



## WO WORK PLAN

Work Control Document: WO # 9610564

Work Plan Originator: P. M. GERUM

Date: October 22, 1996

No.	Work Plan Description	Worker	Date
	<b>**MR 96-058*B , Relocation of U2 PPCS alarm **</b> Outage activity # 3828		
1	Modify PPCS alarm circuitry enclosure as follows: a) Configure sonalert wiring to connect two sonalert power wires to inner side enclosure terminal board connections 6 (BLACK) and 5 (WHITE). Use heat shrink on exposed connections. b) Label outer terminal board connection 6 as "V+" where newly connected inner wire color is (BLACK ) and terminal board connection 5 as "V-" where the newly connected inner color is (WHITE).	I&C	11-08
2 FME	At 2C20 cut a 1 1/8" hole as shown on Attachment 1. Provide adequate FME protection to catch foreign material from dropping into equipment. <i>SEE RE for further amplification on where hole is to be cut. CDR 12/24/96</i>	I&C	11-08
3	Mount sonalert in the hole that was cut. Label the panel area as "SP". File hole burrs.	I&C	11-09
4	Route 14 AWG SIS wiring from new PPCS sonalert location to PPCS alarm circuitry enclosure terminal board at bottom of panel per Responsible Engineer. Provide conductor strain with tywraps. Lug conductors.	I&C	11-09
5 QC	Check lugs on new conductors.	QC	11-09-96
6	Label ends of sonalert conductors <sup>AS below #11-461</sup> "V+" and "V-" and then at new sonalert, terminate at respective "+" and "-" terminals. Use heat shrink to insulate exposed connections. <i>AT SONALERT -&gt; X/SP-V+/SO-V+ and X/SP-V-/SO-V-</i> <i>AT Alarm circuitry enclosure box -&gt; X/50-V+/SP-V+ and X/50-V-/SP-V-</i>	I&C	11-09
	NOTE: Inform Control Operator that PPCS alarm will be removed from service and that the PPCS monitor will be sole means of alarm notification. In addition, commence frequent monitoring of PPCS alarm page.		
	CAUTION: THE WORK IN THE FOLLOWING STEPS MAY INVOLVE ENERGIZED WIRING (+15 VDC), USE APPROPRIATE ELECTRICAL SAFETY PRACTICES.		
7	Lift and tape all leads on old enclosure box terminal board, use wire removal form.	I&C	11-09
8	Remove old PPCS alarm enclosure and install newly modified PPCS alarm enclosure at same mounting position.	I&C	11-09

**MWR WORK PLAN**

Work Control Document: MWR # 9610564

Work Plan Originator: P. M. GERUM

Date: October 22, 1996

No.	Work Plan Description	Worker	Date
	<b>**MR 96-058*B , Relocation of U2 PPCS alarm **</b> Outage activity # 3828		
9	Land new leads from sonalert on respective PPCS alarm circuitry enclosure "+" and "-" terminal board connections.  Verify sonalert leads landed as stated above: _____ initials	IR I&C	11-09
10 PMT	Check the newly installed sonalert "+" and "-" conductors for continuity to ground. Acceptance: no continuity for "+", continuity for "-".		11-09
11	At PPCS alarm circuitry enclosure terminal board, land leads as removed per step 7 wire removal form.	I&C	11-09
	NOTE: Method of PPCS alarm initiation for testing determined by OPS depending on existing plant conditions		
12 PMT	Perform a test of the U2 PPCS alarm to verify the alarm is functional.		11-09
13 SQUG	Have a SQUG evaluation performed for the installation. <i>results attached</i>		12-11
14 PMT	Perform a sound level survey per Attachment 2. Acceptance criteria: 8 to 10 dB above background, no greater than 85 dB.		11-09
15	<i>MODIFY SPARE ALARM CIRCUITRY ENCLOSURE AS PER STEP 1 DIRECTIONS</i>		11-13
16	<i>AFTER STEP 14 IS COMPLETE REIT Baffle plate in "tuned" configuration</i>		12-11

