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REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

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 BAILEY,J.N.F. Arizona Public Service Co. (formerly Arizona Nuclear Power
 RECIP.NAME RECIPIENT AFFILIATION
 MARTIN,J.B. Region 5, Ofc of the Director

SUBJECT: Forwards joint engineering evaluations/nuclear engineering
 walkdown repts,per 8912101 mgt.

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NOTES:			1	1					

NOTE TO ALL "RIDS" RECIPIENTS:

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102-01575-JNB/TRB/RJR

January 22, 1990

JACK N. BAILEY
VICE PRESIDENT
NUCLEAR SAFETY AND LICENSING

Mr. John B. Martin, Regional Administrator
U. S. Nuclear Regulatory Commission
Region V
1450 Maria Lane, Suite 210
Walnut Creek, CA 94596-5368

Dear Sir:

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Docket Nos. STN 50-528 (License No. NPF-41)
STN 50-529 (License No. NPF-51)
STN 50-530 (License No. NPF-74)
Joint Engineering Evaluations (EED)/Nuclear Engineering (NED)
Walkdowns
File: 90-056-026

During the PVNGS/NRC Management Meeting of December 1, 1989, PVNGS management discussed three (3) joint EED/NED system walkdowns which were performed as part of the Unit 3 restart effort. The NRC requested copies of the reports on these joint walkdowns. Accordingly, copies of the reports are provided as Attachment 1.

The joint walkdown is one element in an overall program to improve Nuclear Engineering involvement in plant activities and to improve the NED/EED interface. Other program elements include (1) increased engineering interface meetings at all organizational levels to enhance communications, and (2) reestablishment of a Resident Engineering staff with the responsibility to support plant operation and provide solutions to plant problems. In addition, Nuclear Engineering is providing assistance with training in Design Basis and Configuration Management to the site Engineering staff.

Joint walkdowns between Engineering Evaluations, Nuclear Engineering, and Operations Computer Systems are being conducted on a periodic basis with an annual report which summarizes the years' activities and trends repetitive problems. The objective of this process is to determine the operational condition of the selected systems. In October 1989 the first of these walkdowns were conducted. Due to the newness of the walkdown process, an experienced consultant was used to provide additional assurance that the walkdowns were conducted in sufficient depth to identify conditions that would detract from the operational readiness of the systems. The consultant also served to increase the awareness and sensitivity of the engineers to potential system and component problems. The attached reports are the result of that effort.

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11

Mr. John B. Martin

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Those first three walkdowns and the resulting reports established the baseline data against which the joint walkdown process is now being evaluated and revised to ensure effective and efficient implementation. As a further aid in identifying possible enhancements, PVNGS is also reviewing walkdown programs implemented by other utilities. These activities are being conducted in accordance with the schedule discussed with your staff in recent management meetings.

If you have any questions regarding this effort, please contact Mr. Tom Cogburn at (602) 393-2900 or Mr. John Allen at (602) 340-4181.

Very truly yours,

A handwritten signature in dark ink, appearing to read "J. Bailey", with a long horizontal flourish extending to the right.

JNB/TRB/RJR/kj

Attachments

cc: W. F. Conway
M. J. Davis
D. H. Coe
A. C. Gehr

SYSTEM WALKDOWN CHECKLIST

SYSTEM	PK	UNIT 3	DATE 10-25-89	ENGINEER <u>Jude Clark</u> <u>BOB WELLBORN</u>
SYSTEM DESCRIPTION		CLASS 1E 125 VDC STATION BATTERIES		
EQUIPMENT INSPECTED		EPKAF11, EPKBF12, EPKCF13, EPKDF14		

	YES	NO	ACTION
I. General Area			
A. Room lighting is operable	✓		
B. Room clean, dry and free of debris	✓		
C. Temperature is between 60F and 77F	✓		
D. Ventilation system is operable	✓		
E. No transient materials	✓		
II. Equipment			
A. No maintenance required tags present		✓	* WR #'s
B. All cell jars clean and dry		✓	
C. No cracking/crazing of cell jars/tops	✓		
D. No bolts/hardware missing - battery	✓		
E. No bolts/hardware missing - rack	✓		
F. No intercell corrosion present	✓		
G. All electrolyte levels correct	✓		
H. No cells jumpered out/out of service	*	✓	*T-Mod #

