From: <david.chrzanowski@exeloncorp.com>
To: <gfd@nrc.gov>, <tgs@nrc.goc>
Date: 3/18/05 12:18PM
Subject: Byron LSIV Info 1

Action Required:
Recommendation:

I am also including the drawing again since I misaddressed it earlier.

<<Document #1 Drawing.pdf>> <<Document #1 Part 1a.pdf>> <<Document #1 Part 1b.pdf>>

David Chrzanowski
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Mail Envelope Properties (423B0D5A.1CB : 12 : 41419)

Subject:	Byron LSIV Info 1
Creation Date:	3/18/05 12:17PM
From:	<david.chrzanowski@exeloncorp.com>
Created By:	david.chrzanowski@exeloncorp.com

Recipients

nrc.gov
owf4_po.OWFN_DO
GFD (George Dick)

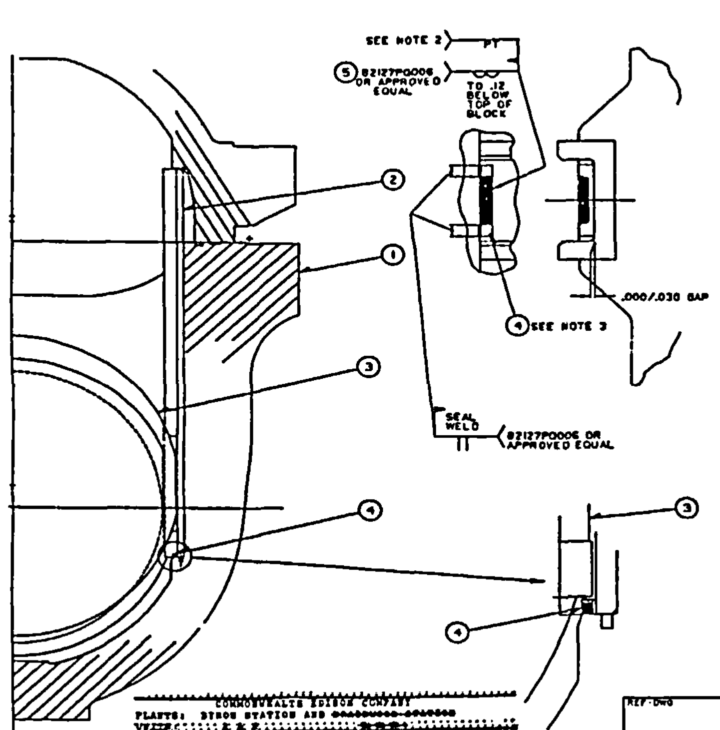
nrc.goc
tgs

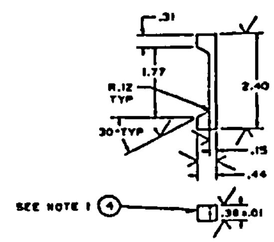
Post Office	**Route**
owf4_po.OWFN_DO	nrc.gov
	nrc.goc

Files	**Size**	**Date & Time**
MESSAGE	1242	03/18/05 12:17PM
Document #1 Drawing.pdf	160981	
Document #1 Part 1a.pdf	2419405	
Document #1 Part 1b.pdf	1235455	
Mime.822	5225340	

Options

Expiration Date:	None
Priority:	Standard
Reply Requested:	No
Return Notification:	None
Concealed Subject:	No
Security:	Standard





NOTES

1. LIQUID PENETRANT INSPECT BLOCKS IN ACCORDANCE WITH ASME SECTION III, PARA NB-2546. USE ACCEPTANCE STANDARD FOR MATERIALS LESS THAN 5/8 INCH THICK.
2. LIQUID PENETRANT INSPECT FINAL WELD SURFACES IN ACCORDANCE WITH ASME SECTION III, NB-5000 USING ACCEPTANCE STANDARD SPECIFIED IN NB-5350. AS AN ALTERNATE TO PT, THE WELD IS TO HAVE A REMOTE VISUAL EXAM. ACCEPTANCE CRITERIA IS CONTAINED IN COMED SPPM VI-3.
3. BLOCK ASSEMBLY NOTES:
   1. PLACE BLOCK AGAINST GUIDE & TACK BLOCK TO VALVE BODY.
   2. PLACE A LAYER OF WELD AROUND BLOCK EDGES TO BE WELDED. TAP BLOCK TO KEEP BLOCK AGAINST GUIDE.
   3. USE CAUTION NOT TO MELT BLOCK LEGS INTO THE GUIDE.

A-BODY ASSEMBLIES 114E854001, 114E855001, 1162E36001 & 1162E35001.

B-MATERIAL SHALL COMPLY WITH ASME BOILER AND PRESSURE VESSEL CODE, SECTION III, SUBSECTION NB, 1971 EDITION THRU W73 OR LATER ADDENDA.

C-MATERIAL SHALL COMPLY WITH SA479 TYPE 304 OR 316, SA240 TYPE 304 OR 316. THE MAXIMUM COBALT CONTENT SHALL NOT EXCEED 0.20 %.

D-TYPE 308 WELD WIRE SHALL MEET REQUIREMENTS OF SECTION II SFA 5.9 AND SECTION III NB-2400 OF THE ASME BOILER AND PRESSURE VESSEL CODE W73 ADDENDA OR LATER.

E-DELTA FERRITE SHALL BE DETERMINED FROM THE ACTUAL CHEMICAL ANALYSIS OF THE WIRE USING FIGURE NB-2433.1-1 OF SECTION III. THE DELTA FERRITE SHALL BE REPORTED IN FERRITE NUMBER (FN). FN OF WELD WIRE SHALL BE NO LESS THAN 5 OR GREATER THAN 20.

QV

AR	WELD WIRE	SFA 5.9, E308		3	DC	5
E	BLOCK	316SST OR 304SST		3	BC	4
REF	DISC ASSY	316SST	[illegible]			3
REF	GUIDE ASSY	410SST	[illegible]			2
REF	BODY ASSY	316SST			A	1
[illegible]	PART NAME	SIZE AND REFERENCE INFORMATION	[illegible]	[illegible]	[illegible]	[illegible]

PARTS LIST

COMMONWEALTH EDISON COMPANY
PLANTS: BYRON STATION AND
STATUS: APPROVED FIELD MODIFICATION
CERTIFICATION LTR. NO. CAW-9668 CBW-5447
SHOP ORDER: CAE/CBE/CCE/CBE-135
AUTHORITY: J. L. TAIN

