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UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

JUN 24 1990

Docket Nos. 50-528, 50-529, and 50-530
License Nos. NPF-41, NPF-51, and NPF-74

Arizona Public Service Company
P. O. Box 52034
Phoenix, Arizona 85072-2034

Attention: Mr. W. F. Conway
Executive Vice President

Gentlemen:

The Confirmatory Action Letter of December 24, 1989, described our understanding of the actions you intended to take prior to the restart of Palo Verde Unit 1. In your letter dated June 24, 1990, you certified that you had completed all restart action items applicable to Unit 1. Based on that certification, the briefing you provided to the NRC staff on April 10, 1990, the subsequent discussions held between our staffs, and our review of your completed work actions, we concur that restart of Unit 1 may proceed.

Post-restart actions were identified in your letter dated June 8, 1989, and updated in letters dated November 6, 1989, December 9, 1989, April 12, 1990, and June 15, 1990. We have periodically reviewed the status of these actions and conclude that your actions thus far are acceptable. We will continue to monitor your progress towards the full resolution of these issues.

Based on the above, we are closing the December 24, 1989, Confirmatory Action Letter.

Sincerely,

for J. B. Martin
Regional Administrator

cc: J. Taylor, EDO
T. Murley, NRR
E. Jordan, AEOD
J. Partlow, NRR
G. Holahan, NRR
J. Larkins, NRR
J. Lieberman, OE
J. Sniezek, EDO

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PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE--PNO-V-89-07 Date 3/3/89

This preliminary notification constitutes EARLY notice of events of POSSIBLE safety or public interest significance. The information presented is as initially received without verification or evaluation and is basically all that is known by Region V staff on this date.

FACILITY: ARIZONA NUCLEAR POWER PROJECT
PALO VERDE UNIT 3
DOCKET NO. 50-530
WINTERSBURG, AZ

Emergency Classification
_X_ Notification of Unusual Event
___ Alert
___ Site Area Emergency
___ General Emergency
___ Not Applicable

SUBJECT: UNUSUAL EVENT DUE TO APPARENT GRID DISTURBANCE

Palo Verde Nuclear Generating Station, Unit 3, declared an Unusual Event (UE) at 1:39 A.M. (MST), March 3, 1989, following loss of the non-Class 1E 13.8 KV busses (S01 and S02) powering the Reactor Coolant Pumps (RCPs). Unit 3 was operating at approximately 98% when at 1:05 a.m. (MST) feeder breakers to a 525 KV transmission line opened on the site's 525 KV ring bus. Unit 3's main generator tripped followed by a reactor power cutback due to the main generator trip, and by a reactor trip on low #2 Steam Generator (SG) pressure at approximately 919 psia. Concurrent with the reactor trip, a Main Steam Isolation Signal was received as expected due to the low SG pressure. In addition, a Safety Injection Actuation Signal (SIAS) and Containment Isolation Actuation Signal (CIAS) were received due to reaching the low pressurizer pressure setpoint of approximately 1837 psia. The 13.8 KV non-Class 1E busses, supplying power to the RCPs and Circulating Water Pumps (CWPs) failed to fast transfer to their alternate source, thereby causing a loss of RCPs and loss of forced reactor coolant circulation. Both Emergency Diesel Generators (EDGs) started due to the SIAS, but the Class 1E 4.1 KV emergency busses remained powered from their normal offsite source throughout the event. Operators stabilized plant conditions in Mode 3 with natural circulation heat removal. Primary plant pressure, temperature, and SG pressures and level were restored to normal post trip values. Throughout the event, operators were unable to operate the four Atmospheric Dump Valves, used for safe shutdown cooldown, from the Control Room or the Remote Shutdown Panel. Operators controlled these valves locally with their handwheels. At least one Main Steam Safety Valve lifted momentarily during the event.

The UE was terminated at 2:52 a.m., following restoration of power to these busses. An NRC resident inspector arrived in the Control Room at approximately 3:15 a.m. At that time, operators had reopened the Main Steam Isolation Valves (MSIVs) and were using the two Steam Bypass Control System (SBCS) valves which dump to atmosphere to control SG heat removal from the Control Room. At approximately 4:15 a.m., two RCPs were restarted and forced cooling flow was restored. The licensee reported that several valves and dampers which receive ESF actuation signals may not have responded correctly to these signals and were manually placed in their actuated position by Control Room operators. In addition, following the reactor trip, the Control Room radiation monitor display lost power for a period of 1 to 2 hours. Finally, following the reactor trip, operators noted an approximate 2.0 gpm increase in one containment sump level due to unidentified leakage. The licensee is considering the ADVs inoperable.

NRC inspectors are closely following the licensee's actions. An Augmented Inspection Team will be dispatched to the site March 3, 1989. Unit 3 was expected to enter a refueling outage on March 7, 1989, and the licensee does not presently intend to restart Unit 3 prior to commencing that outage.

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The licensee issued a brief statement at 4:40 a.m. MST announcing the UE and reactor trip, and is continuing to provide information to local media as it becomes available.

This information is current as of 12:00 p.m. (PST), March 3, 1989.

CONTACT: L. Miller (FTS 463-3860) T. Polich (602) 386-3650

DISTRIBUTION BY 5520:
Date 3/3/89 Time 1:00 pm PST

Chairman Zech	EDO	RI
Comm. Roberts	AEOD	RII
Comm. Carr	PAO	RIII
Comm. Rogers	SLITP	RIV
Comm. Curtiss	NRR	
SECY	NMSS	
CA	ARM	
OI		
OGC	OIA	
ACRS	RES	
GPA		

FAX TO:
Date _____ Time _____
INPO
NSAC
LICENSEE
RESIDENT INSPECTOR
HQS. OPERATIONS OFFICER
PDR (202)634-3343
MAIL TO:
DCS (Original)
DOT:(Trans. Only, Applicable State)

RV FORM 211
Revised: 8/19/87

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE--PNO-V-89-07A Date 3/6/89

This preliminary notification constitutes EARLY notice of events of POSSIBLE safety or public interest significance. The information presented is as initially received without verification or evaluation and is basically all that is known by Region V staff on this date.

FACILITY: ARIZONA NUCLEAR POWER PROJECT
PALO VERDE UNIT 3
DOCKET NO. 50-530
WINTERSBURG, AZ

Emergency Classification
__X_Notification of Unusual Event
____Alert
____Site Area Emergency
____General Emergency
_____Not Applicable

SUBJECT: UPDATE ON PNO-V-89-07 (UNUSUAL EVENT DUE TO GRID DISTURBANCE)

Following the Palo Verde Nuclear Generating Station, Unit 3, plant trip on March 3, 1989, Region V formed an Augmented Inspection Team (AIT) which assembled on-site on March 4, 1989, to investigate the March 3, 1989, Unusual Event. The following sequence of events describe the team's understanding of the event as of 1:30 p.m. (MST), March 6, 1989.

Sequence of Events (March 3, 1989):
Mountain Standard Time (MST)

0102 An electrical fault on one of four 525 KV transmission lines (the Devers line) caused the opening of the 525 KV breakers feeding the faulted line. Approximately 13 cycles later the Unit 3 525 KV main generator output breakers also opened generating a Unit 3 full load rejection. The licensee does not yet understand why the Unit 3 generator output breakers opened.

The main generator load rejection initiated a Reactor Power Cutback, as designed, to reduce reactor power and bypass main steam to the main condenser in order to equalize reactor power, and steam load at approximately 45 % of full power. In this condition the generator would be left supplying power to in-house loads only, through the auxiliary transformer.

The bypassing of main steam to the condenser is controlled by the Steam Bypass Control System (SBCS). The SBCS failed to properly control steam loads to the condenser. Some of the valves cycled repeatedly through their full range. The cause of this failure is not yet fully understood by the licensee.

0103 The malfunctioning SBCS decreased steam generator pressure to the reactor trip setpoint of approximately 919 psia. In addition to the reactor trip, a Main Steam Isolation Signal (MSIS) was received, as designed. At the same time a turbine trip was initiated by the reactor trip, removing power from in-house non-class 13.8 KV busses (S01 and S02) which supply reactor coolant pumps (RCPs). The increased secondary heat removal also caused primary reactor coolant system (RCS) temperatures to decrease, causing decreasing pressurizer level and pressure.

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IE-34 8/2
2.

Due to decreasing RCS pressure, approximately six seconds following the reactor trip, a Safety Injection Actuation Signal (SIAS) and Containment Isolation Actuation Signal (CIAS) were received. When Main Steam Isolation Valves closed due to the MSIS, steam generator pressures and RCS temperatures and pressures began recovering to their normal post-trip values.

The SO1 and SO2 busses which lost power following the turbine trip are designed to fast transfer to other busses powered from off-site sources in order to maintain RCP operation. However, a fast transfer did not occur for either bus. The fast transfer was prevented from occurring, due to the SO1 and SO2 busses not being in sufficient synchronization with the off-site source due to the main generator coastdown. Thus, forced reactor coolant circulation was lost. With the MSIVs shut, the preferred method of establishing steam generator heat removal for natural circulation cool down is with the safe shutdown Atmospheric Dump Valves (ADVs).

0103 (Approximately) Operators noted that the following equipment indicated that it had received a safety signal (SIAS, CIAS, or MSIS) but could not verify that the equipment was in its actuated position:

Auxiliary building damper M06
Auxiliary building basement pump room isolation dampers - HAA-HS-114
Steam Trap Isolation Valves - SG-1134 and SG-1135
Steam Generator No. 1 Cold Leg Blowdown Sample Isolation Valve - SG-UV-228
No. 1 Steam Generator MSIV Bypass Valve - SGE-UV-169
H_2 Purge Containment Isolation Valve - HPA-UV-001

Several of these appear to be indication problems. This list is preliminary.

0105 (Approximately) Control room operators discovered they could not control the ADVs from the control room. These valves have no automatic control.

0111 Main Steam Safety Valve 579 lifted at least twice.

0125 (Approximately) Operators unsuccessfully attempted to operate at least one ADV from the Remote Shutdown Panel (RSP).

0126 ADV control was shifted back to the Control Room. A second attempt to operate ADVs from the Control Room was unsuccessful.