COMMENTS WR 382344 CU CONTAMINATION F13; WR 384033 DOOR STOP MISSING - F14 ROOM

JAR F12-37/38 NEEDS TO HAVE LOWER CASE CLEANED

CELL F13-21 JUMPERED T-MOD 3-89-PK-109

SYSTEM WALKDOWN CHECKLIST

SYSTEM	PK1	UNIT	DATE	ENGINEER	JUDE CLARK
SYSTEM DESCRIPTION		CLASS 1E 125VDC SWITCHBOARDS			
EQUIPMENT INSPECTED		EPKAM41. EPKBM42. EPKCM43. EPKDM44			

	YES	NO	ACTION
I. General Area			
A. Room lighting is operable	✓		
B. Room clean, dry and free of debris	✓		
C. Temperature is between 60F and 77F	✓		
D. Ventilation system is operable	✓		
E. No transient materials		✓	
II. Equipment			
A. No maintenance required tags present	✓ *		*WR #'s
B. No abnormal noise or vibrations	✓		
C. Equipment is clean and dry	✓		
D. No bolts/hardware missing	✓		
E. No T-Mods are installed	✓		* T-Mod #
F. Voltage is between 129VDC and 140VDC	✓		
G. All instruments/lamps operable	✓		
H. Equipment operable and on-line	✓		

COMMENTS SCAFFOLD M42 ROOM WD 355853 TAG 006350

SYSTEM WALKDOWN CHECKLIST

SYSTEM	PK2	UNIT	DATE	ENGINEER	Jude Clark
SYSTEM DESCRIPTION		CLASS 1E 125VDC BATTERY CHARGERS			
EQUIPMENT INSPECTED		EPKAH11, PKBH12, PKCH13, PKDH14, PKAH15, PKBH16			

	YES	NO	ACTION
I. General Area			
A. Room lighting is operable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B. Room clean, dry and free of debris	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C. Temperature is between 60F and 105F	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D. Ventilation system is operable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E. No transient materials	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
II. Equipment			
A. No maintenance required tags present	<input type="checkbox"/>	<input checked="" type="checkbox"/>	WR #'s
B. All cell jars clean and dry	<input type="checkbox"/>	<input type="checkbox"/>	
C. Cracking/crazing of cell jars/tops	<input type="checkbox"/>	<input type="checkbox"/>	
D. Bolts/hardware missing - battery	<input type="checkbox"/>	<input type="checkbox"/>	
E. Bolts/hardware missing - racks	<input type="checkbox"/>	<input type="checkbox"/>	
F. Intercell corrosion present	<input type="checkbox"/>	<input type="checkbox"/>	
G. Electrolyte levels within T/S limits	<input type="checkbox"/>	<input type="checkbox"/>	
H. Cells jumpered out/out of service	<input type="checkbox"/>	<input type="checkbox"/>	

COMMENTS WR 379470 - REPLACE STRIPPED SCREW IN H16

ENGINEERING SKETCH PAD

BY: DOR WELBORN	DATE: 10-25-89	SUBJECT: PK SYSTEM WALKDOWN	SHEET NO.: 1 of 2
CHECKED BY:	DATE:		JOB NO.:

B. DC SWGR ROOM

1. NO HAS CONCERN ABOUT CORRECT LAMP REPLACEMENT
 - A. BULB REPLACEMENT NUMBER
 - B. REFERENCE TO EQUIPMENT
2. PKBM4214 27 B - PHENOLIC TAG MISSING SET @ 100.1VDC?
3. NED TO CHECK SEISMIC QUAL OF OUTPUT BREAKER ENCLOSURE ON SWING CHARGERS.
4. WR 379470 - REPLACE STRIPPED SCREWS IN PKBH16
5. LOWER RIGHT OUTPUT BREAKER FRAME BOLT MISSING. (H16)
6. NED TO CHECK CALC ON OUTPUT CABLES DURING CURRENT LM
7. IS PANEL SCHEDULE A CONTROLLED DOCUMENT i.e. D3EPKA006 & DRAWING ARE TAPED ON COVER OF PKBD22
8. SELF-ADHESIVE TAG HOLDERS COULD FALL INTO CLASS EQUIP. MOST ARE MISSING.
9. SCAFFOLD IN B SWGR ROOM W0355853 TAG 006356
10. FIREPROOFING HAS BEEN REMOVED FROM COLUMN BEHIND H16 CHARGER IN B SWGR ROOM
11. WR 384326 DOOR HANGING UP ON PNB226
- 12. IS DC LOW ALARM ON PN INVERTER LOW VOLT ALARM COORDINATED WITH MCC LOW VOLT ALARM
- 13. TIMER ON EQUALIZE CRT IN CHARGER CAN PUT CHARGER ON EQUALIZE IF NOT ALL THE WAY OFF. SHOULD BE DISABLED.
- 14. NO GUARD ON FLOAT/EQUALIZE SWITCH, ON H12 OR H16
- 15. SHOULD MORE THAN 1 BATTERY BE ON EQUALIZE AT THE SAME TIME? 1 MIN DISCHARGE COULD BE AFFECTED BY EQUALIZE.