REF DWG | QS10000 | TOLERANCE & MACHINING NOTES

Westinghouse Electric Corporation

FIELD MODIF-GUIDE RETENTION, ISOL VLVE
GUID-RETNN

D | 04808 | 3D18417

PROGRAMMED DWG. A

FIELD MODIFICATION-GUIDE RETENTION ISOLATION VALVE

ComEd
Chicago, Illinois
Byron Station Unit 1 & 2

NUCLEAR SAFETY RELATED EQUIPMENT IS SHOWN ON THIS DRAWING

3D18417

SHEET NUMBER | SIZE: D

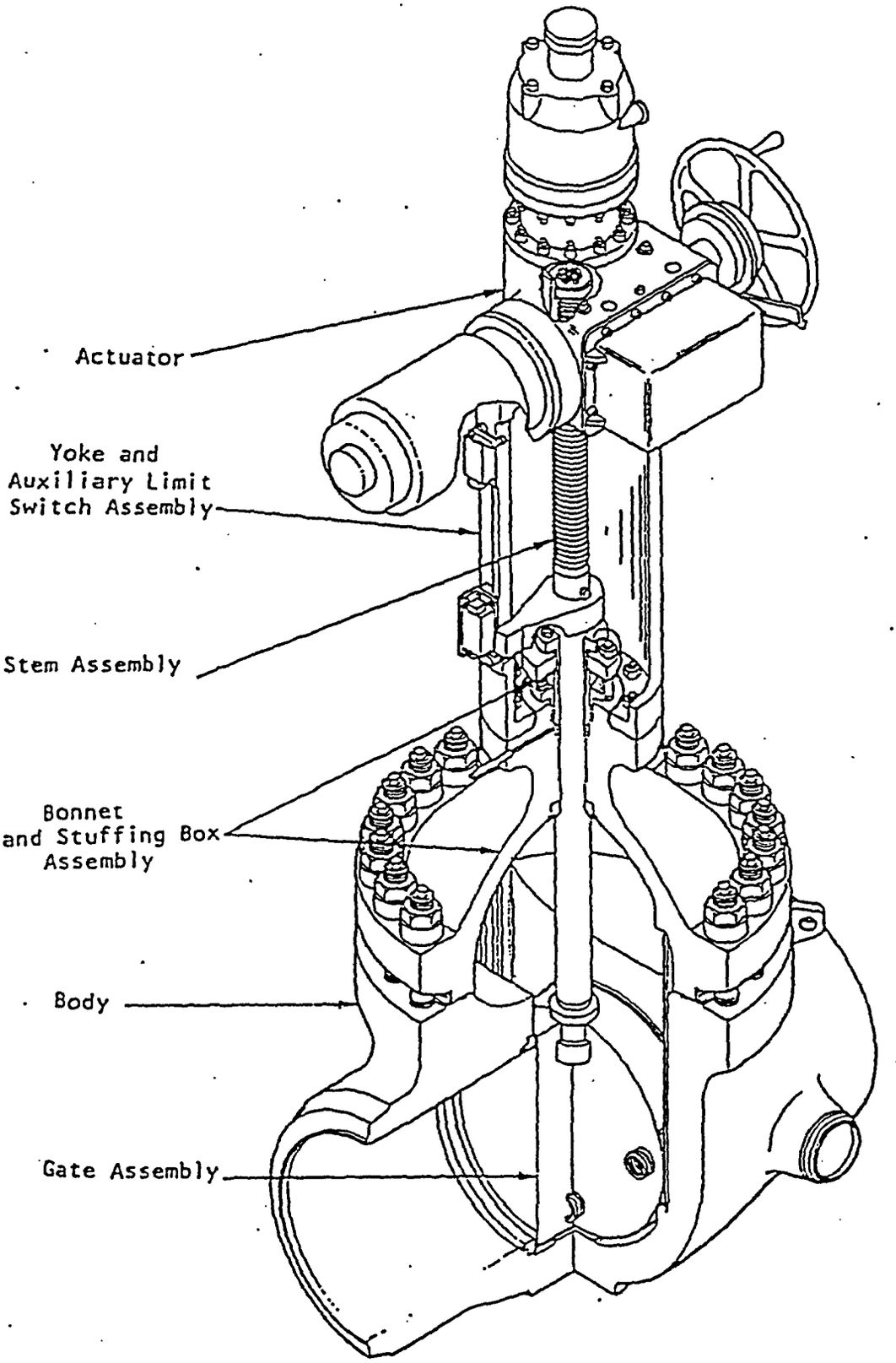


Figure 1.1
Main Loop Isolation Valve

ORIGINAL

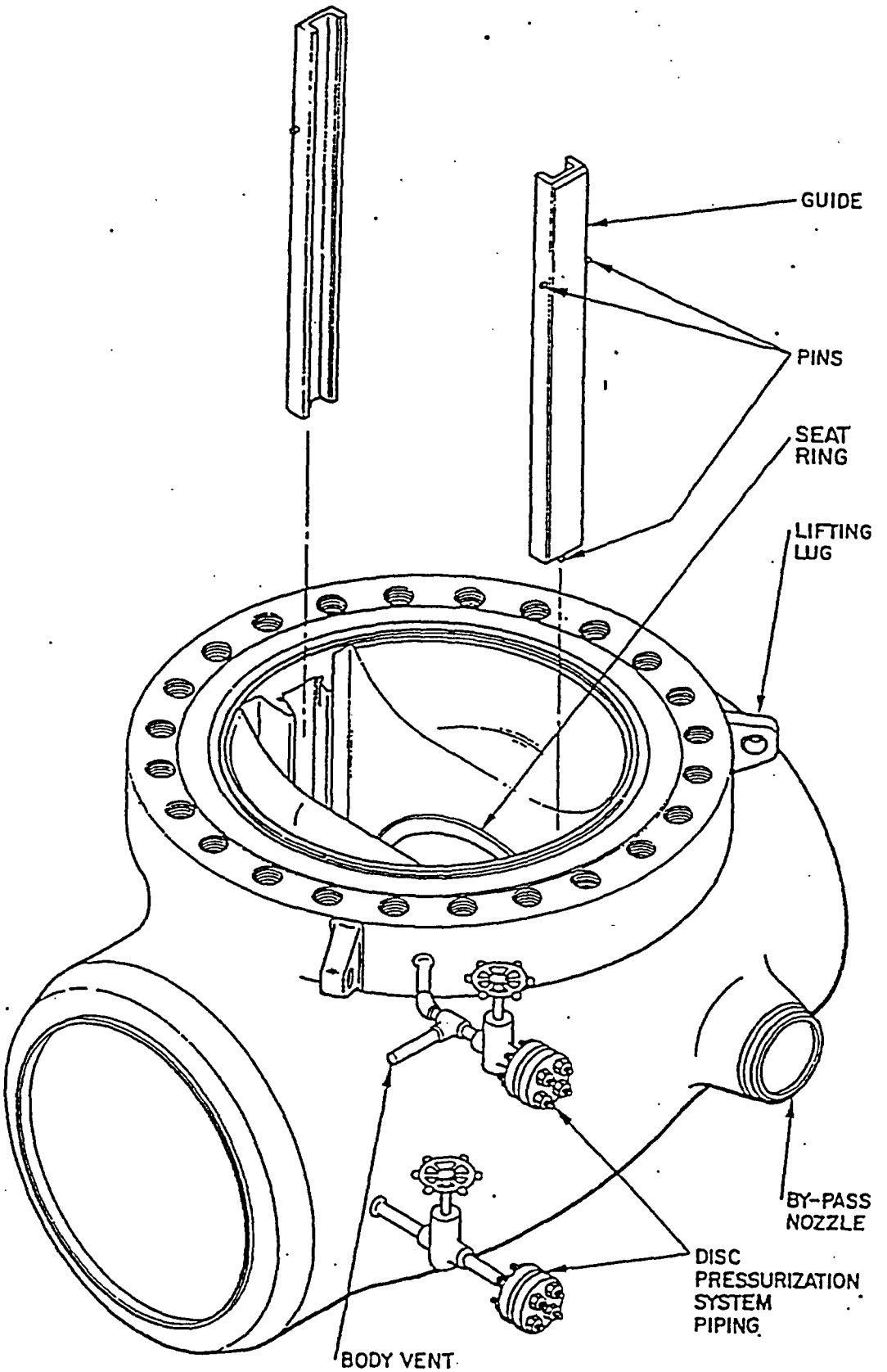


FIGURE 1.2
BODY AND COMPONENTS

[redacted]

Request Task: 970122923 01 Date: 09/26/00

Number 01 PART 1 of 2

Page Type D DUPLICATE Work Date:

Act MOV 1C RC LOOP CL STOP VLV

Title: REPAIR VALVE INTERNAL GUIDES DUE TO RETAINING PIN FAILURE

WORK WRITTEN TO:

Facility BYR Unit 01 Sys RC Mfr Code W120 Unit No

Assbly/Equip MOVA 8002C Model No 1165R26

Component V20 Serial No

ERN 1RC8002C

Building RX1 Elev 401 Room Row Rl Radius

Coord 03 Yard Azimuth Panel/Rack

Location +01

Proj/Doc

Def/Req Desc REPAIR VALVE GUIDE RETAINING PINS BY INSTALLING KEEPERS

PLANNING/SCHEDULING INFORMATION

Plan Dept CM Task Dept CM Priority C Printed Date 08/31/00

Work Analyst HARDINBROCK P PD Due Date

Requester *** UNKNOWN *** PD Early Start

Maint Supv PD Critical Date

Need Date Prt Required PD Critical Task

OPERATIONS SIGN-IN REVIEW DATA

Tech Spec Y Tech Spec/Admin Tech Req No

Need Tool N (List of possible entries: Evaluate using actual document)