0139 Operators declared an Unusual Event based on the loss of 13.8 KV power to the SO1 and SO2 busses concurrent with SIAS on low RCS pressure.

0140 Auxiliary Operators attempted local manual hand wheel operation of the ADVs. ADV 178 and 185 were controlled in this manner to restore steam generator pressure control. ADV 179 hand wheel was operated in the shut direction using a "cheater" bar which broke a portion of the valve actuator, cracked the housing, and rendered the valve inoperable.

0207 Operators unsuccessfully attempted to open #1 steam generator MSIV bypass valve from the control room.

0222 Operators successfully opened #1 steam generator MSIV bypass valve manually at the valve.

0230 Operators opened #2 steam generator MSIV bypass valve from the control room. Operators then began controlling steam generator heat removal from two SBCS valves which dump to atmosphere. (Main condenser vacuum had been lost due to the loss of Circulating Water Pumps powered from S01 and S02)

0232 Bus S01 was reenergized from its off-site source.

0238 MSIS was reset.

0239 Operators secured use of ADVs for steam generator heat removal.

0241 SIAS and CIAS were reset.

0243 Bus S02 was reenergized from its off-site source.

0252 The Unusual Event was terminated.

0315 NRC resident arrived in Control Room.

0449 RCP 1A was restarted.

0455 RCP 2A was restarted.

In accordance with their incident investigation procedures, the licensee has formed an investigation team to identify and resolve the concerns arising from this event. In addition, they have implemented quarantine controls on all equipment which did not or which may not have functioned correctly. Region V has issued a Confirmatory Action Letter requiring review by the AIT prior to removing quarantine controls for troubleshooting or root cause of failure analysis.

This information is current as of 3:30 p.m. (PST), March 6, 1989.

CONTACT: L. Miller (FTS 463-3869) T. Polich (602)386-3650

DISTRIBUTION BY 5520:
Date 3/6/89 Time 5:45 pm PST

Chairman Zech	EDO	RI
Comm. Roberts	AEOD	RII
Comm. Carr	PAO	RIII
Comm. Rogers	SLITP	RIV
Comm. Curtiss	NRR	
SECY	NMSS	
CA	ARM	
OI		
OGC	OIA	
ACRS	RES	
GPA		

FAX TO:
Date _____ Time _____
INPO
NSAC
LICENSEE
RESIDENT INSPECTOR
HQS. OPERATIONS OFFICER
PDR (202)634-3343
MAIL TO:
DCS (Original)
DOT:(Trans. Only, Applicable State)

RV FORM 211
Revised: 8/19/87

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE--PNO-V-89-07B Date 3/23/89

This preliminary notification constitutes EARLY notice of events of POSSIBLE safety or public interest significance. The information presented is as initially received without verification or evaluation and is basically all that is known by Region V staff on this date.

FACILITY: ARIZONA NUCLEAR POWER PROJECT
PALO VERDE UNIT 3
DOCKET NO. 50-530
WINTERSBURG, AZ

Emergency Classification
___Notification of Unusual Event
___Alert
___Site Area Emergency
___General Emergency
_X_Not Applicable

SUBJECT: UPDATE ON PNO-V-89-07A (UNUSUAL EVENT DUE TO GRID DISTURBANCE)

Following the Palo Verde Nuclear Generating Station, Unit 3, plant trip on March 3, 1989, Region V formed an Augmented Inspection Team (AIT) which assembled on-site on March 4, 1989, to investigate the March 3, 1989, Unusual Event.

As a result of the Unit 3 failure to open Atmospheric Dump Valves (ADV) remotely (all from Control Room and one from the Remote Shutdown panel), the licensee initiated testing of ADV's in Units 1 and 2. Preliminary test results are as follows:

Unit 1 - One of four ADV's passed functional testing using the safety-related nitrogen supply to the ADV actuators and with full steam pressure across the valves. This is the only ADV still considered operable in Unit 1. This functional testing was performed with a zero to fifty percent open demand signal to the valve from the Control Room.

Similar testing of the other three ADV's resulted in the failure to open of one valve (SG-HV-184) on the first test and excessive valve position oscillations of all three valves during subsequent tests. Potential valve problems associated with valve (SG-HV-185) positioner discrepancies were observed during those tests. In addition, failure of a nitrogen pressure regulator was encountered during attempts to test SG-HV-184.

Unit 2 - Three of the four ADV's were successfully functionally tested using the safety-related nitrogen supply to the accumulators and with full steam pressure across the valves. The testing was performed using a zero to fifty percent open valve position demand signal from the Control Room. All four ADV's were considered operable prior to the test and the three ADV's that passed were considered by the licensee to be operable subsequent to the test. Testing of the fourth ADV (SG-HV-184) could not be performed with nitrogen due to a failure of its pressure regulator. Subsequent testing using instrument air demonstrated satisfactory operation of the valve. However, during subsequent additional testing, a cracked fitting on the positioner housing for SG-HV-185 was identified by the licensee. In addition, the nitrogen pressure regulator for SG-HV-185 was also determined to be out of calibration. No other failures have been observed during testing of Unit 2 ADVs.

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Unit 3 - The licensee's action plan calls for disassembly and inspection of SG-HV-179 (the valve with the broken operator). The course of action on other Unit 3 ADVs will be decided based upon the results of the SG-HV-179 inspections.

The licensee testing of the ADV's has included the installation of pressure taps on the ADV bonnets. The licensee has been obtaining data consisting of bonnet pressure and actuator pressures, in addition to plant data, during the testing. The licensee is currently evaluating all the above data and correlating it with test results to determine the cause of the ADV malfunctions and resultant corrective action.

NRC inspectors are closely monitoring licensee activities. A follow-up portion of the initial Augmented Inspection Team inspection was completed on March 21, 1989. The NRC Resident Inspectors are currently monitoring licensee activities.

This information is current as of 2:00 p.m. PST, March 23, 1989.

CONTACT: L. Miller (FTS 463-3369) T. Polich (602)386-3650

DISTRIBUTION BY 5520:
Date_____ Time_____

Chairman Zech	EDO	RI
Comm. Roberts	AEOD	RII
Comm. Carr	PAO	RIII
Comm. Rogers	SLITP	RIV
Comm. Curtiss	NRR	
SECY	NMSS	
CA	ARM	
OI		
OGC	OIA	
ACRS	RES	
GPA		

FAX TO:
Date_____ Time_____

INPO
NSAC
LICENSEE
RESIDENT INSPECTOR
HQS. OPERATIONS OFFICER
PDR (202)634-3343

MAIL TO:
DCS (Original)
DOT:(Trans. Only, Applicable State)

EVENT NOTIFICATION WORKSHEET

(8)

TIME OF NOTIFICATION	FACILITY OR ORGANIZATION	UNIT	CALLER'S NAME	TELEPHONE (For call back) AREA CODE / NUMBER
1800 MST	Palo Verde Nuclear Generating Station	1	RICHARD ROUSE	(602) 393-1206

EVENT CLASSIFICATION	YES	NO	EVENT CATEGORY	INITIATION SIGNAL	CAUSE OF FAILURE
GENERAL EMERGENCY		✓	REACTOR TRIP SCRAM		MECHANICAL
SITE AREA EMERGENCY		✓	ESF ACTUATION		ELECTRICAL
ALERT		✓	ECCS ACTUATION		✓ PERSONNEL ERROR
NOTIFICATION OF UNUSUAL EVENT		✓	SAFETY INJECTION FLOW		PROCEDURE INADEQUACY
1 hr / 4 hrs / 50.72 NON-EMERGENCY		✓	LCO ACTION STATEMENT		OTHER
1 hr PHYSICAL SECURITY SAFEGUARDS	✓		OTHER ALL ADV'S INCAPABLE OF REMOTE OPERATION.		
TRANSPORTATION EVENT					
✓ OTHER INFORMATION					

EVENT TIME	ZONE	EVENT DATE MONTH	EVENT DATE DAY	SYSTEM	COMPONENT
1340	MST	04	10	STEAM GENERATOR	ATMOSPHERIC DUMP VALVES

EVENT DESCRIPTION

The following event description is based upon information currently available. If through subsequent reviews of this event, additional information is identified that is pertinent to this event or alters the information being provided at this time, a followup notification will be made via the ENS or under the reporting requirements of 10CFR50.73.

at the start of the event to be described, Unit 1 was in a condition where SGB-HV178 was the ~~only operable~~ only Atmospheric Dump Valve of the four in the unit ~~[illegible]~~ administratively operable.

at approximately 1340 MST on April 10, 1989, Unit 1 was in mode 3 (Hot Standby) when the nitrogen supply to SGB-HV178 was discovered isolated. The air supply ~~system~~ to the ~~valve~~ ADV was also ~~[illegible]~~ previously tagged out of commission. Thus the only means of operation was manual handwheel. This placed Unit 1 in a condition where none of the ADV's were capable of remote operation.

At approximately 1344 MST on April 10, 1989, ~~SG [illegible]~~ the nitrogen supply to SGB-HV178 was ~~restored~~ restored thus restoring remote operation.

The cause of the nitrogen being isolated is currently under investigation and an LER will be submitted pursuant to 10CFR 50.73.