ENGINEERING SKETCH PAD

BY: B. WELCH	DATE: 10-25-89	SUBJECT: PK SYSTEM WALKDOWN	SHEET NO.: 2 of 2
CHECKED BY:	DATE:		JOB NO.:

B BATTERY ROOM

1. FOREIGN RED MATERIAL FLOATING ~~IN~~ CELL 45
2. JAR 37/38 NEEDS TO HAVE SOA CLEANED FROM LOWER CASE.

D BATTERY

1. ~~WR~~ 384033 DOOR STOP MISSING - BATTERY ROOM DOOR

D SWITCHGEAR ROOM

1. COLORS OF INDICATING LIGHTS ON 3E PKDB44 ARE ...
RED-OPEN, GREEN CLOSED (VALUE ON INVERTER - SICUVGS)
NO VALUE IDENTIFICATION ON DISCONNECT

C SWITCHGEAR ROOM

1. 3E PKCB43 FOR SICUVGS3 - SAME AS ABOVE FOR GS4

C BATTERY ROOM

1. WR382344 COPPER CONTAMINATION IN CELLS
2. T-MOD 3-89-PK-109 JUMPER CELL 21

A BATTERY ROOM

A SWITCHGEAR ROOM

1. NO GUARDS ON EQUALIZE SWITCH H11, H13 H15
2. NO LABEL ON M4119 27B
3. ONE FUSE IN H15 IS "ECONOMY 2FA 500" REST ARE "TRON KAK 500" = ?
4. DRAWINGS TAPED TO DOOR OF DZI PANEL



PVNGS WORK REQUEST

ORIGINATOR					
WR NO: 347074	ORIGINATOR NAME: BOB WELBORN	STA. NO.: 6078	EXT.: 2674	DATE: 10/27/89	TIME: 0800
EQUIPMENT TAG NO.: MISC 3PK	NPRDS COMPONENT CODE:	EQUIPMENT FUNCTION DESCRIPTION: 12SUDC CLASS 1E POWER			
LOCATION: 100' CONTROL	UNIT: 3	PLANT FAILURE MODE: 5	STATUS AT FAILURE: A	FAILURE DETECTION: B	
PROBLEM DESCRIPTION: THE ITEMS LISTED ON THE ATTACHED PAGE ARE DEFICIENCIES THAT WERE IDENTIFIED ON PK SYSTEM WALKDOWN ON 10/25/89					
RECOMMENDED ACTION: REWORK AS REQUIRED					
REFERENCES: (P&ID, TECH. MANUALS, ETC.)				ADDITIONAL INFORMATION ATTACHED: (CHECK ONE) <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
MAINTENANCE REQUIRED TAG HUNG? (CHECK ONE) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> CRDL		LOCATION OF MAINTENANCE REQUIRED TAG: NA			
ORIGINATING SUPERVISOR					
NAME: (PRINTED) D. W. Wines		SIGNATURE/DATE/EXT./STA. NO.: D. W. Wines / 10-27-89/6078		TECH. SPEC. RELATED? (CHECK ONE) <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
RELEASING ORGANIZATION					
ROOT CAUSE ANALYSIS REQUIRED? (CHECK ONE) <input type="checkbox"/> YES <input type="checkbox"/> NO		EER NO.:	RESTRICT MODE:	EFFECT ON SYSTEM:	EFFECT ON PLANT:
					PLANT MODE: 1 2 3 4 5 6 7 8 9 0
TSCCR/CRDL NO.:		SIGNATURE/DATE/EXT.:			PRIORITY: 1
					NEED DATE:
COMMENTS:					
WORK CONTROL CENTER					
RECEIVED AND INPUT BY:		DATE:	TIME:	SPECIAL CONDITIONS:	WORK CENTER:
					DISCIPLINE:
DISPOSITION (CHECK ONE)		COMMENTS:			
<input type="checkbox"/> WR CANCELLED, DUPLICATE OF _____					
<input type="checkbox"/> WR NOT APPROVED, SEE COMMENTS					
<input type="checkbox"/> BLANKET WO ISSUED					
<input type="checkbox"/> WO ISSUED, WO NO. _____					
<input type="checkbox"/> WR CANCELLED, SEE WO NO _____					
		WORK CONTROL REVIEWER:		EXT.:	DATE:

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ENGINEERING SKETCH PAD

BY:	DATE:	SUBJECT: WR 347074	SHEET NO.: 2 of 2
CHECKED BY:	DATE:		JOB NO.:

1. THE BOLT IS MISSING FROM THE LOWER RIGHT FRAME FOR THE DC OUTPUT BREAKERS ON 3EPKBH16.
2. UNCONTROLLED DRAWINGS AND PORTIONS OF DRAWINGS THAT ARE TAPED IN THE DISTRIBUTION PANELS IN 3EPKAM41, 43 & PKBM42, 42 SHOULD BE REMOVED OR IDENTIFIED "INFORMATION ONLY".
3. GUARDS TO PREVENT ACCIDENTAL SWITCHING OF THE FLOAT/EQUALIZE SWITCH ARE MISSING ON PKAH11, 415 & PKBH12 & H16.
4. EXTERNAL SURFACES OF EQUIPMENT ARE DUSTY/DIRTY.
5. DOORS TO MCC CUBICLES IN PKAM41, M43 & PKBM42, 42 ARE STUCK TO GASKETING FROM RECENT REPAINTING OF MCCS.
6. A PORTION OF THE FIREPROOFING IS MISSING FROM COLUMN IN THE NORTHWEST CORNER OF THE "B" DC SWITCHGEAR ROOM (BEHIND PKAH16 CHARGER).
7. TYGON TUBING IS CONNECTED FROM EYE WASH STATIONS TO FLOOR DRAINS IN "A", "B", "C", & "D" BATTERY ROOMS.

SYSTEM ENGINEER
WALKDOWN LOG NOTES
CONTINUATION PAGES

C.H. Walkdown

PAGE ____ OF ____

ITEM NO.	COMPONENT ID	PROBLEM DESCRIPTION	ACTION DOC
1	3MCHBP01	- Suction Flange leak - Cracked plexiglass	W.R. 338433
2	3MCHNP02A	Mechanical seal leak	W.R. 326576
3	3MCHNP02B	- Mechanical seal leak - Remove tape on motor	W.R. 326577
4	3MCHNP03A	Oil seal leakage	W.R. 326578
5	3MCHNP04A	Mechanical seal leak	W.R. 326579
6	3MCHNP04B	- Mechanical seal leak - Check oil level	W.R. 326580
7	3MCHNP07B	Replace pump casing insulation	W.O. 372560
8	3MCHNP08A	Replace casing drain cap	W.R. 326581
9	3MCHNP08B	Replace casing drain cap	W.R. 326582
10	3MCHNP09A	Replace casing drain cap	W.R. 326583
11	3MCHNE04	- Investigate leaks on skid - Clean boric acid off skid	W.R. 326581, 326582, 326583, 326584
12	3MCHNP09B	Investigate pump leaks	W.R. 326584
13	3MCHNP10B	- Replace pump casing insulation - Check oil level	W.R. 326585
14	3MCHNE07	Install insulation on heat exchanger flange	W.R. 326586
15	3JCHEUV0500	Packing leak	W.R. 326587
16	3JCHEHV0532	- Valve bonnet leakage - Actuator air pressure low	W.R. 326588
17	3JCHBHV0530	- Clean boric acid off bonnet bolts - Adjust valve packing if required	W.R. 326589
18	3JCHAHV0531	- Clean boric acid off bonnet bolts - Adjust valve packing if required	W.R. 326590
19	3JCHEHV0536	Packing leak	W.R. 326591
20	3JCHNUV0567	Actuator air pressure low	W.R. 326592
21	3JCHEFV0241	Packing leak	W.R. 326593
22	3JCHEFV0242	Packing leak	W.R. 326594
23	3JCHEFV0243	- Packing leak - Valve bonnet leak	W.R. 326595
24	3JCHEFV0244	Packing leak	W.R. 326596