Fire Prot N NONE FOUND

Doc Req/No Y 990024622

SIGNATURE AUTHORIZATION/APPROVAL/REVIEW

Supvl Authorization to start work N/A

Maint Supv for work completion

QC Review of work N/A

ANI Review of Code work

Post Maintenance Test Complete

Shift Approval for Completion

QC Review of work package N/A

ANI Review of work package

BYRON NUCLEAR POWER STATION

UNCONTROLLED COPY

COMMON

Work Request Task: 970122923 01

Master Number : 01

Package Type : D DUPLICATE

Name/Act : MOV 1C RC LOOP CL STOP VLV

Task Title: REPAIR VALVE INTERNAL GUIDES DUE TO RETAINING PIN FAILURE

Work Date:

TASK DETERMINATION DATA:		50.59 Scrn Rq:	N		
Safety Related :	Y Y	Critical Comp:		Fire Protection:	N
Code Related :	Y Y	Availability :	R	ASME XI/IST :	N
Reliability Rel :	N N	Modification :	N	Cntnmnt Isolat :	N
Regulatory Rel :	N N	Tracking Code:		Fire Hazard :	N
EQ Related :	N N	RWP Rqrd :	Y	Confined Space :	N
Control Rm Equip:	N	OOS Rqrd/No :	Y 990024622	Personal Safety:	N
Effect S/R Eq :	Y	Spcl Hazards :	WD	PMV Required :	N
Leakage Related :	N	Spcl Precaut :	WG	PIF Rel :	
Unit Derating :		Barrier(s) :		ISI Required :	Y
Foreign Mtl Excl:	Y	Mode Required:		Reg 1.97 :	
EPA Log Entry :		Applic Mode :		Temp Alt :	
Evals Required :		Tech Spec :	Y	Trouble/Brkdown:	N
Weighting Factor:		Work Plan Fac:	WP ND QS RS VS WE	Security :	N
RWP Request No. :	99005974	RWP No/Rev :	001827 00		

QC REQMTS & COMMENTS: QC Inspection Standard:

QC HOLD POINTS FOR WELD INSPECTION. SEE NSWP WELD RECORDS	06/03/00 MMC96
AND WORK INSTRUCTIONS.	06/03/00 MMC96
	06/03/00 MMC96
QC TO PERFORM INTERNAL CLEANLINESS INSPECTION	06/03/00 MMC96

QC Inspector :

WORK DESCRIPTION: CLNINSP

*** WORK SCOPE ***

INSTALL GUIDE STOP BLOCKS IN ACCORDANCE WITH WESTINGHOUSE FCN# CBEM-10754 (DOC# 11) AND THE REQUIREMENTS STATED IN BAP 1600-5T1 (DOC# 19.

ONCE ASME MATERIAL(S) IS/ARE CHECKED OUT TO WORK REQUEST, SUPERVISOR/DESIGNEE SHALL RETURN WORK PACKAGE TO WORK PLANNER FOR COMPLETING NIS-2 FORM AND OBTAINING REQUIRED RRR DATA DOCUMENTATION.

MM SUPERVISOR/DESIGNEE: _____ / 9/29/00
SIGNATURE / DATE

PRIOR TO START OF WORK, REQUEST QC TO PERFORM PT EXAM ON GUIDE BLOCKS. RECORD NDE REPORT NO. 2000-329

RECORD AS FOUND VALVE POSITION.

AS FOUND:OPEN - (✓) ** CLOSED - ( ) ** THROTTLED - (%)

INSTALLER: _____ / 9/29/00
SIGNATURE / DATE

MAINTAIN SYSTEM CLEANLINESS IN ACCORDANCE WITH FME PROCEDURE MA-AA-AD-6-03008 AND ATTACHMENT 2.
[ ] AREA 1 AREA 2 [X].

INSTALL FIXTURE FOR PCI ROBOTIC WELDING MACHINE ON THE 8" BYPASS NOZZLE OF THE LSIV.
---PERFORM TACK WELDING PER NSWP-W-01, PCI PROCEDURES GWS-1, WCP-6 AND WCP-8 AND PCI WELDING PROCEDURE 8 MN-GTAW/SMAW.
---PREHEAT: 50 DEG. INTERPASS: 350 DEG.
---FILLER MATL.: SMAW = E308/E316 GTAW = ER308/ER316
---QC FINAL WELD INSPECTION: _____ / _____

WORK DESCRIPTION: CLNINSP

INITIAL/DATE

.

.

CLOSE VALVE UNDER POWER TO THE CLOSED LIMIT SWITCH POSITION
CONTINUE TO CLOSE VALVE MANUALLY TO THE STEM STOP POSITION
(APPROXIMATELY 3/8" BELOW LIMIT SWITCH POSITION).

.

MARK A REFERENCE LINE ON THE VALVE YOKE CORRESPONDING TO
THE TORQUE ARM POSITION. KEEP REFERENCE LINE ON YOKE TO
CHECK THIS POSITION AFTER BLOCK WELDING.

.

OPEN VALVE ELECTRICALLY TO THE FULL OPEN POSITION FOR
WELDING OF THE BLOCKS.

.

PROVIDE PROTECTION FOR VALVE SEATS FROM DAMAGE DURING
BLOCK INSTALLATION.

.

INSTALL GUIDE BLOCKS IN ACCORDANCE WITH WESTINGHOUSE
FCN# CBEM-10754 (DOC# 11) USING WELD MAP (DOC# 12).
---PERFORM WELDING PER NSWP-W-01, PCI PROCEDURES GWS-1,
WCP-6 AND WCP-8 AND PCI WELD PROCEDURE 8-MC-GTAW
USING WELD MAP (DOC# 12) AND W-01-A WELD RECORDS
(DOC# 13 - 18)
---DOCUMENT WELDING USING W-01-A WELD RECORDS
(DOC# 13 THRU 18)
---PLACE BLOCK AGAINST GUIDE AND TACK WELD TO VALVE BODY.
---PLACE A LAYER OF WELD AROUND BLOCK EDGES TO BE WELDED.
TAP BLOCK TO KEEP IT AGAINST THE GUIDE.
---USE CAUTION NOT TO MELT BLOCK LEGS INTO THE GUIDE.

.

WELDING COMPLETE - INSTALLER: _____/_____

INITIAL/DATE

.

.

CLEAN SEAT SURFACES AND INSIDE OF VALVE BODY TO REMOVE
DEBRIS AND RESIDUE FROM WELDING AND NDE.

.

INSTALLER: _____/_____

INITIAL/DATE

.

.

WORK DESCRIPTION: CLNINSP

CLOSE VALVE ELECTRICALLY TO THE CLOSED LIMIT SWITH POSITION. CONTINUE TO TO CLOSE VALVE MANUALLY TO THE REFERENCE LINE MARKED ON THE YOKE IN THE PREVIOUS STEP.

.

.

IF TORQUE ARM DOES NOT GO DOWN TO THE REFERENCE LINE, RECORD DIMENSION FROM THE TORQUE ARM TO THE REFERENCE LINE. CONTACT ENGINEERING FOR RESOLUTION.

DIMENSION ----------

SEE REV. 1 PH 9/25/00

.

.

REMOVE FIXTURE FROM THE 8" BYPASS NOZZLE ON THE LSIV. REQUEST QC TO VISUALLY INSPECT REMOVAL AREA AND TO PERFORM NDE (PT) EXAM.

.

NDE REPORT NO. 2000-277

.