BILL RECKLEY

POWER PRIOR TO EVENT (%)	ANYTHING "UNUSUAL" OR NOT UNDERSTOOD?	YES (Explain above)	NO
0		✓	
CURRENT POWER OR MODE	DID ALL SYSTEMS FUNCTION AS REQUIRED?	YES (Explain above)	NO (Explain above)
3		✓	

OUTSIDE AGENCY OR PERSONNEL NOTIFIED BY LICENSEE	CORRECTIVE ACTIONS
STATE(S) N/A	Restored N_2 supply to operate the valve remotely. Investigating cause.
LOCAL N/A	
RESIDENT INSPECTOR ✓ YES / NO / WILL BE	
OTHER	MODE OF OPERATION UNTIL CORRECTION: 3 / ESTIMATED TIME FOR RESTART: N/A
PRESS RELEASE: No	ADDITIONAL INFORMATION ON REVERSE

PV419-05UB Rev. 11-88

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ADDITIONAL INFORMATION FOR RADIOLOGICAL RELEASES

☐ LIQUID RELEASE ☐ GASEOUS RELEASE	RELEASE RATE (Ci/sec)	ESTIMATED TOTAL ACTIVITY (Ci)
☐ PLANNED ☐ UNPLANNED	RELEASE DURATION	ESTIMATED TOTAL IODINE

T.S. LIMITS

AREA EVACUATED		PERSONNEL EXPOSED/CONTAMINATED		PLANT HEALTH PHYSICS BACKUP REQUESTED		
☐ YES (List below)	☐ NO	☐ YES (Describe below)	☐ NO	☐ YES	☐ NO	NOTE: ONLY IF T.S. EXCEEDED OR ACTUAL CONTAMINATION

ADDITIONAL INFORMATION

ADDITIONAL INFORMATION FOR REACTOR COOLANT OR STEAM GENERATOR TUBE LEAKS

☐ SUDDEN DEVELOPMENT		☐ LONG TERM DEVELOPMENT		START DATE	TIME
LEAK	UNITS	COOLANT ACTIVITY	UNITS	MONITOR READINGS	
RATE		PRIMARY		CONDENSER VACUUM	
VOLUME		SECONDARY		MAIN STEAM LINE	
T.S. LIMITS				SG BLOWDOWN	

LIST OF SAFETY RELATED EQUIPMENT NOT OPERATIONAL

SPECIAL ACTIONS TAKEN BY LICENSEE (if any)

what section under 50.73 to report
answer: Don't know.
Could I have operated
after 3 manually
answer: Yes from Mike Evans
~~will~~ Have you checked reqmnts under 50.72
answer: Yes. Can find no
report reqmts.

INITIALS AND DATE

RJ Rousc
CALLER

SHIFT SUPERVISOR

4/10/88
COMPLIANCE ENGINEER

COMPLIANCE LEAD

4/10/88
COMPLIANCE MANAGER

(10)

EVENT NOTIFICATION WORKSHEET

JOLL FFE

NOTIFICATION CALL FROM ORGANIZATION		NUCLEAR UNIT	TELEPHONE NUMBER
0203 MST Palo Verde Nuclear Generating Station		3	W. Conner & Muhs — AREA CODE 602 — NUMBER 393-3607

EVENT CLASSIFICATION	YES NO	EVENT CATEGORY	INITIATION SIGNAL	CAUSE OF FAILURE
GENERAL EMERGENCY		REACTOR TRIP	132 (RPS)	MECHANICAL
SITE AREA EMERGENCY		ESF ACTUATION	SIAS, CIAS, MSIS	X ELECTRICAL
ALERT		RADIOLOGICAL		PERSONNEL ERROR
X NOTIFICATION OF UNUSUAL EVENT		HAZARDOUS NOTIFICATION		PROCEDURE INADEQUACY
X 10 CFR 50.72 NON-EMERGENCY		LICENSEE ACTION ON STATE EVENT		OTHER
PHYSICAL SECURITY SAFEGUARDS		OTHER		
TRANSPORTATION EVENT				
OTHER				

EVENT TIME	ZONE	EVENT DATE (MONTH DAY)	SYSTEM
0105	MST	03 03	EQUIPMENT

EVENT DESCRIPTION

The following event description is based upon information currently available. If through subsequent reviews of this event, additional information is identified that is pertinent to this event or alters the information being provided at this time, a followup notification will be made via the ENS or under the reporting requirements of 10CFR50.73.

ON 3-3-89, AT 0105 hrs U3 EXPERIENCED A 100% LOAD REJECTION (DUE TO OFFSITE RELAYING) AND A SUBSEQUENT RPC TO 45% FP. APPROXIMATELY 30 SECONDS LATER A Rx TRIP DUE TO SIAS, CIAS/MSIS WERE RECEIVED ON LO PRESSURIZER AND SG PRESSURES RESPECTIVELY. AN NUE WAS DECLARED @ 0139 IN ACCORDANCE WITH OUR EPIP'S, DUE DEGRADED ELECTRICAL (LOP - OFFSITE). THERE WERE DIFFICULTIES ENCOUNTERED DURING THE MITIGATION OF THE EVENT. THESE INCLUDED: 1) ADVS WERE UNCONTROLLABLE FROM THE CR AND REMAINED CLOSED - MANUAL LOCAL ACTION WAS REQUIRED FOR MANUAL OPERATION.

2) MSSV (1) ACTUATED AT LESS THAN DESIGN SETPOINT (RELIEF IS 1252)

3) MINOR EQUIPMENT DID NOT RESPOND TO THE SIAS/CIAS/MSIS

1.) SGB UV 22 (SG BLOWDOWN SAMPLE VLV) DID NOT CLOSE - MSIS
2.) H2 REDUCE A SOL VALVE (UV-1) - DID NOT CLOSE - CIAS
3.) AUX BLDG TVAC (SOL DAMPER) - DID NOT ACTUATE AS REQUIRED
4.) AUX BLDG MCC - DID NOT ACTUATE TO SIAS POSITION
5.) MS DRAIN VALVE (HA-1175) DID NOT CLOSE - MSIS

ENVIRONMENTAL EFFECTS NOT UNDERSTOOD AT THIS TIME, MITIGATION ACTIVITIES STILL IN PROGRESS

NUCLEAR POWER PRIOR TO EVENT: 100%	ANYTHING UNUSUAL OR NOT UNDERSTOOD	YES X Explain below	NO
CURRENT POWER LEVEL: 3	SIGNAL SYSTEM INOPERABLE, RED	YES	NO X Explain below
LISTS AGENCY OR PERSONNEL NOTIFIED BY LICENSEE	CORRECTIVE ACTIONS		
RESIDENT NRC FOR: YES NO X WILL BE			
	RESTORATION ESTIMATE	N/A	

Arizona Nuclear Power Project
P.O. BOX 52034 • PHOENIX, ARIZONA 85072-2034

192-00455-JGH/TDS/DAJ
March 8, 1989

U. S. Nuclear Regulatory Commission
NRC Document Control Desk
Washington, D.C. 20555

Dear Sirs:

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Unit 3
Docket No. STN 50-530 (License No. NPF-74)
Special Report 3-SR-89-002
File: 89-020-404

Attached please find Special Report 3-SR-89-002 prepared and submitted pursuant to Emergency Plan Implementing Procedure -03. This report discusses a NOTIFICATION OF UNUSUAL EVENT due to a complete loss of offsite power to the non-class in-house electrical busses and a safety injection actuation.

If you have any questions, please contact T. D. Shriver, Compliance Manager at (602) 393-2521.

Very truly yours,

J. G. Haynes
Vice President
Nuclear Production

JGH/TDS/DAJ/kj

Attachment

cc: D. B. Karner (all w/a)
J. B. Martin
T. J. Polich
M. J. Davis
A. C. Gehr
INPO Records Center
R. T. Milstead
C. F. Tedford
F. L. Russo
R. Godbehere
R. Colson

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Palo Verde Nuclear Generating Station Unit 3

Notification of Unusual Event

Docket No. 50-530

License No. NPF-74

Special Report No. 3-SR-89-002

This Special Report is being provided pursuant to Emergency Plan Implementing Procedure (EPIP)-03, "Notification of Unusual Event Implementing Actions" to report the declaration of a Notification of Unusual Event (NUE) for Palo Verde Unit 3. The NUE was declared pursuant to EPIP-02, "Emergency Classification" as a result of a complete loss of offsite power to the in-plant non-class 1E electrical busses 3E-NAN-S01 and 3E-NAN-S02 and a safety injection actuation resulting from low pressurizer pressure.

On March 3, 1989, Palo Verde Unit 3 was operating in Mode 1 (POWER OPERATION) at approximately 98 percent power and in-plant non-class 1E electrical components (including Reactor Coolant Pumps) were being powered by the Main Turbine Generator via the Unit Auxiliary Transformer. At approximately 0102 MST an electrcial grid disturbance occurred which was caused by a fault near the Devers, California switchyard. The electrical grid disturbance resulted in the main generator output breakers opening and a reactor power cutback. During the reactor power cutback, the control system for four (4) of the eight (8) steam bypass control valves appears not to have operated properly which resulted in secondary pressure oscillations and an excessive steam demand. The excessive steam demand eventually resulted in a Steam Generator Number two (2) low pressure reactor trip, main turbine trip, and Main Steam Isolation System (MSIS) Engineered Safety Features (ESF) actuation at approximately 0103 MST. Approximately six seconds after the reactor trip, Safety Injection and Containment Isolation ESF actuations occurred due to low pressurizer pressure. In accordance with approved procedures, two (2) Reactor Coolant Pumps (RCP's) were stopped. Following the Main Turbine trip, a Fast-Bus Transfer did not occur per design and a loss of power to the in-plant non-class 1E electrical busses occurred. This resulted in the other two (2) RCP's being deenergized.

As a result of the MSIS actuation, steam flow to the Main Condenser was terminated. Attempts to remotely operate the Atmospheric Dump Valves (ADV's) were unsuccessful which resulted in the automatic actuation of one (1) Main Steam Safety Valve (MSSV).

At approximately 0139 MST on March 3, 1989, a Notification of Unusual Event (NUE) was declared pursuant to EPIP-02, "Emergency Classification", due to the loss of power to the in-plant non-class 1E electrical busses and the safety injection system actuation. At approximately 0149 MST on March 3, 1989 the appropriate state and local agencies were notified via the Notification and Alert Network (NAN). The Nuclear Regulatory Commission (NRC) Operations Center was notified at approximately 0203 MST on March 3, 1989.

At approximately 0232 MST on March 3, 1989, power was restored to 3E-NAN-S01. At approximately 0241 MST on March 3, 1989, the Safety Injection Actuation System was reset. At approximately 0243 MST on March 3, 1989, power was

restored to 3E-NAN-S02. As a result of restoring power to the in-plant non-class 1E electrical busses, the NUE was terminated at approximately 0252 MST on March 3, 1989.

The event did not result in any challenge to fission product barriers nor did the event result in significant releases of radioactive materials. A Licensee Event Report will be submitted within 30 days of the event in accordance with 10CFR50.73.