SYSTEM ENGINEER
WALKDOWN LOG NOTES
CONTINUATION PAGES

PAGE ____ OF ____

ITEM NO.	COMPONENT ID	PROBLEM DESCRIPTION	ACTION DOC
25	3JCHAHV0507	Packing leak !!	W.R. 326597
26	3JCHNPSV0199	Valve bonnet leak	W.R. 326598
27	3JCHBV0515	- Clean boric acid off bonnet bolts - Identify and repair any leaks	W.R. 326599
28	3PPCNV024	Replace valve insulation	W.R. 326600
29	3MCHNX08	Repair leakage around temp. element 3JCHNTE0283	W.O. 322066
30	3JCHNRT0265	Inlet and outlet flange leaks	W.R. 338436
31	3PCHNVX61	Investigate and repair valve leaks	W.R. 338437
32	3MCHNT03	- Repair or replace crushed or missing insulation on pipes and valves - Repair leaks around heaters 3MCHNH02 and 3MCHNMO3	W.R. 338438 W.R. 338439
33	3PCHNV925	Repair valve bonnet leak	W.O. 360916
34	3PCHNVR91	- Clean boric acid around vent cap - Tighten cap	W.R. 338440
35	3PCHNVX61	- Clean boric acid around vent cap - Tighten cap	W.R. 338441
36	3PCHEV961	- Clean boric acid around cap - Tighten cap	W.R. 338442
37	3PCHBV943	Packing leak	W.R. 338443
38	3MCHNF25	Flange leak	W.O. 324766
39	3PCHNVX50	Insulate valve :	W.R. 338444
40	3PCHNVR06	Insulate valve	W.R. 338445
41	3PCHNV074	Cap leak	W.R. 338446
42	3PCHNVX11	- Replace valve insulation - Investigate and repair valve leaks	W.R. 338447
43	3PCHEVX12	Cap leak	W.R. 389471
44	3CH027H00E	- Reattach tag to snubber - Tag on I-beam near snubber	W.R. 389472
45	3PCHNV063	Cap leak	W.R. 389473
46	3ECHNJ100	- Replace cracked flex conduit Conduit # 3E2C1CMRR28	W.R. 389474
47	3PCHNV815	Packing leak	W.R. 389475

PAGE OF

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AF Walkdown
Work Request



PVNGS WORK REQUEST

ORIGINATOR							
WR NO.: 335246	ORIGINATOR NAME: <i>J. W. Moreland</i>		STA. NO.: <i>6077</i>	EXT.: <i>651</i>	DATE: <i>10/26/89</i>	TIME: <i>0226</i>	
EQUIPMENT TAG NO.: <i>AF A H V 54</i>	NPRDS COMPONENT CODE: <i>11066X</i>		EQUIPMENT FUNCTION DESCRIPTION: <i>T & T valve</i>				
LOCATION: <i>W355</i>	UNIT: <i>3</i>	PLANT FAILURE MODE: <i>F</i>	STATUS AT FAILURE: <i>D</i>	FAILURE DETECTION: <i>H</i>			
PROBLEM DESCRIPTION: <i>On the trip linkage pin #6 is partially disengaged. Had burg of 2989 from I/M copy attached</i>							
RECOMMENDED ACTION: <i>Restore pin #5 to the correct position & replace the cot screw #7 check the remaining pins for engagement & set screw</i>							
REFERENCES: (PAID, TECH. MANUALS, ETC.) <i>TCR 38</i>				ADDITIONAL INFORMATION ATTACHED: (CHECK ONE) <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			
MAINTENANCE REQUIRED TAG HUNG? (CHECK ONE) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> CRDL		LOCATION OF MAINTENANCE REQUIRED TAG:					
ORIGINATING SUPERVISOR							
NAME (PRINTED): <i>Johnson K</i>		SIGNATURE/DATE/EXT./STA. NO.: <i>Johnson K 6077</i>			TECH. SPEC. RELATED? (CHECK ONE) <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		
RELEASING ORGANIZATION							
ROOT CAUSE ANALYSIS REQUIRED? (CHECK ONE) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		EER NO.:	RESTRICT MODE:	EFFECT ON SYSTEM:	EFFECT ON PLANT:	PLANT MODE: 1 2 3 4 5 6 7 8 9 0	
TSCCR/CRDL NO.:		SIGNATURE/DATE/EXT.:				PRIORITY: NEED DATE:	
COMMENTS:							
WORK CONTROL CENTER							
RECEIVED AND INPUT BY:		DATE:	TIME:	SPECIAL CONDITIONS:	WORK CENTER:	DISCIPLINE:	
DISPOSITION (CHECK ONE)		COMMENTS:					
<input type="checkbox"/> WR CANCELLED, DUPLICATE							
<input type="checkbox"/> WR NOT APPROVED, SEE COMMENTS							
<input type="checkbox"/> BLANKET WO ISSUED							
<input type="checkbox"/> WO ISSUED, WO NO.:							
<input type="checkbox"/> WR CANCELLED, SEE WO. NO.		WORK CONTROL REVIEWER: EXT: DATE:					