QC: _____ / 10-4-00
INITIAL/DATE

.

.

******HOLD******

QC TO PERFORM INTERNAL CLEANLINESS INSPECTION(S) AND DOCUMENT ACCEPTANCE USING APPROPRIATE ATTACHMENT(S).

.

.

POSITION VALVE IN THE AS FOUND POSITION RECORDED AT INITIAL WORK INSTRUCTIONS.

-

AS LEFT :OPEN - (✓) ** CLOSED - ( ) ** THROTTLED - (%)

-

INSTALLER: _____ / 10/11/00
SIGNATURE / DATE

.

**********END OF REV.0**********

.

*** WORK SCOPE ***

INSTALL GUIDE STOP BLOCKS IN ACCORDANCE WITH WESTINGHOUSE DRAWING 4D98951 (DOC# 21) (PROVIDED BY ER9915633, DOC# 22) AND THE REQUIREMENTS STATED IN BAP 1600-5T1 (DOC# 19).

.

WORK DESCRIPTION: CLNINSP

.

.

REVISE PREVIOUS WORK INSTRUCTIONS AS FOLLOWS:

.

INSTALL GUIDE BLOCKS IN ACCORDANCE WITH THE NOTES AND DETAILS ON WESTINGHOUSE DRAWING 4D98951 (DOC# 21) USING WELD MAP (DOC# 12).

---PERFORM WELDING PER NSWP-W-01, PCI PROCEDURES GWS-1, WCP-6 AND WCP-8 AND PCI WELD PROCEDURE 8-MC-GTAW USING WELD MAP (DOC# 12) AND W-01-A WELD RECORD (DOC# 13 & 14).

---DOCUMENT WELDING USING W-01-A WELD RECORDS (DOC# 13 & 14).

---FILLET WELD MAY BE LESS THAN .25" AT THE START AND FINISH OF THE WELD.

---USE CAUTION NOT TO MELT BLOCK LEGS INTO THE GUIDE(S)

.

.

DELETE ALL STEPS IN PREVIOUS WORK INSTRUCTIONS PERTAINING TO VERIFICATION OF VALVE CLOSURE. STEPS ARE NOT INCLUDED IN DRAWING 4D8951 (DOC# 22).

.

.

REV.1 DOCUMENT CHANGES:

---DRAWING 4D98951 (DOC# 21) SUPERSEDES FCN# CBEM-10754 (DOC# 11)

---WELD MAP (DOC# 12) REVISED PER NEW WELD DEAIL ON DRAWING# 4D98951 (DOC# 21).

---DOC# 13 & 14 REVISED PER NEW WELD DETAIL ON DRAWING# 4D98951 (DOC# 21).

---DOC# 15 - 19 (WELDS# 3 - 6) DELETED PER REVISED WELD DETAIL ON DRAWING# 4D98951 (DOC# 21).

---ER9915633 (DOC# 22) SUPERSEDES ER9913429 (DOC# 20)

COMMON

Work Request No: 970122923 01

Master Number: 01

Package Type : D DUPLICATE

Work Date:

Page: 7

Date: 09/25/00

PART 1 of 2

Name/Act : MOV 1C RC LOOP CL STOP VLV

Task Title: REPAIR VALVE INTERNAL GUIDES DUE TO RETAINING PIN FAILURE

ACTUAL START / UTC CHANGE-OUT INFORMATION:

Actual Start Date Time : 9/30/00 02:00

Actual Complete Date Time 10/04/00 1800

UTC

Mfr Model No : W120 1165E26

Serial Number:

Changeout

UTC

Manufacturer:

Model Number:

Catalog ID:

Reason:

AS FOUND/WORK PERFORMED:

As Found: Installed and Removed fixture to allow Robotic welding repairs to valve guide of 1RC8002C.

[illegible]

COMMON

Work Request Task: 970122923 01

Master Number : 01

Package Type : D DUPLICATE

Work Date:

Name/Act : MOV 1C RC LOOP CL STOP VLV

Task Title: REPAIR VALVE INTERNAL GUIDES DUE TO RETAINING PIN FAILURE

Work Performed:

Installed and removed fixture to allow Robotic welding modifications to valve guides of 1RC8002.

Continued on Additional Sheets?: No

Page: 9
Work Request Task: 970122923 01 Date: 09/25/00
Master Number : 01 PART 1 of 2
Package Type : D DUPLICATE Work Date:
Effect : MOV 1C RC LOOP CL STOP VLV
Task Title: REPAIR VALVE INTERNAL GUIDES DUE TO RETAINING PIN FAILURE

Root Cause (if applicable): N/A - Modification
Root Cause
Comments :

Worker: Arnold Edwards Date: 10/5/00 Total Hours:
Defeciency Tag Removed: N/A

Comments:

Post Maintenance Verification:
Test No Dept Inits Date

N/A MMM 10-7-00

NO POST MAINTENANCE VERIFICATION SPECIFIED

*** END OF PART 1 ***

COMMON [redacted] Page: 1
Work Request Task : 970122923 01 Date: 09/25/00
Master Number : 01 PART 1 of 2
Package Type : D DUPLICATE Work Date:
Name/Act : MOV 1C RC LOOP CL STOP VLV
Task Title : REPAIR VALVE INTERNAL GUIDES DUE TO RETAINING PIN FAILURE

SUPERVISOR FEEDBACK:
Maint Cause : _____ Maintenance Code: _____
Avoidance Code : _____ Action Taken : _____
PMT Required : ___ (Y/N)
Downtime : _____ Hrs ____ Min Limited Cond Operation: ___

Work Delay: _____
Comments _____
and Hours _____

Rework : none
Comments _____
and Hours _____

REFERENCES:

Type	Sub	Document Number	Sheet	Title/Description
PROC	MSP	MA-AA-AD-6-00010 ATT# 1	1	WP REVISION SHEET
PROC	MSP	MA-AA-AD-6-03009 ATT# 1	1	BILL OF MATERIALS
~~PROC~~	~~SPPM~~	~~VOL 3A MSWP-W-01~~		~~ASME WELDING~~ *
PROC	SPPM	VOL 3A MSWP-W-01 EXHIBIT		ASME WELD RECORD
~~PROC~~	~~SPPM~~	~~VOL 2 ASME/B31.1 GWR~~		~~ASME/B31.1 GENERAL WEL~~ *
DWGV		1165E26	1	MOTOR OPERATED GATE VA
DWGV		1165E26	2	MOTOR OPERATED GATE VA
DCD		FCN# CBEM-10754		
PROC	MSP	MA-AA-AD-6-03009 ATT# 5	1	M&TE USAGE LOG
~~PROC~~	~~MSP~~	~~AD-AA-104-109 ATTACHMENT~~	~~1~~	~~PRE-JOB BRIEFING~~ *
~~PROC~~	~~MSP~~	~~AD-AA-104-109 ATTACHMENT~~	~~1-4~~	~~EXPANDED PRE-JOB BRIEF~~ *
~~PROC~~	~~MSP~~	~~AD-AA-104-109 ATTACHMENT~~	~~1-3~~	~~POST-JOB CRITIQUE~~ *
PROC	MSP	MA-AA-AD-6-03008 ATT.2	1 & 3	FME REQUIREMENTS
DWGV		4D98951		
DCD	ER	9915633		

REMOVED @ CLOSE OUT MBR 10-7-00

MATERIALS LIST:
Parts required date/time : _____ _____
Deliver Parts to : ___ _____
Parts Checked & Available: _____
Parts Assembled In Storeroom Under This Work Request: _____

R	Qty	UOM	Catalog Id	Q	Catalog Description
~~M~~	~~1~~	~~EA~~	~~0000615523~~	~~4~~	~~GASKET, SPIRAL WOUND, SPIRAL WOUND, NUCLEAR G~~
~~M~~	~~2~~	~~EA~~	~~0000705551~~	~~4~~	~~ASSEMBLY, GUIDE, SPIN RCPCLGAA / FOR HOT LEG~~
M	2	EA	0001026789	1	BLOCK, GUIDE, LSIV RETENTION, SA-479 OR SA-24

10/6/00

*** END OF PART 2 ***
*** END OF REPORT ***

ATTACHMENT 1
Example of Work Package Revision sheet
Page 3 of 3

WR Number: 970122923-01

Rev. No.	Revision Type Major/Minor	Revision Description
1	MINOR	UPDATED PROCEDURES ON REFERENCE LIST AND INSERTED CORRECT FORMS. [illegible] 9/6/00
2	MINOR	Added data to weld map [illegible] 9/30/00
Major Revision Field Approvals Rev. No.		