DISC N:

AS A ...ULT OF AN OPERABILITY DETERMINATION OF CONTEROL COMPONENTS INC. (CCI) ATMOSPHERIC DUMP VALVES (ADVS) THAT WAS PERFORMED ON 4/13/89, THE LICENSEE DETERMINED THAT ADDITIONAL TESTING OF THE ADVS WOULD BE REQUIRED IN ORDER TO DEMONSTRATE, IN PART, THE OPERABILITY OF THE ADVS. ON 4/14/89, THE LICENSEE ISOLATED THE ADVS WITH THE INSTALLED BLOCK VALVES WHILE AT FULL POWER AND SUCCESSFULLY CYCLED BOTH ADVS. NO PROBLEMS WERE ENCOUNTERED. THE LICENSEE PLANS TO IMPLEMENT CCI'S RECOMMENDED FIELD CHANGES DURING THE NEXT REFUELING OUTAGE IN THE FALL OF 1989.

REGIONAL ACTION:

RESIDENT INSPECTORS MONITORED THE TEST OF ADVS AND DETERMINED THAT THEY OPERATED AS DESIGNED.

CONTACT: A. HOWELL FTS: 728-8180

PRIORITY ATTENTION REQUIRED MORNING REPORT - REGION V APRIL 14, 1989

LICENSEE/FACILITY: NOTIFICATION: TELEPHONE CALL FROM LICENSEE

PALO VERDE UNITS 1,2,3

SUBJECT: PART 21 REPORT/CCI VALVES

DOCKET NOS.: 50-528, 50-529, 50-530

REPORTABLE EVENT NUMBER: 15311

DISCUSSION:

ON APRIL 13, 1989, PURSUANT TO 10 CFR PART 21, THE ARIZONA NUCLEAR POWER PROJECT (ANPP) REPORTED A DESIGN DEFICIENCY RELATED TO THE ATMOSPHERIC DUMP VALVES (ADV) AT PALO VERDE. THE MANUFACTURER OF THE VALVES, CONTROL COMPONENTS INC. (CCI), DETERMINED THAT EXCESSIVE INTERNAL VALVE LEAKAGE CAN RESULT IN HIGH INTERNAL VALVE PRESSURES WHICH THEN PREVENTS LOCAL OR REMOTE OPERATION OF THE VALVE. CCI'S REVIEW OF THE VALVE DESIGN WAS PROMPTED BY AN EVENT AT PALO VERDE UNIT 3 ON MARCH 3, 1989, DURING WHICH THE ADV'S DID NOT PROPERLY FUNCTION. THE EVENT AND THE MALFUNCTION OF THE CCI VALVES HAS BEEN EXTENSIVELY REVIEWED BY BOTH NRR AND RV. NRR IS ALREADY ADDRESSING THE GENERIC ASPECTS OF THE PROBLEM. ALL THREE PALO VERDE UNITS ARE PRESENTLY SHUT DOWN.

REGIONAL ACTION: CONTINUE EVENT FOLLOW-UP PER MC2515

CONTACT: L. MILLER (FTS) 463-3869

AUGMENTED INSPECTION TEAM PLAN
PALO VERDE UNIT 3

A. TEAM MEMBERSHIP:

D. F. Kirsch, Chief, Reactor Safety Branch - Team Leader
J. Burdoin, Reactor Inspector
W. Ang, Reactor Inspector
W. TenBrook, Radiation Specialist
M. Davis, Project Manager, NRR
John Knox, Power Systems Engineer, NRR
D. Coe, Resident Inspector, Palo Verde
Tim Collins, Reactor Systems Engineer, NRR

B. TEAM SCHEDULE:

3/4/89	0730	Team arrives on site
3/4/89	0800	Entrance interview with licensee management
3/4/89	0830	Licensee management overview briefing of event
3/4/89	0930	Being inspection and personnel interviews
3/10/89		Complete Inspection
3/27/89		Issue report

C. TEAM OBJECTIVES

1. Develop description of event.

2. Develop detailed sequence of events.

3. Identify all equipment/instrumentation failures/ deficiencies.

4. Identify procedural/human errors.

5. Identify/assess safety significance.

6. Assess EP event assessment/coordination/communicatic adequacy.

7. Assess performance of plant radiation monitoring system during transient.

8. Determine if transient had adverse effect on fuel integrity.

9. Identify work coordination/communication deficiencie

B/8
8

10. Identify problem history and assess licensee's responsiveness in resolution -

    - Electrical grid disturbances
    - Fast transfer of SO1, SO2 power
    - SBCS

11. Assess licensee post-event analysis - root cause determination.

12. Assess the adequacy of licensee involvement of equipment vendors, combustion engineering, QA, and corporate engineering in event evaluation/resolution.

13. Assess the adequacy of preventive and corrective maintenance on problem or failed equipment.

D. INSPECTION METHODOLOGY

1. Conduct interviews with licensee personnel significantly involved in the event, or the assessment of the event, to obtain information related to:

    a. Description of event
    b. Sequence of events
    c. Individual actions, evaluations, and observations throughout the course of the event.
    d. Adequacy of procedures in responding to event.
    e. Coordination/communication of activities prior to, during, and after event.
    f. Assessment of those areas identified in Part B of this inspection plan.

2. Perform records reviews of:

    a. Operational data - records, logs, etc.
    b. Preventive and corrective maintenance.
    c. Review applicable emergency, operating, and maintenance procedures.
    d. Conduct independent visual examination of plant equipment/systems involved in the event. Develop photographic record where appropriate.

E. CURRENTLY IDENTIFIED ISSUES FOR DETAILED FACT GATHERING BY TEAM

1. Failure of ADVs to operate from Control Room or Remote Shutdown Panel
2. Failure of Fast Bus transfer to operate.
3. Failure of Auxiliary Building Ventilation Dampers to operate
4. Assessment of Steam Bypass Control System operation
5. Two containment isolation valves failed to operate
6. Assess whether grid disturbance contributed to trip of Main Generator bus ties
7. Assess the increase in RCS leakage

Arizona Public Service Company
P.O. BOX 53999 • PHOENIX, ARIZONA 85072-3999

WILLIAM F. CONWAY
EXECUTIVE VICE PRESIDENT
NUCLEAR

102-01564-WFC/TRB/DRL
January 11, 1990

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

Dear Sir:

Subject: Unit 1 Restart List
File: 89-019-419

Attachment 1 to this letter identifies those action items I consider necessary to complete prior to the restart of PVNGS Unit 1. The listing is identical to the PVNGS Unit 2 restart list forwarded to you on May 26, 1989 except for the deletion of ten (10) Unit 2 specific actions as described in Attachment 2 and the addition of thirteen (13) Unit 1 specific items as described in Attachment 3. You will also note that seventy-two (72) action items are identified as closed. Those items were generic in nature and the actions taken prior to the restart of Unit 2 also addressed Units 1 and 3.

Record #756 for the Unit 2 and Unit 3 restart lists stated "Implement twice monthly isolated SBCS valve stroking". This record should not contain the word isolated as testing requires both an isolated and unisolated valve stroke during each month. The attached Unit 1 Restart List has been corrected to reflect the actual commitment as stated in the Steam Bypass Control System Overall Final Report dated May 6, 1989, page 8.

If I can answer any questions, please contact me.

Very truly yours,

WFConway

WFC/TRB/kj

Attachment

cc: T. L. Chan
D. Coe
M. J. Davis
A. C. Gehr

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9.

ATTACHMENT 1

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 1 **Date Due:**

Responsible Group: EED **Source Of Item:** AIT

Description Of Item:
Engineering should determine what corrective actions and/or compensatory measures need to be taken for the ADV's

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 2 **Date Due:**

Responsible Group: LICENSING **Source Of Item:** TDS/DRH

Description Of Item:
PREPARE A JCO IF DESIGN RELATED PROBLEMS ARE IDENTIFIED OR CHANGE DESIGN (ADV)

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 3 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** TDS/DRH

Description Of Item:
APPROPRIATE OPERABILITY TESTING SHALL BE PERFORMED FOR THE ADV's (CAL 3/7)

Closure Documentation Required: 41ST-1SG03;-1SG05

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y Record Number: 4 Date Due:

Responsible Group: OPS MGR Source Of Item: TDS/DRH

Description Of Item:
TRAIN OPERATIONS PERSONNEL HOW TO PROPERLY OPERATE ADV's REMOTELY AND LOCALLY (MANUALLY)

Closure Documentation Required: ROSTER;PRINTOUT

Compliance Engineering:

Status: OPEN Days Until Due Date: 999

Restart Item: Y Record Number: 5 Date Due:

Responsible Group: WORK CONTROL Source Of Item: TDS/DRH

Description Of Item:
LABEL THE LEFT-HAND AND RIGHT HAND ADV MANUAL OPERATORS, THE INSTRUMENT AIR ISOLATION VALVE AND THE EQUALIZING VALVE

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN Days Until Due Date: 999

Restart Item: Y Record Number: 6 Date Due:

Responsible Group: LICENSING Source Of Item: TDS/DRH

Description Of Item:
RESOLVE ISSUES CONCERNING THE TYPE OF LIGHTING COMMITTED TO IN THE MSSS AND ENSURE THAT PVNGS COMPLIES WITH THE COMMITMENT

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED Days Until Due Date: 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y Record Number: 8 Date Due:

Responsible Group: MAINTENANCE Source Of Item: TDS/DRH

Description Of Item:
Ensure that lighting preventive maintenance tasks are current

Closure Documentation Required: PM PRINTOUT W/STATUS

Compliance Engineering:

Status: OPEN Days Until Due Date: 999

Restart Item: Y Record Number: 9 Date Due:

Responsible Group: MAINTENANCE Source Of Item: TDS/DRH

Description Of Item:
Ensure that there are no other waived PM's which could affect safe plant operation

Closure Documentation Required: PM PRINTOUT W/STATUS

Compliance Engineering:

Status: OPEN Days Until Due Date: 999

Restart Item: Y Record Number: 10 Date Due:

Responsible Group: EED Source Of Item: TDS/DRH

Description Of Item:
Provide justification for waived PM's.