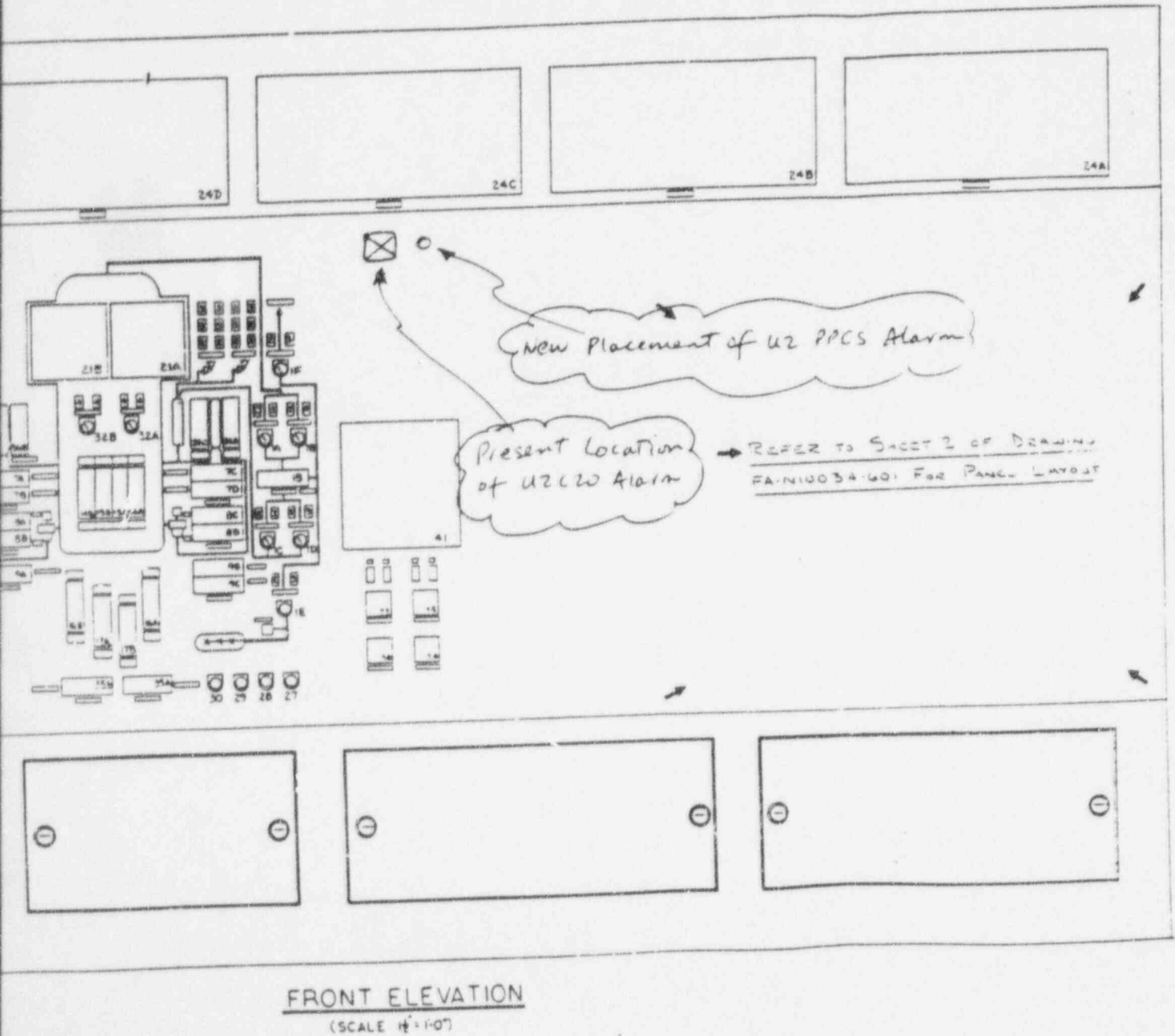
Attachment 1

MR-96-058+B

UNIT 2 configuration

Approximate PPLS Alarm placement

Copy of Mercury FA-N10034-601



ENTRY AREA

CONDUIT ENTRY AREA

**MR 96-058**  
**Post Installation Sound Level Survey**  
 Measured in dB (A)

Pre Survey Calibration: \_\_\_\_\_

Instrument used: Quest Model 215 Serial: M20500050

1C103	1C20	1C04	1C03	C01	C02	2C03	2C04	2C20	2C103	
61	61	60	59	59	61	61	61	61	55	background
82	84	80	72	77	74	X	X	X	X	unr data
X	X	X	X	72	76	76	80	83	75	unr data