Work Package Preparer _____ / _____

AI/ANI/ANII Reviewer _____ / _____

Operations _____ / _____

Operations Validation of OOS NA 9/5/00

Technical Reviewer _____ / _____

Cross-Discipline Reviewer _____ / _____

Approver _____ / _____

Planning / E-3 Walkdown Checklist

(use back of form for additional comments/information)

Dept: EM ☐ IM ☐ MM ☐ Other: CM PCI

AR# / WR #: 970122923-01 EPN #: 1RC8002C Component Type: _____

Initial Information EWCS Panel IM49

Location: Bldg. 01 Elev. 390'-4" Rm. _____ Col. _____ Row. _____ Az. _____

Rad. _____ Yard. _____ Panel Rack #: _____

Cont Rm Equip: Yes ☐ No ☑ Shielding Issues: Yes ☑ No ☐ Interference's: Yes ☐ No ☑ Cont. Space: Yes ☐ No ☑

RWP Required: Yes ☑ No ☐ Scaffold Required: Yes ☑ No ☐ Insul Removal: Yes ☑ No ☐ Isolatable: Yes ☑ No ☐

Special Hazards: ☐ Asbestos ☑ Fall Protection ☐ Noise ☑ Lighting ☐ Cutting / Welding Other: High Dose

Special Precautions / Safety Equip: ☐ Manlift ☑ Ladder ☐ Low Voltage Lighting ☐ Chemical Clothing Other: High Dose

Manufacturer: _____ Model: _____ Serial #: _____ UTC No: _____

Type / Size: NA 1SS 9-30-00 Instrument Range / Mounting: _____ ~~Common Sensing Line: Yes ☐ No ☐~~

Initial Walkdown Information

Component Label Present/Correct: Yes ☑ No ☐ AR / Deficiency Tag(s) Hung: Yes ☐ No ☐ Tag Number(s): _____

Type of leakage: _____ Quantity of leakage: _____

Identify / Validate Problem: Retaining Pin Failure

Repair Recommendation: Repair Valve Internal Guides

Estimated Parts Required 1- CSIV Guide Stop Block

Tools / Special Tools Required: yes

Special Requirements and EWCS Panel M213 Information

OOS Required: Yes ☑ No ☐ Suggested isolation points: _____

Temp Mod / Power Required: Yes ☑ No ☐ If Yes specify: _____

Long lead parts Required: Yes ☐ No ☑ If Yes specify: _____

Area Decon Required: Yes ☑ No ☐ Step Off Pad Required: Yes ☑ No ☐ Dose Concerns: Yes ☑ No ☐

Security Breaches Required: Yes ☐ No ☑ Fire Protection: Yes ☑ No ☐ Photo/Picture Available: Yes ☑ No ☐

Maint history reviewed: Yes ☑ No ☐ JIT/Mock-up Training: Yes ☑ No ☐

FME Zone. ☐ Zone 1 ☑ Zone 2 FME Concerns: Chips From cutting INSIDE Pipe & Valve

Key Required: Yes ☐ No ☑ Key #. _____ Contingencies Needed: Yes ☐ No ☐ _____

Work Planning Factors: ☐ High Risk ☐ HLA ☐ LCO ☑ Rigging Required ☐ Freeze Required ☐ Furmanite Required

☐ Crane Support ☑ Vendor Support ☐ Painting ☑ Shielding ☑ Scaffold Other: _____

Plant Barrier Impairment(s): NA

Procedures / Drawings / VETIPS Required: yes

Other Safety Issues: _____

Support From Other Groups. CM PCI RP CP Est. Crew / Job Duration: _____

Distance to. Air _____ Water _____ Electricity _____

Planning Walkdown performed by: _____ **Date:** 9 / 30 / 00

Planning / E-3 Walkdown Checklist

(use back of form for additional comments/information)

E-3 Walkdown Validate Information

All potential errors / safety issues addressed: Yes ☑ No ☐ Comments: _____

Work Instructions / Procedures / VETIPS Adequate: Yes ☑ No ☐ Comments: POOR QUALITY ORIGINAL

Correct parts identified on BOM: Yes ☑ No ☐ Comments: _____

Dose / Alara concerns identified: Yes ☑ No ☐ Comments: _____

M&TE / Tool list / equipment available: Yes ☑ No ☐ Comments: _____

Crew / Duration Correct: Yes ☑ No ☐ Comments: _____

Support groups Correct: Yes ☑ No ☐ Comments: _____

RWP Request Submitted: Yes ☑ No ☐ RWP #: 1827

OOS Request Submitted / Adequate: Yes ☑ No ☐ OOS #: ~~990021937~~ 9900024622

Scaffold Request Submitted: Yes ☑ No ☐ Scaffold #: _____

Insulation Request Submitted: Yes ☑ No ☐ Insulation #: _____

Parts Reserved: Yes ☐ No ☑ Ticket #: _____

Parts Staged: Yes ☐ No ☑ Location: _____

All Holds Removed: Yes ☑ No ☐ All Eng. Approvals obtained: Yes ☑ No ☐

Required Tests Identified: Yes ☑ No ☐ All Procedure Datapoints identified: Yes ☑ No ☐

IM data cards in package: Yes ☐ No ☑ FME concerns addressed: Yes ☑ No ☐

Drawings Adequate / Legible: Yes ☑ No ☐ Painting required: Yes ☐ No ☑

Pre-fab work needed: Yes ☐ No ☑ Job set-up required: Yes ☑ No ☐

PERMITS:
Hot Work #: Yes Confined Space #: NA Special Chemical use #: NA

Plant Barrier Impairment Number(s): NA

E-3 Walkdown performed by: _____ **Date:** 9/30/00

Work Completion Information

Verify installed:
Manufacturer: _____ Model: _____ Serial #: _____ UTC #: _____

Validate remaining data previously collected is correct: Yes ☐ No ☐
If No – List discrepancies / differences: _____

Validate tools previously listed are correct: Yes ☐ No ☐
If No – List discrepancies / differences: _____

First Line Supervisor: _____ **Date:** 10/02/00

ATTACHMENT 2
Work Package Forms
Page 1 of 3

Work Request No.: 970122923-01	MA-AA-AD-6-03008, Attachment 2

Foreign Material Exclusion Requirements

FME AREA CLASSIFICATION: An FME Area 1 is established in situations where a final visual inspection of internal cleanliness prior to system closure is not possible due to configuration or other circumstances, otherwise a FME Area 2 will be established.