Closure Documentation Required: PM PRINTOUT W/JUST

Compliance Engineering:

Status: OPEN Days Until Due Date: 999

PVNGS RESTART DATA BASE REPORT

Report Date: **01/04/90** Report Time: **08:20:05**

Restart Item: Y **Record Number:** 11 **Date Due:**

Responsible Group: RAD PROT **Source Of Item:**

Description Of Item:
ENSURE THAT PERSONNEL RESPONSIBLE FOR PERFORMING OFF-SITE DOSE ASSESSMENT CALCULATIONS ARE TRAINED

Closure Documentation Required: RP ROSTER/PRINTOUT

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 13 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** TDS/DRH

Description Of Item:
The NAN-S01A, NAN-S02A breakers and the RCP breakers should be cycled a minimum of two times.

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 14 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** TDS/DRH

Description Of Item:
The alternate supply breakers NAN-S01B and NAN-S02B should be cycled a minimum of two times when busses are transferred to the UAT

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 15 **Date Due:**

Responsible Group: MAINTENANCE **Source Of Item:** TDS/DRH

Description Of Item:
Evaluate 13.8 kv and 4.16 kv circuit breaker PM status. For those breakers which are not up-to-date, either a)conduct the appropriate PM or b)provide technical justification for those PM's which will not be performed

Closure Documentation Required: PM PRINTOUT W/STATUS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 16 **Date Due:**

Responsible Group: OPS MGR **Source Of Item:** TDS/DRH

Description Of Item:
Interim guidance should be issued to provide instruction on resetting of the RCP 286 relays concerning the matching of handswitch flags to component indicators in situations where the RCP has tripped. (IIR2-1)

Closure Documentation Required: NIGHT ORDER

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 17 **Date Due:**

Responsible Group: QA **Source Of Item:** Exit

Description Of Item:
Mr Kirsch also stated that QA's role in this process (planning, review of action plans, etc.) must be obvious

Closure Documentation Required: U1 VERIFICATION

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 19 **Date Due:**

Responsible Group: EED **Source Of Item:** Exit

Description Of Item:
A review of the history of the performance of Units 1,2, and 3 SBCS quick open signal should be performed

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 21 **Date Due:**

Responsible Group: TRAINING **Source Of Item:** Exit

Description Of Item:
Simulator fidelity and simulator training on ADV operation needs to be addressed to ensure realistic information is provided to the operators concerning the operation of the ADVs at power conditions

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 22 **Date Due:**

Responsible Group: NED **Source Of Item:** Exit

Description Of Item:
Ensure sufficient vendor involvement with the troubleshooting plans (ADV's)

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 23 **Date Due:**

Responsible Group: OPS MGR **Source Of Item:** Exit

Description Of Item:
Operator training on ADV operation for both ROs and AOs is to be performed. This training should include the related instrument air and nitrogen system operation. This training needs to be performed on a continuing basis

Closure Documentation Required: ROSTER/PRINTOUT

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 24 **Date Due:**

Responsible Group: TRAINING **Source Of Item:** Exit

Description Of Item:
The negative training performed by simulator training needs to be corrected (ADV)

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 26 **Date Due:**

Responsible Group: MAINT/U **Source Of Item:** Exit

Description Of Item:
Label components required for manual operation of the ADVs

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 27 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** Exit

Description Of Item:
Emergency lighting must be installed at the areas required for manual operation of the ADVs

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 29 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** Exit

Description Of Item:
Assure any other areas which require local manual operations has sufficient emergency lighting

Closure Documentation Required: WO'S DCP 1FE-QD-023

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: 1 **Record Number:** 30 **Date Due:**

Responsible Group: OPS MGR **Source Of Item:** CAL 3/7

Description Of Item:
Incorporate the central lessons learned from the March 3, 1989, Unusual Event at palo Verde 3 into your activities at Unit 1 prior to restart of Unit 1

Closure Documentation Required: NIGHT ORDER

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 32 **Date Due:**

Responsible Group: MAINTENANCE **Source Of Item:** CAL 3/7

Description Of Item:
Ensure confirmation that the emergency lighting is operable

Closure Documentation Required: PM STATUS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 33 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** CAL 3/7

Description Of Item:
Ensure confirmation that the steam bypass control system is operable

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 35 **Date Due:**

Responsible Group: LICENSING **Source Of Item:** CAL 3/7

Description Of Item:
Conduct a thorough investigation and obtain a full understanding of the Unit 1 March 5, 1989, reactor trip

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Report Date: **01/04/90** Report Time: **08:20:05**

Restart Item: Y **Record Number:** 36 **Date Due:**

Responsible Group: LICENSING **Source Of Item:** CAL 3/7

Description Of Item:
Define the pre-restart corrective actions needed as a result of the Unit 1 trip

Closure Documentation Required: U1 PRE-RESTART LIST

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: 1 **Record Number:** 38 **Date Due:**

Responsible Group: COMPLIANCE **Source Of Item:** CAL 3/7

Description Of Item:
Brief the NRC upon completion of your investigation and will not restart the Palo Verde Unit 1 facility prior to receiving NRC concurrence

Closure Documentation Required: BRIEFING

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 39 **Date Due:**

Responsible Group: PS&C **Source Of Item:** CAL3/28

Description Of Item:
Confirm that the reactor coolant pumps' power supplies are reliably ensured

Closure Documentation Required: 41OP-1ZZ04

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: **01/04/90** Report Time: **08:20:05**

Restart Item: Y **Record Number:** 40 **Date Due:**

Responsible Group: LICENSING **Source Of Item:** CAL3/28

Description Of Item:
The causes of equipment failure during these events will be determined, to the extent practicable and corrective action will be taken to prevent future occurrences

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 41 **Date Due:**

Responsible Group: EED/NED **Source Of Item:** CAL3/28

Description Of Item:
The causes of equipment failure will include a thorough review of the equipment history of these components

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 43 **Date Due:**

Responsible Group: MGT/U3 **Source Of Item:** U3 CAL

Description Of Item:
Conduct a thorough investigation and obtain a full understanding of the March 3, 1989, Unusual Event (Unit 3)

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: **01/04/90** Report Time: **08:20:05**

Restart Item: Y **Record Number:** 44 **Date Due:**

Responsible Group: LICENSING **Source Of Item:** U3 CAL

Description Of Item:
Define the pre-start corrective actions needed as a result of the Unit 3 trip

Closure Documentation Required: U1 PRE-RESTART LIST

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 45 **Date Due:**

Responsible Group: LICENSING **Source Of Item:** U3 CAL

Description Of Item:
Define the post-restart corrective actions needed as a result of the Unit 3 trip

Closure Documentation Required: U1 POST RESTART LIST

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 47 **Date Due:**

Responsible Group: NED **Source Of Item:** AIT

Description Of Item:
Reassess the design of the electrical distribution network and fast bus transfer scheme due to its apparent susceptibility to generating a loss of power to the reactor coolant pumps. Discuss with NRC.

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 48 **Date Due:**

Responsible Group: LICENSING **Source Of Item:** AIT

Description Of Item:
Perform an analysis of the findings detailed in the AIT inspection report, identifying the lessons learned and needed improvements

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 49 **Date Due:**

Responsible Group: LICENSING **Source Of Item:** AIT

Description Of Item:
Provide the results of your analyses and improvements in writing to the NRC within 30 days of April 20, 1989

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 54 **Date Due:**

Responsible Group: PS&C **Source Of Item:** AIT 19

Description Of Item:
Procedural enhancements will be pursued to minimize future water hammer

Closure Documentation Required: 41OP-1ZZ14

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: **01/04/90** Report Time: **08:20:05**

Restart Item: Y **Record Number:** 55 **Date Due:**

Responsible Group: PS&C **Source Of Item:** AIT 19

Description Of Item:
Procedural enhancements will be provided to operations personnel to ensure that the uniqueness of the RCP trip circuit design is understood

Closure Documentation Required: 41OP-1RC01

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 61 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** AIT 30

Description Of Item:
Ensure ADV positioners are cleaned and checked

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 63 **Date Due:**

Responsible Group: NED **Source Of Item:** AIT 30

Description Of Item:
Review the performance of the IA system during the event and determine corrective action including a determination for the need for accelerating any Generic Letter 88-14 action

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Report Date: **01/04/90** Report Time: **08:20:05**

Restart Item: Y **Record Number:** 67 **Date Due:**

Responsible Group: COMPLIANCE **Source Of Item:** AIT 36

Description Of Item:
The relationship between a valve and its associated controls and indications should be made as simple and clear as possible so that under the stressful conditions that are likly when the RSP is used, operators are not unnecessarily delayed in actions

Closure Documentation Required: LETTER TO FILE

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 70 **Date Due:**

Responsible Group: MAINT/U **Source Of Item:** AIT 37

Description Of Item:
All emergency lighting should be maintained in an operable condition

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 75 **Date Due:**

Responsible Group: MGT/OPS **Source Of Item:** AIT 39

Description Of Item:
One of the operators was carrying cutters at the time. The licensee should consider whether these should be made available to AOs, at least for emergencies

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 77 **Date Due:**

Responsible Group: PS&C **Source Of Item:** AIT 39

Description Of Item:
Provide the equalizing valve name,number, and location aids in the procedure

Closure Documentation Required: 41DP-10P01

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 78 **Date Due:**

Responsible Group: EED/PS&C **Source Of Item:** AIT 50

Description Of Item:
Reexamine the PM program for SBCS and assess needed improvements

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 80 **Date Due:**

Responsible Group: PS&C **Source Of Item:** AIT 52

Description Of Item:
Reexamine practices and procedures for performance of light bulb replacement preventive maintenance tasks.