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SYSTEM ENGINEER'S WALKDOWN
CHECKLIST AND GUIDELINE

73DP-9ZZ01

Revision

1

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EXHIBITSYSTEM ENGINEER WALKDOWNLog Notes

System:

AF

System Engineer:

Moreland

(print)

Unit #:

3

Design Engineer:

Phalen

(print)

Walkdown Date:

10/24/99

Submittal Date:

10/31/99

Walkdown Satisfactory?

☒

Yes

No (Provide Reason)

Problem Summary:

See page 2

Has Problem Been Identified Before?

Yes

No

Previous Problem Actions Taken:

N/A

Walkdown Performed By:

Moreland / Phalen

Reviewed By:

Date:

CC: Discipline Supervisor (EED)
Discipline Supervisor (NED)
EED Manager
NED Manager
21-11-11



NUCLEAR ADMINISTRATIVE AND TECHNICAL MANUAL

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SYSTEM ENGINEER'S WALKDOWN
CHECKLIST AND GUIDELINE

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EXHIBIT

CONTINUATION PAGE(S) SYSTEM ENGINEER WALKDOWN LOG NOTES

Item Number	Component Tag Number	Description of Problem/Concern	Action Document
#1	3JAFAHV54	Linkage Pin	WR 335246
#2	3JZJAEO1	Missing Dogs	WR 335247

SYSTEM ENGINEER'S WALKDOWN
CHECKLIST AND GUIDELINE

73DP-9ZZ01

Revision

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SYSTEM ENGINEER WALKDOWN
CHECKLIST/GUIDELINE

Purpose: The following items are not intended to be system specific, however, they are intended to provide a generalized listing of typical items that should be checked and/or inspected.

This checklist is intended only to be a guide. Items may be omitted as not applicable and items may be added at the discretion of System Engineer.

Mechanical Items

Valves:

- OK Valve packing gland condition, leakage available remaining margin on gland bolts
- OK Valve stem surface condition
- OK Manual valve operator status condition
- OK Motor operators - check for signs of oil leaks and gauling on stem threads
- N/A Solenoid operators, check for overheating of electrical coils, plugging of pneumatic vent openings
- N/A Pneumatic operators, check for excessive piston blowby or leaks through diaphragms
- OK Valve general cleanliness and indications of surface corrosion
- N/A Where feasible, check for through seat leakage
- OK Check physical mounting integrity of limit switches
- OK Check for valve bonnet leaks
- N/A Check stable operation on control valves
- OK Check installation/mounting details for seismic mounting

NUCLEAR ADMINISTRATIVE AND TECHNICAL MANUAL

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SYSTEM ENGINEER'S WALKDOWN CHECKLIST AND GUIDELINE

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Rotating Equipment

- OK General cleanliness
- OK Leakages, casing joints and shaft seals
- OK Lubrication, ~~oil pressure, slinger ring action, correct oil levels, use of correct type and amount of lubricant, filter change outs,~~ ^{N/A} unobstructed vent openings, excessive leakage.
- OK Installation of protective guards on rotating parts, hold down hardware in place
- N/A Check for abnormal noises or vibrations