Work Planner – Initial Appropriate FME Area	__ AREA 1		✓ AREA 2	
FME Requirements: These requirements shall be complete prior to initial system breach.	**Required**	**WGS Initials**	**Required**	**WGS Initials**
FME Work Practices discussed	Yes		Yes	[illegible]
Stellite/Cobalt addressed during pre-job brief	Yes		Yes	[illegible]
FME Devices were addressed	Yes		Yes	[illegible]
FMEA Boundary in place	Yes		Yes/No	*** [illegible]
FMEA Signs Posted (Attachment 2, page 2)	Yes		Yes/No	*** [illegible]
FMEA Precleaning completed	Yes		Yes	[illegible]
FMEA Prejob Inspections performed	Yes		Yes	[illegible]
FME Monitor required	Yes/No	***	Yes/No	*** [illegible]

*** At the discretion of the Work Group Supervisor, this item may be N/A.

FME Internal Device Record	Yes	See Below	Yes	See Below
FMEA Log required (Attachment 2, Page 3)	Yes	See Below	Yes/No	See Below

Remarks:

Initial Internal Foreign Material inspection completed and appropriate levels of FME controls exist:

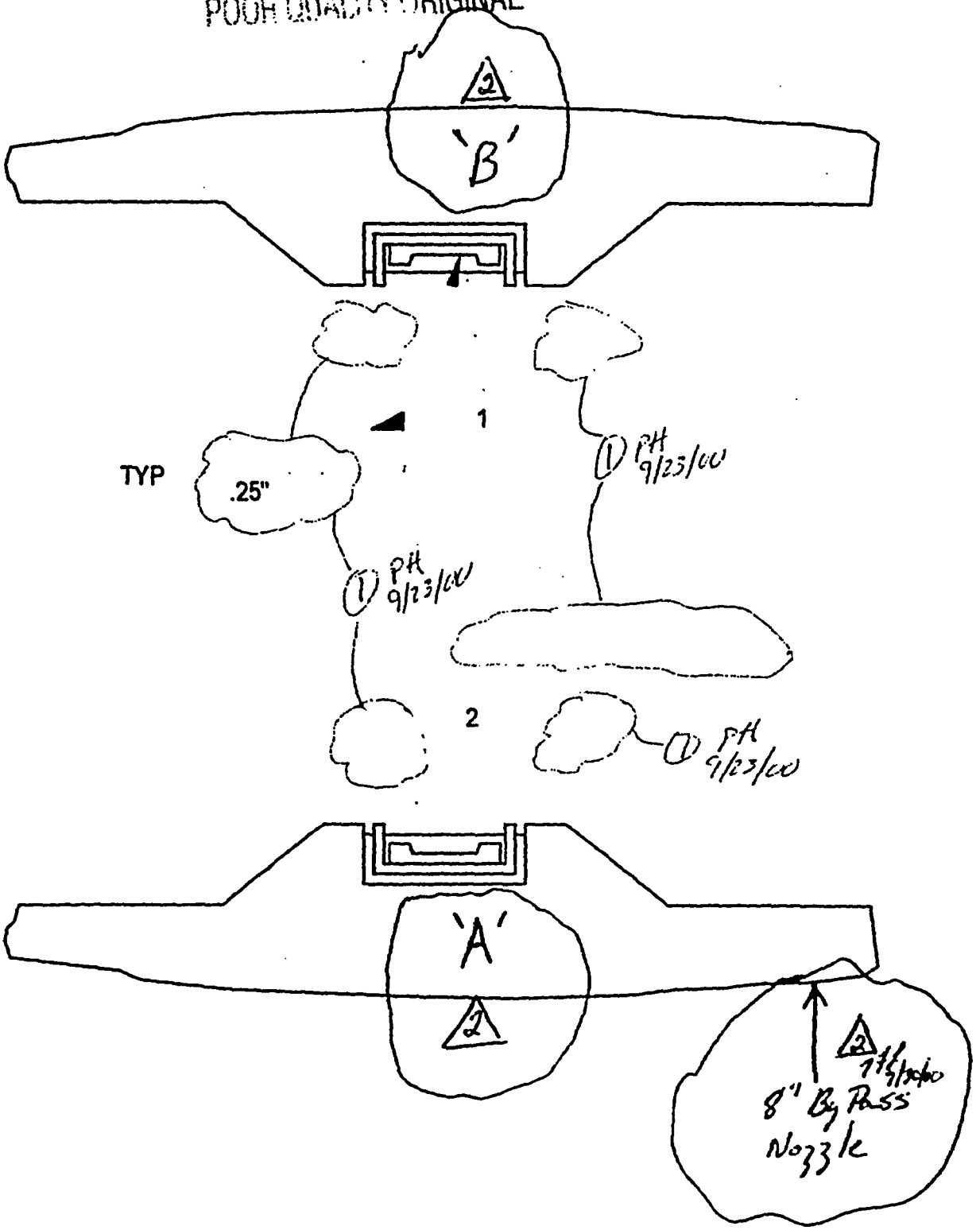
John Ryan / 10/07/00

Lead Worker Initials/Date

FME INTERNAL DEVICE RECORD

Internal Device Description	Location	Date Installed	Lead Worker Initials	Date Removed	Lead Worker Initials

Tool and Parts Log Used?	If Tool and Parts Log is used, reconcile prior to final closeout.
✓ NO __ YES	/
	Work Supervisor Initials/Date
Verify system/component is free of foreign material prior to final system closure.	[illegible] / 10/7/00
	Work Supervisor Initials/Date



WR# 970122923-01
DOCUMENT# 12
PAGE 1 OF 1
REV.1

ASME WELD RECORD

EXHIBIT A
Page 1 of 2

WELD RECORD GENERAL INFORMATION

Station: 006 Unit: 01

Supplement Sheet: POOR QUALITY ORIGINAL

Work Package No.: 970122923-01

[X] Safety
[ ] Regulatory/Augmented Quality
[ ] Non-Safety
[ ] Reliability
[ ] Seismic

PH 9/13/00

Document No.: 13 Rev.: ~~0~~ 1

Weld No.: 1 Dwg./Doc. Number & Rev.: CBEM-10754[DOC# 11] Design Table: N/A
EPN No.: 1RC8002C ASME Code/Class: SECT. III / CL.1

Description (Item #1) VALVE BODY Base Metal Spec.: SA-351 GR.CF8M
P-No./Gr. No.: 8 / 1 Nom. Thick: >1" Dia.: N/A

Description (Item #2) GUIDE STOP BLOCK Base Metal Spec.: SEE REMARKS
P-No./Gr. No.: 8 / 1 Nom. Thick: 3/8" Dia.: N/A

WPS No. & Rev.: 8 MC-GTAW End Prep Detail: PER DOC# 11

[ ] Open Root [ ] Consumable Insert ______ [ ] Backing Ring ______ [X] Fillet-Min. Size .25"
[ ] Overlay Deposit Thickness: Minimum: ______ Maximum: ______
[X] Other: ~~BUILD-UP [SURFACING]~~ (1) PH 9/23/00

Filler Material Class [X] Root: ER316L [X] Intermediate Pass(es): ER316L
[X] Final Pass(es): ER316L PWHT @ N/A °F for N/A
Minimum Preheat Temperature: 50 °F Maximum Interpass Temperature: 350 °F

Process & Inspection Activities

Attributes N/A'd: 5 6 7 8 12 13	Welder ID	H/W	QC Insp. REJ	QC Insp. ACC	Overview Init./Date
1. Pre Fit-Up Inspections (6.1/7.1) [ ] End Prep NDE Req'd [ ] PT [ ] MT NDE Report No.: NA	m-656 10-1-00	H oc		FJ 10-1-00	
2. Base Material Data (6.2/7.2) #1 Heat/Serial/QRI No. EXISTING #2 Heat/Serial/QRI No. H 083159A Ins	m-656 10-1-00	X	X	X	X
3. Fit-Up Inspections (6.3/7.3) [ ] Heat/Serial/QRI No. of Insert or Backing Ring	m-656 10-1-00	H oc		FJ 10-1-00	
4. Preheat: (6.4/7.4) Actual: > 50°F Temperature Indicator I.D. AMBIENT	m-378 10-1-00	X	X	X	X
9. Interpass Temperature (6.8 / 7.8) Actual: < 350° F Temperature Indicator I.D.: (1)	* m-378 10-1-00	X	X	X	X
10. Fill Data: (6.9, WPS / 7.9) Heat/Lot/QRI No.: XT 7591 AWS Classification: ER 316 L .035" dia. Heat/Lot/QRI No.: ______ AWS Classification: ______	* m-378 10-1-00	X	X	X	X

ASME WELD RECORD (Cont'd)