Closure Documentation Required: PM FACSIMILE'S

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: **01/04/90** Report Time: **08:20:05**

Restart Item: Y **Record Number:** 81 **Date Due:**

Responsible Group: EED/NED **Source Of Item:** AIT 53

Description Of Item:
Perform a comprehensive analysis of tasks required to be performed in plant areas in the event of blackout and assure that lighting levels are adequate to perform those tasks
not limited to light ingress/egress routes

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 84 **Date Due:**

Responsible Group: EP **Source Of Item:** AIT 59

Description Of Item:
The 34 minute delay between the recognition of conditions requiring classification as an Unusual Event and the declaration of Notification of Unusual Enent appears excessive. Assess the reasons for this delay and resolve these issues

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 88 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** AIT 64

Description Of Item:
Implement Plant Change Package 86-03-SQ-028-00 in Units 1 and 3 during their respective 1989 refueling outages

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 92 **Date Due:**

Responsible Group: EED **Source Of Item:** AIT 66

Description Of Item:
Test the CHV-507 isolation valve under low instrument air conditions to further confirm a root cause of failure (IIR)

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 93 **Date Due:**

Responsible Group: MGT/OPS **Source Of Item:** AIT 68

Description Of Item:
Assess the necessary tools in possession of AOs

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 94 **Date Due:**

Responsible Group: PS&C **Source Of Item:** AIT 68

Description Of Item:
Reassess the adequacy of procedures for manual operation of the ADVs to correct key omissions and improve clarity. Assess both local and remote.

Closure Documentation Required: MULTIPLE PROCEDURES

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 95 **Date Due:**

Responsible Group: TRAINING **Source Of Item:** AIT 68

Description Of Item:
Perform analysis of all AO and RO tasks to identify those that are infrequently performed and take action to assure that periodic training is instituted to provide assurance that infrequent operations will be properly accomplished (Exit, IIR2-3D)

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 96 **Date Due:**

Responsible Group: OPS MGR **Source Of Item:** AIT 69

Description Of Item:
Reassess the training needs, and provisions to provide for those needs, of AOs to assure that AOs are adequately knowledgeable and capable in those areas where they are expected to perform

Closure Documentation Required: NIGHT ORDER

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 97 **Date Due:**

Responsible Group: ALLEN JM **Source Of Item:** AIT 69

Description Of Item:
Change the SRP control of the PVNGS switchyard because licensee's are responsible for activities which can challenge safety systems

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: **01/04/90** Report Time: **08:20:05**

Restart Item: Y **Record Number:** 98 **Date Due:**

Responsible Group: OPS MGR **Source Of Item:** AIT 69

Description Of Item:
Take action to assure that appropriate operations staff are fully knowledgeable and trained in the requirements and processes employed in resetting switchgear protective relays (IIR2-3D)

Closure Documentation Required: TRAINING PRINTOUT

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 99 **Date Due:**

Responsible Group: EED **Source Of Item:** AIT 69

Description Of Item:
Assess the adequacy of the safety valve tail pipe/guard pipe design to preclude steam from blowing back into the MSSS rooms

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 101 **Date Due:**

Responsible Group: PS&C **Source Of Item:** AIT 70

Description Of Item:
Reevaluate practices for periodic testing of the ADVs particularly, to assure that the valves are periodically tested under conditions that they are expected to operate under when called upon

Closure Documentation Required: 41ST-1SG03;-1SG04

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 102 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** AIT 70

Description Of Item:
Implement effective measures to assure adequate lighting in the vicinity of the ADVs to assure that operators can effectively read the procedures and perform their required tasks

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 103 **Date Due:**

Responsible Group: NED **Source Of Item:** AIT 70

Description Of Item:
Assess the need to strip essential lighting from Class 1E buses on Loss of Power/Safety Injection.

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 104 **Date Due:**

Responsible Group: EED **Source Of Item:** AIT 70

Description Of Item:
Assess the adequacy of emergency/essential lighting, in other plant areas in addition to the MSSS, to perform the required activities in those areas as well as lighting of ingress/egress routes (EXIT, AIT37, AIT72)

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 105 **Date Due:**

Responsible Group: EED/PS&C **Source Of Item:** AIT 70

Description Of Item:
A re-assessment of the adequacy of the PM frequency needs to be performed to assure that calibrations, functional tests, and Preventive maintenance are commensurate with the importance of this system (SBCS)

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 106 **Date Due:**

Responsible Group: NED **Source Of Item:** AIT 70

Description Of Item:
Engineering needs to understand, and take action to deal with as necessary, the reasons for the drop in instrument air pressure to 64 psi shortly after loss of instrument air compressors (COMP GAS)

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 107 **Date Due:**

Responsible Group: NED **Source Of Item:** AIT 70

Description Of Item:
Engineering needs to assess the adequacy of measures to assure an adequate instrument air quality at locations of close tolerance air devices

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Report Date: **01/04/90** Report Time: **08:20:05**

Restart Item: Y **Record Number:** 112 **Date Due:**

Responsible Group: NED/PS&C **Source Of Item:** AIT 71

Description Of Item:
Perform a comprehensive analysis of manufacturer's requirements, and ANPP implementation of these in PM programs
in particular, the adequacy of methods used to delay or waive PM performance

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 114 **Date Due:**

Responsible Group: MGT/OPS **Source Of Item:** AIT 72

Description Of Item:
Critically assess the adequacy of communications and provisions made to assure adequate communications

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 115 **Date Due:**

Responsible Group: MGT **Source Of Item:** AIT 72

Description Of Item:
Take measures to assure that instructions are clear, specific, understood, and that the staff clearly understands the unacceptability to proceeding with activities in the face of uncertainty as to method or expected results

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Report Date: **01/04/90** Report Time: **08:20:05**

Restart Item: Y **Record Number:** 108 **Date Due:**

Responsible Group: NED **Source Of Item:** AIT 71

Description Of Item:
Engineering needs to assess the design adequacy of the nitrogen pressure regulator and take measures to improve the reliability (CG)

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 110 **Date Due:**

Responsible Group: NED **Source Of Item:** AIT 71

Description Of Item:
Perform a comprehensive study of power source reliability, assess the facts, and make reliability improvement recommendations

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 111 **Date Due:**

Responsible Group: MGT/OPS **Source Of Item:** AIT 71

Description Of Item:
Engineering needs to evaluate and resolve the potential effects on human performance due to the loud audible alarm in the RSP room when switches are out of normal position

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 116 **Date Due:**

Responsible Group: EED **Source Of Item:** AIT 72

Description Of Item:
Thoroughly understand the ADV system problems, why they didn't operate as designed during the Unit 3 event, and what is required to assure the reliability of the ADVs

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 120 **Date Due:**

Responsible Group: NED **Source Of Item:** AIT 73

Description Of Item:
With regard to the Unit AC electrical power supply systems, perform a comprehensive study, assess the facts and make recommendations to improve power source reliability as soon as possible. ANPP agreed to evaluate a time table, discuss with NRC

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 127 **Date Due:**

Responsible Group: QA **Source Of Item:** QI COMM

Description Of Item:
ATMOSPHERIC DUMP VALVES - COMMENT 1

Closure Documentation Required: U1 VERFICATION

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 128 **Date Due:**

Responsible Group: QA **Source Of Item:** QI COMM

Description Of Item:
ATMOSPHERIC DUMP VALVES - COMMENT 2

Closure Documentation Required: U1 VERIFICATION

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 130 **Date Due:**

Responsible Group: QA **Source Of Item:** QI COMM

Description Of Item:
AUX. FEED PUMP - COMMENT 1

Closure Documentation Required: U1 VERIFICATION

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 138 **Date Due:**

Responsible Group: QA **Source Of Item:** QI COMM

Description Of Item:
BACKUP NITROGEN TO THE INSTRUMENT AIR SYSTEM - COMMENT 1

Closure Documentation Required: U1 VERIFICATION

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: 1 **Record Number:** 147 **Date Due:**

Responsible Group: QA **Source Of Item:** QI COMM

Description Of Item:
CHARGING PUMP - COMMENT 2B

Closure Documentation Required: U1 VERIFICATION

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 243 **Date Due:**

Responsible Group: QA **Source Of Item:** QI COMM

Description Of Item:
LOW PRESSURE NITROGEN SYSTEM - COMMENT 1

Closure Documentation Required: U1 VERIFICATION

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 266 **Date Due:**

Responsible Group: QA **Source Of Item:** QI COMM

Description Of Item:
PREVENTIVE MAINTENANCE - COMMENT 1A

Closure Documentation Required: U1 VERFICATION

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 267 **Date Due:**

Responsible Group: QA **Source Of Item:** QI COMM

Description Of Item:
PREVENTIVE MAINTENANCE - COMMENT 1B

Closure Documentation Required: U1 VERIFICATION

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 278 **Date Due:**

Responsible Group: QA **Source Of Item:** QI COMM

Description Of Item:
SAFETY INJECTION SYSTEM - COMMENT 1A

Closure Documentation Required: U1 VERIFICATION

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 309 **Date Due:**

Responsible Group: TRAINING **Source Of Item:** AT1

Description Of Item:
INADEQUATE POLICY STATEMENT ON TRAINING.

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: **01/04/90** Report Time: **08:20:05**

Restart Item: Y **Record Number:** 321 **Date Due:**

Responsible Group: TRAINING/MGT **Source Of Item:** 01

Description Of Item:
INADEQUATE POLICY GUIDANCE CONCERNING QUALIFICATION OF PERSONNEL TO PERFORM WORK.

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 386 **Date Due:**

Responsible Group: MGT **Source Of Item:** PS-0A6

Description Of Item:
IN ALMOST EVERY DIVISION EVALUATED BY INPO HIGH STANDARDS OF PERFORMANCE AND MANAGEMENT EXPECTATIONS WERE EITHER NOT ESTALLISHED, COMMUNICATED OR ACHIEVED.

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 387 **Date Due:**

Responsible Group: COMPLIANCE **Source Of Item:** PS-0A7

Description Of Item:
ADDITIONAL NUCLEAR PLANT OPERATIONAL EXPERIENCE IS NEEDED AT THE CORPORATE MANAGER LEVEL AND IN MANY KEY PLANT STAFF POSITIONS.

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 396 **Date Due:**

Responsible Group: MGT/U **Source Of Item:** PS-MA1

Description Of Item:
THE PM PROGRAM IS NOT EFFECTIVELY IMPLEMENTED.