Post Survey Calibration: \_\_\_\_\_

*All results at least 8 to 10 dB > background, but < 85dB*

*11-29-96*

**NUCLEAR POWER DEPARTMENT  
SAFETY EVALUATION REPORT**

SER \_\_\_\_\_  
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Title of Proposed Modification, Procedure Change, Test or Experiment: Relocation of the 1(2)C20 PPCS alarms

Reference Document(s) #: WO 9610563, WO 9610564, MR 96-058\*A, MR 96-058\*B

Prepared By: \_\_\_\_\_ Date: 10/4/96

Reviewed By: \_\_\_\_\_ Date: 10-15-96

MSS Review/Date: \_\_\_\_\_ MSS #: \_\_\_\_\_

Manager - PBNP Approval: \_\_\_\_\_ Date: \_\_\_\_\_

In lieu of MSS and Manager signature, attach PBF-0026d if serial review has been conducted. (MSS and manager approvals are not necessary for a determination of non-applicability.)

**Section 1**

**Screening - Determination if Safety Evaluation is Required**

- A. Describe the modification, procedure change, test, or experiment and its expected effects. Include interim configurations or conditions.

The 1(2)C20 PPCS alarms will be relocated from the inside of 1(2)C20 to the outside of the front panel of 1(2)C20 for better audibility of the alarm by the Control Operators. The PPCS alarm will be temporarily inoperable during disconnection and subsequent reconnection in the new circuit.

- B. Does the change, test or experiment involve a change in the Technical Specification? ☐ Yes ☒ No  
If a change is required, briefly describe what the change should be and why it is required.  
*NOTE: NRC approval is required prior to implementation.*

- C. Screening for 10 CFR 50.59 and 10 CFR 72.48 Applicability:

1. 10 CFR 50.59 Screening:

- a. Will any system, structure or component (SSC) described in the PBNP FSAR, including its figures, be altered? (Refer to NP 10.3.1, step 3.1.2 for exception. This question may be answered "no" although the SSC is described in the PBNP FSAR.) ☐ Yes ☒ No
- b. Could, within reasonable possibility, the proposed change affect the intended design, operation, function, or method of function, of an SSC important to safety which is described in the PBNP FSAR? (This includes interim conditions.) ☐ Yes ☒ No
- c. Will any procedure described in the PBNP FSAR be altered? (Refer to NP 10.3.1, Attachment A, Part E, for guidance.) ☐ Yes ☒ No
- d. Will a test or experiment be performed which is not described in the PBNP FSAR and affects the design, operation, function, or method of function, of an SSC important to safety which is described in the PBNP FSAR? ☐ Yes ☒ No
- e. Will implementation affect a prior documented regulatory commitment to the NRC pertaining to the design, operation, function, or method of function, of an SSC important to safety which is described in the PBNP FSAR? ☐ Yes ☒ No

**NUCLEAR POWER DEPARTMENT  
SAFETY EVALUATION REPORT**

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Section 1 - Continuation

- f. Is a 10 CFR 50.59 evaluation required (are any of the above questions answered yes)? ☐ Yes ☒ No

*NOTE: If no, then provide basis for decision in Part D.  
If yes, complete Sections 2 and 3.*

2. 10 CFR 72.48 Screening for the Independent Spent Fuel Storage Installation (ISFSI):

- a. Will any system, structure, or component (SSC) described in the ISFSI Licensing Basis document, including its figures, be altered? (Refer to Step 3.1.2 for exception. This question may be answered "no" although the SSC is described in the ISFSI Licensing Basis documents.) ☐ Yes ☒ No
- b. Could, within reasonable possibility, the proposed change affect the intended design, operation, function, or method of function, of an SSC important to safety which is described in the ISFSI Licensing Basis documents? (This includes interim conditions.) ☐ Yes ☒ No
- c. Will any procedures described in the ISFSI Licensing Basis documents be altered? ☐ Yes ☒ No
- d. Will a test or experiment be performed which is not described in the ISFSI Licensing Basis documents and affects the design, operation, function, or method of function, of an SSC important to safety which is described in the ISFSI Licensing Basis documents? ☐ Yes ☒ No
- e. Will implementation affect a prior documented regulatory commitment to the NRC pertaining to the design, operation, function, or method of function, of an SSC important to safety which is described in the ISFSI Licensing Basis documents? ☐ Yes ☒ No
- f. Is a 10 CFR 72.48 evaluation required (are any of the above questions answered yes)? ☐ Yes ☒ No