Work Package No.: 970122523-01 **Document No.:** 13 **Rev.:** 0

Process & Inspection Activities (Cont'd)	Welder ID	H/W	QC Insp. REJ	QC Insp. ACC	Overview Init./Date
11 Final Weld Visual Inspection (6.10 7.10)	# 378 10-1-00	H oc		10-2-00	

REMARKS: BASE METAL (ITEM 2): SA-479 TYPE 304 OR 316
SA-240 TYPE 304 OR 316

POOR QUALITY ORIGINAL

@ 1st Pass comp 10:03 AM
1st Pass comp 10:23 AM
2nd Pass Complete 10:45
3rd Pass Complete 10:50 10-1-00
PS

Work Complete/Date (8.)	Inspection Complete/Date (8.)
[signature] 10/1/00	N/A
Maintenance Supv./Foreman	QC Inspector

Reviewed By/Date (8.)	Reviewed By/Date (8.)
N/A 12/12/00 [signature] 12/12/00	N/A
ANI/ANII	Overview

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ASME Welding

ASME WELD RECORD

EXHIBIT A
Page 1 of 2

WELD RECORD GENERAL INFORMATION

Station: 006 Unit: 01

Supplement Sheet:

Work Package No.: 970122923-01

- [X] Safety
- [ ] Regulatory/Augmented Quality
- [ ] Non-Safety
  - [ ] Reliability
  - [ ] Seismic

PH 9/23/00

Document No.: 14 Rev.: 8 1

Weld No.: 2 Dwg./Doc. Number & Rev.: CBEM-10754[DOC# 11] Design Table: N/A

EPN No.: 1RC8002C ASME Code/Class: SECT. III / CL.1

Description (Item #1) VALVE BODY Base Metal Spec.: SA-351 GR.CF8M

P-No./Gr. No.: 8/1 Nom. Thick: >1" Dia.: N/A

Description (Item #2) GUIDE STOP BLOCK Base Metal Spec.: SEE REMARKS

P-No./Gr. No.: 8/1 Nom. Thick: 3/8" Dia.: N/A

WPS No. & Rev.: 8 MC-GTAW End Prep Detail: PER DOC# 11

- [ ] Open Root
- [ ] Consumable Insert
- [ ] Backing Ring
- [X] Fillet-Min. Size .25"
- [ ] Overlay Deposit Thickness: Minimum: Maximum:
- [X] Other: ~~BUILD-UP (SURFACING)~~ (1) PH 9/23/00

Filler Material Class [X] Root: ER316L [X] Intermediate Pass(es): ER316L

[X] Final Pass(es): ER316L PWHT @ N/A °F for N/A

Minimum Preheat Temperature: 50 °F Maximum Interpass Temperature: 350 °F

Process & Inspection Activities

Attributes N/A'd: 5 6 7 8 12 13	Welder ID	H/W	QC Insp. REJ	QC Insp. ACC	Overview Init./Date
1. Pre Fit-Up Inspections (6.1/7.1) ☐ End Prep NDE Req'd ☐ PT ☐ MT NDE Report No.: N/A	M-454 10-1-00	H QC		FU & P.I.	
2. Base Material Data (6.2/7.2) #1 Heat/Serial/QRI No. EXISTING #2 Heat/Serial/QRI No. N 013054 A/04	M-454 10-1-00				
3. Fit-Up Inspections (6.3/7.3) ☐ Heat/Serial/QRI No. of Insert or Backing Ring	M-454 10-1-00	H QC		FU & P.I.	
4. Preheat: (6.4/7.4) Actual: ≥50°F Temperature Indicator I.D. AMBIENT	*M-378 10-1-00				
9. Interpass Temperature (6.8/7.8) Actual: ≤350°F (1) Temperature Indicator I.D.:	*M-378 10-1-00				
10. Fill Data: (6.9. WPS/7.9) Heat/Lot/QRI No.: XT 7591 AWS Classification: ER 316L .035" dia. Heat/Lot/QRI No.: AWS Classification:	*M-378 10-1-00				

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ASME Welding

ASME WELD RECORD (Cont'd)

EXHIBIT A
Page 2 of 2

Work Package No.: 970122923-01 Document No.: 14 Rev.: 0

Process & Inspection Activities (Cont'd)	Welder ID	H/W	QC Insp. REJ	QC Insp. ACC	Overview Init./Date
11. Final Weld Visual Inspection (6.10 / 7.10)	* M-378 10-1-00	H qc		[signature] 10-1-00	

REMARKS: BASE METAL [ITEM# 2]: SA-470 TYPE 304 OR 316
SA-240 TYPE 304 OR 316

(1) 1st Pass 10:35 AM
2nd Pass 9:00 AM
3rd Pass 9:40 AM
PS 10-1-00

POOR QUALITY ORIGINAL

Work Complete/Date (8.)	Inspection Complete/Date (8.)
[signature] 10/1/00 Maintenance Supv./Foreman	N/A QC Inspector
Reviewed By/Date (8.) [signature] 10/1/00 ANI/ANII	Reviewed By/Date (8.) N/A Overview

Liquid Penetrant Examination

NDT-D
LIQUID PENETRANT EXAMINATION DATA SHEET

ASME Sect. III Class 3

STATION	BYRON	06	UNIT	01	REPORT NO.	2000 – 229	
SYSTEM	RC				WORK REQUEST NO.	~~97012292201~~ 9701229A3-01	
COMPONENT/LINE NO.	Block Guides				EPN/SERIAL NO.	1RC8002B	
REF.DWG./ECN/FCR NO.	FCN #CBEM-10754				REV.	–	
PT PROCEDURE	NDT-D R/23		ACCEPTANCE	NDT-D2 R/11	APPENDIX	"A" R/12	
MATERIAL/SIZE/THICKNESS	SA-479 / 2-3/8" x 7/16" x 3/8"				WELD NO.	N/A	
COMPONENT TEMPERATURE	72 Deg. F		PENETRANT MATERIAL MFG.		MAGNAFLUX		

	TYPE	BATCH#	TIME		
CLEANER	SKC – S	99D04K	PRE-CLEAN	5	MINS.
PENETRANT	SKL – SP	98A16K	DWELL	10	MINS.
DEVELOPER	SKD – S2	97E05K	DEVELOPMENT	7	MINS.

EXAMINATION RESULTS ACCEPT X REJECT ____ SEE BELOW

EXAMINATION COMMENTS & DESCRIPTION:

N/A Meets the requirements of the SPPM Volume IV, NDT-D-2

Performed a PT Examination of 6 Block Guides for the Loop Stop Isolation valves.
Heat # D83059A #4D98951H04-05
Heat # D83059A #4D98951H04-06
Heat # D83059A #4D98951H04-07
Heat # D83059A #4D98951H04-08
Heat # D83059A #4D98951H04-09
Heat # D83059A #4D98951H04-10

EXAMINER H. M. Ackerman LEVEL II DATE 09/27/00

ComEd REVIEWED BY [signature] DATE 9-27-00

AI / ANI [signature] DATE 9-27-00

DOC: 19 | REV: 0

APPROVED 12/02/98

Facsimile

BAP 1300-5T1
Revision 6

POOR QUALITY ORIGINAL

ASME SECTION XI REPAIR/REPLACEMENT REPORT

Part 1. General Information

Work Request No: 970122923-01 Unit: 01

Design Change No: N/A System: RC

EPN: 1RC8002C ASME Class: 1

Description: 1C RC LOOP CL STOP ISOLATION VLV

Original Design Specification: F2702

Original Construction Code: SECT.III, 1971 Ed W73 Ad

Replacement Design Specification: F2702

Replacement Construction Code: SECT.III, 1971 Ed W73 Ad

Code Cases To Be Invoked: ~~N-416-1~~ N-416-1

Code of Repair ASME Section XI, 89 Edition NO Addenda

Description of Flaw/Problem: INTERNAL VALVE GUIDES ARE SUSCEPTABLE TO FAILURE.