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 414 **Date Due:**

Responsible Group: EED/NED MGT **Source Of Item:** PS-TS7

Description Of Item:
MANAGEMENT HAS NOT ESTABLISHED AND CLEARLY COMMUNICATED HIGH ENGINEERING STANDARDS TO WORKING LEVEL, CLOSELY MONITORED PERFORMANCE, AND FOLLOWED UP TO ENSURE THE EXPECTATIONS ARE BEING MET

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 418 **Date Due:**

Responsible Group: EED/NED MGT **Source Of Item:** PS-TS12

Description Of Item:
IN GENERAL, THE ENGINEERING ORGANIZATIONS HAVE NOT SET PERFORMANCE GOALS AND OBJECTIVES THAT REFLECT NORMAL INDUSTRY ENGINEERING PRACTICES AND HIGH STANDARDS.

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 443 **Date Due:**

Responsible Group: NS&L **Source Of Item:** PS-OE4

Description Of Item:
MANY RECOMMENDATIONS FROM SOERS AND SERS HAVE NOT BEEN IMPLEMENTED IN A TIMELY MANNER

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 454 **Date Due:**

Responsible Group: MGT/U **Source Of Item:** PS-OP4

Description Of Item:
OPERATIONS SUPERVISION IS NOT ADEQUATELY ESTABLISHING, COMNMUNICATING, MONITORING, DEMANDING AND ENFORCING A WORKING ENVIRONMENT THAT PROMOTES PROFESSIONALISM, FORMALITY, ACCOUNTABILITY AND ADHERENCE TO HIGH STANDARDS OF PERFORMANCE.

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: 1 **Record Number:** 494 **Date Due:**

Responsible Group: OCS **Source Of Item:** IIR 2-1

Description Of Item:
REPLACE FAILED COMPONENT (CEAC #2 PROCESSOR BOARD) AND RETEST. (UNIT 1)

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: 1 **Record Number:** 496 **Date Due:**

Responsible Group: OCS **Source Of Item:** IIR 2-1

Description Of Item:
PERFORM ROOT CAUSE OF FAILURE FOR THE PROCESSOR BOARD PER EER #89-SA-013.

Closure Documentation Required: EER 89-SA-013

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: 1 **Record Number:** 499 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** IIR 2-1

Description Of Item:
IMPLEMENT WR#319813 TO REPAIR THE 12V POWER SUPPLY.

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: 1 **Record Number:** 500 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** IIR 2-1

Description Of Item:
IMPLEMENT WO #328150 TO REPAIR/REPLACE THE INVERTER.

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: **01/04/90** Report Time: **08:20:05**

Restart Item: 1 **Record Number:** 501 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** II.. 2-1

Description Of Item:
REPLACE THE PUSH BUTTON INTERFACE CARD ON RKN-C02 BAY 7 LOGIC HOUSING #5 BOARD #4 - PART #304342. WR#341328.

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: 1 **Record Number:** 512 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** IIR 2-1

Description Of Item:
IMPLEMENT SITE MOD 1-SM-ED-008 AT NEXT REFUELING OUTAGE.

Closure Documentation Required: WO/SITE MOD

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 515 **Date Due:**

Responsible Group: PS&C **Source Of Item:** IIR 2-1

Description Of Item:
UPGRADE OPERATING PROCEDURE TO INCLUDE GUIDELINES FOR ESTABLISHING LONG PATH RECIRCULATION AS INTERIM ACTION.

Closure Documentation Required: 41OP-1ZZ14

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 516 **Date Due:**

Responsible Group: OPS MGR **Source Of Item:** IIR 2-1

Description Of Item:
PROVIDE TRAINING TO ALL OPERATIONS PERSONNEL CONCERNING THE RESETTING OF THE RCP 286 RELAYS WITH THE CONTROL ROOM HANDSWITCHES IN "AFTER-START" OR WITH A TRIP SIGNAL STILL PRESENT.

Closure Documentation Required: TRAINING PRINTOUT

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 518 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** IIR 2-1

Description Of Item:
INSTALL CAUTION PLACARDS ON THE RCP BREAKER DOORS IN ALL THREE UNITS THAT STATE "ENSURE THAT CONTROL ROOM HANDSWITCHES FOR THIS COMPONENT ARE IN THE "AFTER-STOP" POSITION BEFORE RESETTING THE 286 RELAYS."

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 519 **Date Due:**

Responsible Group: PS&C/WORK CONT **Source Of Item:** IIR 2-1

Description Of Item:
EVALUATE PLANT COMPONENTS TO DETERMINE IF ANY OTHER PLANT COMPONENTS ARE OF THE SAME DESIGN. BASED ON THIS EVALUATION, MODIFY STATION PROCEDURES TO INCORPORATE GUIDELINES FOR RESETTING THE 286 RELAYS FOR THESE COMPONENTS AND INSTALL CAUTION PLACARDS

Closure Documentation Required: PROCEDURES/WO

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 520 **Date Due:**

Responsible Group: OPS MGR **Source Of Item:** IIR 2-1

Description Of Item:
PROVIDE GUIDANCE TO OPERATIONAL PERSONNEL CONCERNING THE MATCHING OF HANDSWITCH FLAGS TO COMPONENT INDICATORS IN SITUATIONS WHERE THE COMPONENT HAS TRIPPED OR HAS AUTOMATICALLY STARTED. IN ADDITION, THIS GUIDANCE SHOULD ALSO ADDRESS MANAGEMENT'S PHILOSOP

Closure Documentation Required: NIGHT ORDER

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 536 **Date Due:**

Responsible Group: EED **Source Of Item:** IIR2-3D

Description Of Item:
ENGINEERING IS TO PROVIDE RECOMMENDATIONS TO PREVENT RECURRENCE OF THE INABILITY TO OPERATE THE ADVS REMOTELY FROM THE CONTROL ROOM OR RSP

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 537 **Date Due:**

Responsible Group: EED **Source Of Item:** IIR2-3D

Description Of Item:
REVIEW THE ADEQUACY OF THE RELIEF REQUEST FOR THE ADVS AND REVISE THE ASME SECTION XI PROGRAM TO DEFINE APPROPRIATE SURVEILLANCE TESTING FOR THE ADVS.

Closure Documentation Required: 71PR-1XI01

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: **01/04/90** Report Time: **08:20:05**

Restart Item: Y **Record Number:** 545 **Date Due:**

Responsible Group: TRAINING **Source Of Item:** IIR2-3D

Description Of Item:
REVISE THE SIMULATOR TO MODEL ACTUAL ADV OPERATION IN THE UNITS.

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 549 **Date Due:**

Responsible Group: PS&C **Source Of Item:** IIR2-3D

Description Of Item:
REVISE 4XRO-XZZ10, FUNCTIONAL RECOVERY PROCEDURE, AS NECESSARY, TO INCLUDE PROVISIONS FOR MANUAL ADV OPERATION OR ALTERNATE STEAMING PATHS TO MEET HEAT REMOVAL SUCCESS PATH

Closure Documentation Required: 41RO-1ZZ10

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 558 **Date Due:**

Responsible Group: OPS MGR **Source Of Item:** IIR2-3D

Description Of Item:
IDENTIFY THOSE TASKS WHICH THE AOS ARE NOT ALLOWED TO PERFORM, I.E., THAT ARE REQUIRED TO BE PERFORMED BY A LICENSED OPERATOR ONLY.

Closure Documentation Required:

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Report Date: **01/04/90** Report Time: **08:20:05**

Restart Item: Y **Record Number:** 559 **Date Due:**

Responsible Group: OPS MGR **Source Of Item:** IIR2-3D

Description Of Item:
OPERATIONS SUPERVISORY PERSONNEL SHALL BE COUNSELED THAT THEY SHOULD NOT DIRECT THE AOS TO PERFORM TASKS FOR WHICH THEY ARE NEITHER TRAINED NOR SPECIFICALLY AUTHROIZED TO DO.

Closure Documentation Required:

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 560 **Date Due:**

Responsible Group: MGT/U **Source Of Item:** IIR2-3D

Description Of Item:
ALL AOS SHALL BE INFORMED WHEN PROBLEMS ARE ENCOUNTERED IN JOB PERFORMANCE, THAT THESE PROBLEMS MUST BE REVIEWED WITH THEIR SUPERVISOR PRIOR TO TAKING NON-STANDARD CORRECTIVE ACTIONS. THE ABOVE SHALL ALSO BE REITERATED TO ALL OPS DEPT PERSONNEL

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 561 **Date Due:**

Responsible Group: MGT/U **Source Of Item:** IIR2-3D

Description Of Item:
OPERATIONS PERSONNEL SHALL REVIEW THE EVENT WITH EMPHASIS ON THE NECESSITY OF FOLLOWING SPECIFIC LOCAL VALVE OPERATING INSTRUCTIONS EVEN DURING TRANSIENT CONDITIONS AND THE PROHIBITION ON USING CHEATER BARS.

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 563 **Date Due:**

Responsible Group: MGT/U **Source Of Item:** IIR2-3D

Description Of Item:
REEMPHASIZE AND ENFORCE THE COMMUNICATION STANDARD AS DESCRIBED IN 40AC-9OP02.

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 564 **Date Due:**

Responsible Group: TRAINING/MGT/U **Source Of Item:** IIR2-3D

Description Of Item:
REQUIRE SPECIAL EMPHASIS ON FORMAL COMMUNICATIONS ON SHIFT AND ON THE SIMULATOR.

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 565 **Date Due:**

Responsible Group: PLANT DIRECTOR **Source Of Item:** IIR2-3D

Description Of Item:
DEVELOP A STANDARD FOR REQUIRED TOOLS, SAFETY APPAREL, ETC. TO BE CARRIED AT ALL TIMES BY AN AO.

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: **01/04/90** Report Time: **08:20:05**

Restart Item: Y **Record Number:** 570 **Date Due:**

Responsible Group: OPS MGR **Source Of Item:** IIR2-3D

Description Of Item:
EVALUATE THE USE OF RADIO EARPHONES, OR ALTERNATE METHODS FOR ENHANCING COMMUNICATIONS BETWEEN THE AOS AND THE CONTROL ROOM.

Closure Documentation Required:

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 575 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** IIR2-3D

Description Of Item:
IMPLEMENT THE RECOMMENDED CORRECTIVE ACTIONS OF THE ENGINEERING ACTION PLAN FOR MSSS LIGHTING.