*NOTE: If no, then provide basis for decision in Part D.  
If yes, complete Sections 4 and 5.*

D. Basis for determination that a safety evaluation is not required:

The 1(2)C20 PPCS alarms will be relocated from the inside of the ASIP to the outside of the front panel of the ASIP for better audibility of the alarm as needed by the Control Operators and other Control Room personnel. The power supply of the alarm is from the +15 Vdc power supply in C174(C175), which respectively is A(B) train DC power. Train separation will be maintained in the new wire routing as per the original Stone & Webster specification 02-1 (J.O. #13754.02). The new alarm installation will be seismically evaluated and approved. QA materials will be used in the installation. The alarm will be relocated and new wire runs will be installed first and then disconnections and new terminations done last to minimize the amount of time the alarm is inoperable. The Control Operator will be informed prior to the alarm being inoperable, and then the Control Operator or dedicated operator will utilize the PPCS monitor as an acceptable interim identification method for an alarming condition. The Control Operator will then be subsequently informed when the new alarm circuit is connected. A test of the new alarm circuit will be done after installation. The manufacturers frequency specification of 2900 Hz  $\pm$  500 Hz meets the NUREG-000 recommended frequency band of 200 Hz to 5000 Hz. FME practices will be employed during pertinent installation activities. This modification will not change the PPCS and ASIP function or description as stated in the FSAR. The Main Control Board integrity will not be compromised by the mounting of the alarm. There is no unreviewed safety question. There is no ISFSI applicability and therefore a 10CFR72.48 evaluation is not required.



Restoration Date 11-09-96

PBF-0036  
Revision 2 04/29/94

Work Order No. 9610564

## Return to Service Testing Reviews

INITIALS  
Pre-Release / Pre or Post-RTS

### Work Group Post-Maintenance Testing

Continuity checks  
Functional test  
Sound level survey

Section XI Equipment Y (N)

Operability Testing None

Inservice Testing None

ENGINEERING REVIEW

SECTION XI ENGINEERING REVIEW



# WCC TRACKING

205 (52)

ORIGINAL \*\*\*\*\* PBNP \*\*\*\*\* WD No: 9619564  
WD Priority: 4 \* UNIT 2 \* MWD \* UNIT 2 \*  
Resp Group: ID \*\*\*\*\* HEADER PAGE \*\*\*\*\* Step Print: 10/23/96  
Equipment: C-020 System: MMS HP Zone:  
Equipment Name: AUX SAFETY INSTRUMENT PANEL (ASIP)  
Physical Location: 44/CB/CP Discovery Date: 09/19/96

Problem Description:  
RELOCATE THE UNIT 2 PPCS ALARM TO FRONT OF ASIP 2C20. COMMITMENT FOR  
RESPONSE TO CAL RIIT 96-12. DESIGN TO BE COMPLETE MID OCTOBER.

Originator: IPE Outage ID: U2R22 Activity: 3628  
Tag/Sticker Placed: N No: 97502 Tag/Sticker Lctn:  
Job Type: MODIFICATION SUPPORT Project ID: Condition Report: N  
Work Function: WORK ORDER  
Mod Req #: 96 - 058 B

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QA: Y	SEIS: 1	Operability Pre-Test: N	Procedures:
SR: Y	LCO: N		
EQ: N	PMT: Y	Operability Post-Test: N	Procedures:
SSA: Y	CIV: N	MRULE: Y	
A/P: P	CACC:		
RRN:			Tech Spec Ref: 3.5
QA Codes: 26		Sect XI Class:	
Tools Needed:			

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Work Plan/Instructions reviewed.	Planner:	ID S
LINE SUPERVISOR: 1111111111	NAME:	DATE: 10/24/96

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Plant Conditions: ANY CONDITION	Ignition Control Permit: N
Other Conditions:	Transient Combustible Permit: N
Fire Barrier Penetration Permit: N	RWP: N
Equipment Isolation Required: N	FME: Y
Isolation Tag Series #:	