Describe Flaw Detection method (i.e., NDE Method, leaking, etc.):
SEE 1RC8002A

(Attach additional sheets as necessary)

Proposed Work Instructions: INSTALL GUIDE STOP BLOCKS IN VALVE IN ACCORDANCE WITH WESTINGHOUSE ~~FCN# CBEM-10754~~ DRAWING 4D98951 REV. 3 (ER 9915633) (1) PH 4/23/00

(Attach additional sheets as necessary)

Method of Flaw Removal/Repair/Replacement:

- ☐ Grinding/Blending/Buffing
- ☐ Bolting
- ☑ Welding
- ☐ Other _____
- ☐ Mechanical Joint Disassembly

Comments: _____

PAUL HARDENBROOK	6/3/00	3145	MAINTENANCE PLANNING
Originator	Date	Ext.	Department

(0768AA/WPF/111198-F)

Part 2: Engineering Evaluation (Verification of Acceptability)

Scope of Applicability:

- [X] ASME Section XI Repair/Replacement
- [ ] ASME Section XI, IWE/IWL Repair/Replacement
- [ ] Replacement of Valves, Piping, Fittings or Supports ≤ 1" NPS
- [ ] Temporary Non-Code Piping Repair
- [ ] This is Not a Section XI Repair/Replacement
- [X] ASME Form NIS-2 is required.

Mode of Failure: None. Installation of Guide Stops to mitigate Possible Failures in Future

Suitability Evaluation (including Weld Process): [X] N/A JRS 4/23/00
Acceptable Per Westinghouse ~~FCN CBEM-10754~~ Drwg 4D98951 Rev 3

JRS 4/23/00
Supporting Technical Documentation:
~~FCN CBEM-10754~~ Drwg 4D98951 Rev 3
ER 9913429, Nonstructural weld per NB 5260 & NB-4131.2 98 Edition

Is the intended life of the repair or the item to be used for replacement less than the design life of the item being repaired or replaced? [ ] Yes [X] No [ ] N/A

Is application of an ASME code case symbol stamp required for the repair or replacement item? [ ] Yes [X] No [ ] N/A

Code Review:

- [x] Maintenance Replacement meets Original Code Requirements BAP 1600-5T2 Code Reconciliation #_____
- [ ] Modification Replacement meets Applicable Code Requirements
- [ ] Repair meets Applicable Code Requirements
- [ ] Replacement of Valves, Piping, and Fittings or Supports ≤ 1" NPS meets material and primary stress level requirements of applicable Code. BAP 1600-5T2 Code Reconciliation # _____
- [ ] Temporary Non-Code Piping Repair meets requirements of NRC Generic Letter 90-05 (NRC approval may be required).
- [ ] Not applicable.

Required ASME Examinations and Tests:

(Note: All NDE will be performed to the ComEd SPPM Procedures or Station Procedures unless otherwise noted in work instructions).

In-Process:	Post Maintenance:
1. Visual of Welds	1. VT-2 @ NOP
2. PT of Weld Blak	2.
3. Per Drwg 3D18417 Note 1	3.
4.	4.

Completed by _____ 6/23/00 7/12/00
Site Support Eng./ISI Group Date

Reviewed by N/A _____
Responsible Engineer (IWL Scope Only) Date

Reviewed by _____ (7/19/00) 8/18/00 20 9/23/00
ANI (For Welding)/ANII Date

(0768AA/WPF/111198-F)

Part 3 Repair/Replacement Report Completion Checklist

Mode of Failure/Suitability Evaluation (Part 2) Complete:	☒ Yes	☐ No	☐ N/A
Testing Requirements (Part 2) Satisfied:	☒ Yes	☐ No	☐ N/A
New Welds, Valves, Components Incorporated into ISI Program: NTS Item # _____	☒ Yes	☐ No	☐ N/A
Baseline Data Results Review Complete:	☒ Yes	☐ No	☐ N/A
ASME Code documentation included in Work Package:	☒ Yes	☐ No	☐ N/A
UFSAR Table A1.126-1 Update Initiated for Permanent Repair of Temporary Non-Code Piping Repair:	☐ Yes	☐ No	☒ N/A
Action Item, or equivalent, Initiated for Permanent Repair of Temporary Non-Code Piping Repair: NTS Item # _____	☐ Yes	☐ No	☒ N/A
ASME Form NIS-2 Form Initiated (thru part 7)	☒ Yes	☐ No	☐ N/A

Completed by: _____ ISI Group 12/6/00 Date

(Final)

(0768AA/WPF/111198-F)

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENT
As Required by the Provisions of the ASME Code Section XI

POOR QUALITY ORIGINAL

1. Owner Commonwealth Edison Company (Name) — Date 10/08/00
   One First National Plaza, Chicago, IL (Address) — Sheet 1 of 1
2. Plant Byron Nuclear Power Station (Name) — Unit
   4450 N. German Church Road, Byron, IL (Address) — Work Request No. 970122923-01, -03, -07 (Repair Organization, P.O. No., Job No., etc.)
3. Work Performed by PCI Energy Services * (Name) — Type Code Symbol Stamp Not Applicable
   Authorization No. Not Applicable
   One Energy Dr., Lake Bluff, IL 60044 (Address) — Expiration Date Not Applicable
4. Identification of System Reactor Coolant (RC)
5. (a) Applicable Construction Code Section III ~~1974~~ 1971 Edition, ~~S73~~ W73 Addenda, N/A-1 Code Case
   (b) Applicable Edition of Section XI Utilized for Repairs or Replacement Components 19 89
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No	National Board No	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
Guide Stops	PCI	H083059A/05 H083059A/06	n/a	1RC8002C s/n 04-114E937-G-03		Replacement	No
Field Weld FW-80	Hunter Corp.	n/a	n/a	1RC21AC-8" FW-80	1984	Replaced	No
Field Weld FW-80	PCI Energy Services	n/a	n/a	1RC21AC-8" FW-80	2000	Replacement	No
Field Weld FW-244	Hunter Corp.	n/a	n/a	1RC21AC-8" FW-244	1984	Replaced	No
Field Weld FW-244	PCI Energy Services	n/a	n/a	1RC21AC-8" FW-244	2000	Replacement	No
Field Weld FW-417	Hunter Corp.	n/a	n/a	1RC22AC-1 1/2" FW-417	1984	Replaced	No
Field Weld FW-417	PCI Energy Services	n/a	n/a	1RC22AC-1 1/2" FW-417	2000	Replacement	No
1 ½" Sched. 160 Pipe	Hunter Corp.	Ht #: 462294	N/a	1RC22AC-1/12"	1984	Replaced	No
1 ½" Coupling	ASP	Ht Code: HLT Ht #: A13856	N/a	1RC22AC-1 ½"	1998	Replacement	No

7. Description of Work: Install Guide Stops in 1RC8002C/Cut out & Re-install 1RC21AC, 1RC22AC/Install New Coupling
8. Test Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒
   Other ☐ Pressure 2238 psi Test Temp. 553 °F

Note: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8-1/2 in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

This form has been electronically generated

FORM NIS-2 (Back)

9. Remarks Invoked Code Case N-416-1 WR 970122923-01-03-07

Applicable Manufacturer's Data Reports to be attached

* Work also performed by: NES + Venture
555 S. Joliet Rd
Bolingbrook IL 61440

** 74/575 for piping with code edition.

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement report of replacement conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp Not Applicable

Certificate of Authorization No. Not Applicable Expiration Date Not Applicable

Signed [signature] Owner's Designee, Title ISI - Engr Date 12/6 ,20 00

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Illinois and employed by H.S.B.I.I. Co of Hartford, Ct. have inspected the components described in this Owner's Report during the period 7/21/00 - 5/13/07 to 12/06/07, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in the Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

[signature] Commissions IL-1654
Inspector's Signature National Board, State, Province, and Endorsements

Date 12/12 ,20 00