Heat Exchangers

- OK General Cleanliness
- N/A Check seals on relief valves
- N/A Check for body/casing leaks
- N/A Condition of thermal sliding bases

Piping

- N/A No excessive vibration or motion
- OK Piping supports and hangers are properly installed
- OK Thermal insulation in place
- N/A No boric acid chemical attack or exposure present

I & C Items:

Field Mounted Instruments

- N/A Inspect the integrity of the mounting
- OK Check that the tubing/wiring is not detached, kinked or otherwise showing signs of damage
- OK General condition of the device, indicator bent, face plate broken, etc.
- N/A Pneumatic devices, leaking regulators, broken gauges, loose linkage on positioners

SYSTEM ENGINEER'S WALKDOWN
CHECKLIST AND GUIDELINE

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Field Mounted Instruments (Cont'd)OK Check that protective covers are in place and fasteners securedOK Check for process fluid leaksControl CabinetsOK General CleanlinessOK Physical Mounting (Check hardware if accessible)OK Protective covers in place with fasteners secure *3121AED1*N/A Proper cabinet cooling and/or ventilationElectrical ItemsMotors:OK General CleanlinessOK Physical mounting of motorsOK LubricationOK Ventilation conditions, filters, oil/dirt buildup on windingsElectrical Enclosures:OK Conditions of seals and closure devicesOK General CleanlinessOK General Mounting requirementsCables:OK General CleanlinessOK Proximity to hotpipesOK Oil ContaminationOK Weathering from the elementsOK Heat Stress signs



PVNGS WORK REQUEST

ORIGINATOR							
WR NO: 335247	ORIGINATOR NAME: Jim Moreland	STA. NO.: 6077	EXT.: 2631	DATE: 10/31/87	TIME: 830		
EQUIPMENT TAG NO.: 7525AED1	NPROS COMPONENT CODE:	EQUIPMENT FUNCTION DESCRIPTION: Turbine Control Cabinet					
LOCATION: 80' / M555	UNIT: 3	PLANT FAILURE MODE: 6	STATUS AT FAILURE: A	FAILURE DETECTION: J			
PROBLEM/DESCRIPTION: Hoffman control cabinet missing two closure "logs"							
RECOMMENDED ACTION: Replace missing logs							
REFERENCES: (P&ID, TECH. MANUALS, ETC.)				ADDITIONAL INFORMATION ATTACHED: (CHECK ONE) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
MAINTENANCE REQUIRED TAG HUNG? (CHECK ONE) <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> CRDL		LOCATION OF MAINTENANCE REQUIRED TAG:					
ORIGINATING SUPERVISOR							
NAME (PRINTED): Johnson, K	SIGNATURE/DATE/EXT./STA. NO.: Johnson, K 6/6 AM			TECH. SPEC. RELATED? (CHECK ONE) <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			
RELEASING ORGANIZATION							
ROOT CAUSE ANALYSIS REQUIRED? (CHECK ONE) <input type="checkbox"/> YES <input type="checkbox"/> NO	EER NO.:	RESTRICT MODE:	EFFECT ON SYSTEM:	EFFECT ON PLANT:	PLANT MODE: 1 2 3 4 5 6 7 8 9 0		
TSCCR/CRDL NO.:	SIGNATURE/DATE/EXT.:			PRIORITY:	NEED DATE:		
COMMENTS:							
WORK CONTROL CENTER							
RECEIVED AND INPUT BY:		DATE:	TIME:	SPECIAL CONDITIONS:	WORK CENTER:	DISCIPLINE:	
DISPOSITION (CHECK ONE)		COMMENTS:					
<input type="checkbox"/> WR CANCELLED, DUPLICATE OF _____							
<input type="checkbox"/> WR NOT APPROVED, SEE COMMENTS							
<input type="checkbox"/> BLANKET WO ISSUED							
<input type="checkbox"/> WO ISSUED, WO NO. _____							
<input type="checkbox"/> WR CANCELLED, SEE WO. NO. _____		WORK CONTROL REVIEWER:		EXT	DATE:		

ORIGINAL Copy: WCC • PINK Copy: ENGINEERING • CANARY Copy: ORIGINATOR