Operability Pre-Test Complete: Equipment Isolation as requested.  
Permission granted to perform Work.  
Ops DSS Notification Req: (Y) Ops DSS Signature Date: 11/8/96  
=====

Special Notification:

Number of Steps: 001  
Acct #: 00 - 00000 - 1200138 - 00000  
MFG Code: MERCURY Tech Manual Cntl #:

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\* WORK ORDER CLOSEOUT \*

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Group Head Signature: ✓ Date: 12/14/96

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ORIGINAL \*\*\*\*\* PBNF \*\*\*\*\* WD No: 9610564001  
WD Priority: 4 \* UNIT 2 \* MWO \* UNIT 2 \*  
Resp Group: IC \*\*\*\*\* STEP DETAIL \*\*\*\*\* Step Print: 10/23/96  
Equipment: C-020 System: MMS HP Zone:  
Equipment Name: AUX SAFETY INSTRUMENT PANEL (ASIP)  
Physical Location: 44/CB/CR  
Sequence No: 01  
Short Desc: RELOCATE U2 PPCS ALARM

PLANNED: WORK PROCEDURES:  
Crew: I  
Shift: 2  
Class: 330

Work Plan Description:  
INSTALL NEW SONALERT PER THE ATTACHED WORK PLAN WRITTEN BY PAT GERUM.

QC REVIEW REQUIRED: Y LECLAIR, GENE IC S DATE: 102396

WORK PERFORMED: INSTALLED SONALERT PER WORK PLAN  
QAR LUGS 2 ea 4N 903-0781 2 ea 4N 903-1267  
PMI TESTED SAT PER WORK PLAN  
26 FEET SIS 14AWG WIRE 4N 908-7133

MTE: QAR: 9183  
11052  
12108

ACTUAL USED: CREW: I  
SHIFT: 2  
WORKER CLASS: 321  
NUMBER OF WORKERS: 1  
TOTAL HOURS: 10.0  
TTL EXPOSURE/STEP (MREM): 0

PARTS USED LIST ATTACHED: Y / N  
WO TAGS REMOVED: / N / NA WORK COMPLETE DATE: 11/9/96  
EMPLOYEE NUMBER: 2121 EMPLOYEE NAME:

\* WORK COMPLETED \*  
Cause Failure Code: PM / SVD / NRM /  
As Found-Out of Spec: Y / N / NA Machine History Review Required: Y / N  
Failed Component: N/A  
Corrective Action: NO RP/RE Downtime: \_\_\_\_\_ hrs  
LINE SUPERVISOR: \_\_\_\_\_ NAME: \_\_\_\_\_ DATE: 11/9/96

\* EQUIPMENT RETURN TO SERVICE \*  
Operability Post Testing: by work plan  
EQUIP. TAKEN OOS - DATE: 11/7/96 TIME: 0700 RTN DATE: 12/23/96 TIME: 1900  
Operability Procs Performed  
NON OPS SUPV: \_\_\_\_\_ NAME: \_\_\_\_\_ DATE: \_\_\_\_\_  
DSS: \_\_\_\_\_ NAME: \_\_\_\_\_ DATE: 12/23/96

IWP NUMBER:

95-035-01

#55

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## INSTALLATION WORK PLAN

PBNP MINOR PROCEDURE ☐**RECORD**Check As  
Applicable

Work Order

~~MAINTENANCE WORK REQUEST~~ WORK PLAN ☒

FOR MODIFICATION#

95-035

WO

MWR#

9604777

INSTALLATION WORK PLAN TITLE

SPRAY ADDITIVE TANK FLOW CONTROLLER VIC - 926A

UNIT 2☒ QA-SCOPE☐ NON QA-SCOPEOriginator [Signature]Date 6/3/96Reviewer [Signature]Date 7/23/96Final Des  
Group Head [Signature]Date 7/29/96Quality Engineer [Signature]Date 8/15/96Installation  
Group Head [Signature]Date 8/15/96Manager -  
Operations or DSS [Signature]Date 8/20/96

NOTE: Changes to this work plan must be done with the concurrence of the responsible or team engineer and the installation supervisor, or as delineated within the IWP.

DG-G02.5  
Revision 0