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 578 **Date Due:**

Responsible Group: EED/NED/PS&C **Source Of Item:** IIR2-3D

Description Of Item:
EVALUATE THE AO EMERGENCY TASKS INVOLVING MANUAL MANIPULATION OF SAFETY RELATED AND IMPORTANT TO SAFETY PLANT COMPONENTS AND DETERMINE IF THEY CAN BE PERFORMED IN THE EVENT OF A LOSS OF NORMAL AND ESSENTIAL LIGHTING CONDITION.

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 566 **Date Due:**

Responsible Group: EED/PS&C **Source Of Item:** IIR2-3D

Description Of Item:
DEVELOP SPECIFIC INSTRUCTIONS FOR ADV OPERATIONS FROM THE CONTROL ROOM. THE INSTRUCTIONS AS A MINIMUM, SHOULD INCLUDE DESIRED OPEN DEMAND SIGNALS, DURATION, AND PREFERRED CLOSING METHOD.

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 567 **Date Due:**

Responsible Group: PS&C **Source Of Item:** IIR2-3D

Description Of Item:
SPECIFIC INSTRUCTIONS FOR ADV OPERATION FROM THE CONTROL ROOM SHALL BE INCORPORATED AS APPROPRIATE INTO THE APPROPRIATE OPERATING, SURVEILLANCE, RECOVERY, EMERGENCY, AND FUNCTIONAL RECOVERY PROCEDURES.

Closure Documentation Required: MULTIPLE PROCEDURES

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 568 **Date Due:**

Responsible Group: TRAINING **Source Of Item:** IIR2-3D

Description Of Item:
STANDARDS OF PERFORMANCE IN PROCEDURAL USAGE WILL BE ENFORCED AND EMPHASIZED/MEASURED DURING SIMULATOR TRAINING AND ON SHIFT.

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 589 **Date Due:**

Responsible Group: MAINTENANCE **Source Of Item:** IIR2-3D

Description Of Item:
PERFORM IA PM TASKS.

Closure Documentation Required: PM PRINTOUT/STATUS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 601 **Date Due:**

Responsible Group: EED **Source Of Item:** IIR2-3D

Description Of Item:
INCLUDE THE SPRING LOADED CHECK VALVES BETWEEN THE N2 AND IA SYSTEMS FOR THE ADVS IN THE ASME XI LEAKAGE TESTING PROGRAM.

Closure Documentation Required: MULTIPLE PROCEDURES

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 602 **Date Due:**

Responsible Group: LICENSING/NED **Source Of Item:** IIR2-3D

Description Of Item:
COMPLETE THE REEVALUATION OF THE RESPONSE TO NRC'S GENERIC LETTER 88-14 AND DETERMINE IF ADDITIONAL ACTIONS ARE NECESSARY BASED UPON THIS EVENT.

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 606 **Date Due:**

Responsible Group: EED/NSSS **Source Of Item:** IIR2-3D

Description Of Item:
IMPLEMENT THE ENGINEERING PLAN TO CONDUCT A DESIGN REVIEW OR TEST CHA-HV-507 TO ENSURE IT WILL PERFORM AS DESIGNED, INCLUDING UNDER A LOSS OF INSTRUMENT AIR CONDITIONS.

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 612 **Date Due:**

Responsible Group: PLANT DIRECTOR **Source Of Item:** IIR2-3D

Description Of Item:
PLANT MANAGEMENT SHALL RE-EVALUATE THE USE OF FURMANITE FOR PRIMARY SYSTEM LEAKS.

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: 1 **Record Number:** 614 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** IIR2-3D

Description Of Item:
ENSURE THAT DCP 1FE-SQ-058 IS INSTALLED BY IMPLEMENTATION OF WOS 284976. (RELIABLE POWER TO UNIT 1 RMS MINI-COMPUTER).

Closure Documentation Required: WORK ORDER

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 615 **Date Due:**

Responsible Group: EP **Source Of Item:** IIR2-3D

Description Of Item:
PROVIDE AN UNINTERRUPTIBLE POWER SUPPLY WITH A CAPACITY OF AT LEAST 1 HOUR DURATION FOR THE MESOREM COMPUTER IN THE STSC.

Closure Documentation Required: MEMO FROM EP/INSTALL

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 620 **Date Due:**

Responsible Group: PLANT DIRECTOR **Source Of Item:** IIR2-3D

Description Of Item:
REVIEW REQTS FOR CONTROL ROOM ACCESS WITH CHEMISTRY PERSONNEL STRESSING THAT THE LEAD OR ACTING LEAD CHEMISTRY TECHNCIAN IS PART OF THE ON-SHIFT TEAM AND IS ALLOWED INTO THE CONTROL ROOM WHEN IT IS NECESSARY TO COMMUNICATE PERTINENT INFO TO THE SHIFT SUP

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 641 **Date Due:**

Responsible Group: EED **Source Of Item:** IIR2-3D

Description Of Item:
EED TO SUPPLY THE UNITS WITH A CURRENT AND ACCURATE PHONE LIST OF QUALIFIED ENGINEERS AND PR&C REPRESENTATIVES.

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: **01/04/90** Report Time: **08:20:05**

Restart Item: Y **Record Number:** 642 **Date Due:**

Responsible Group: PS&C **Source Of Item:** IIR2-3D

Description Of Item:
MODIFY DEGRADED ELECTRICAL POWER PROCEDURE 4XAO-XZZ12, APPENDIX B, TO INCLUDE BETTER AND MORE SPECIFIC GUIDANCE ON RESETTING "86" RELAYS.

Closure Documentation Required: MULTIPLE PROCEDURES

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 644 **Date Due:**

Responsible Group: MGT\OPS **Source Of Item:** IIR2-3D

Description Of Item:
MANAGEMENT SHALL REEMPHASIZE TO PLANT PERSONNEL THE IMPORTANCE OF PROCEDURE USE AND STRICT ADHERENCE.

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 648 **Date Due:**

Responsible Group: OPS MGR **Source Of Item:** IIR2-3D

Description Of Item:
OPERATIONS SHALL REVIEW THE MODIFICATIONS TO THE DEGRADED ELECTRICAL POWER PROCEDURE, AS IDENTIFIED IN THE WRITTEN COMMUNICATION'S SECTION. THE OPEATIONS CREW SHALL THEN ADHERE TO THE PROCEDURE AND NOT ALLOW OR PERFORM UNNECESSARY TROUBLESHOOTING.

Closure Documentation Required: NIGHT ORDER

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: **01/04/90** Report Time: **08:20:05**

Restart Item: Y **Record Number:** 651 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** ADV

Description Of Item:
INCREASE NITROGEN REGULATOR PRESSURE FROM 95 TO 105 PSIG ON ADV.

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: 1 **Record Number:** 653 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** ADV

Description Of Item:
INSPECT UNIT 1 AND 2 ACTUATORS AND REMOVE EXTRA SPRING IF FOUND ON ADVS.

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 656 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** ADV

Description Of Item:
INCORPORATE CCI RECOMMENDED MODIFICATIONS ON ADVS
A) INCREASE PLUG PILOT CAPACITY B) MODIFY PISTON RING C) MODIFY DISK STACK TO PROVIDE A SMOOTH CV TRANSITION.

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 662 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** ADV

Description Of Item:
REPLACED DAMAGED/WORN REGULATOR PARTS ON PNEUMATIC SUBSYSTEM.

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 663 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** ADV

Description Of Item:
VERIFY NITROGEN SUBSYSTEM CLEANLINESS ON PNEUMATIC SUBSYSTEM.

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 664 **Date Due:**

Responsible Group: MAINTENANCE **Source Of Item:** ADV

Description Of Item:
DEVELOP AND PERFORM A PM TASK TO ADJUST REGULATOR SETPOINT ON PNEUMATIC SUBSYSTEM.

Closure Documentation Required: PMS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 665 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** ADV

Description Of Item:
NITPOGEN ACCUMULATOR DROP TEST TO BE PERFORMED ON ALL VALVES, LEAKING FITTINGS AND RELIEF VALVE PROBLEMS TO BE CORRECTED ON PNEUMATIC SYBSYSTEM.

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 668 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** ADV

Description Of Item:
DEVELOP ST AND TEST SECTION XI CHECK VALVES FOR LEAKAGE ON PNEUMATIC SUBSYSTEM.

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 669 **Date Due:**

Responsible Group: MAINTENANCE **Source Of Item:** ADV

Description Of Item:
DEVELOP AND PERFORM A PM TASK TO CALIBRATE AND ADJUST THE POSITIONERS ON PNEUMATIC SUBSYSTEM.

Closure Documentation Required: PM

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 670 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** ADV

Description Of Item:
FLUSH/SAMPLE NITROGEN SUBSYSTEM, IA AND HIGH PRESSURE NITROGEN SUPPLIES TO VERIFY CLEANLINESS ON PNEUMATIC SUBSYSTEM.

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 672 **Date Due:**

Responsible Group: NED **Source Of Item:** ADV

Description Of Item:
IMPLEMENT CORRECTIVE ACTIONS NOTED IN INSTRUMENT AIR REPORT (NED REPORT) ON PNEUMATIC SUBSYSTEM.

Closure Documentation Required:

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 673 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** ADV

Description Of Item:
REMOVE UNQUALIFIED CAGES PER VENDOR TECH. MANUAL.

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 6 4 **Date Due:**

Responsible Group: PS&C **Source Of Item:** EDR

Description Of Item:
REVISE OPERATING PROCEDURES TO SPECIFY OPERATION OF TWO RCP'S ON UAT WITH THE OTHER TWO ON SUT POWER

Closure Documentation Required: 41OP-1ZZ04

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 698 **Date Due:**

Responsible Group: OCS **Source Of Item:** EDR

Description Of Item:
INSTALL DIGITAL FAULT RECORDER ON SSO RELAYS

Closure Documentation Required: WO'S/T-MOD

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 699 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** EDR

Description Of Item:
REFERENCE CIRCUIT MODIFICATION TO SSO SYSTEM. T-MOD

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 700 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** EDR

Description Of Item:
CLEANING OF HIGH VOLTAGE BUSHINGS, INSULATORS AND ARRESTORS.

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 701 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** EDR

Description Of Item:
LUBRICATION AND CYCLING OF FBT BREAKERS

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 702 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** EDR

Description Of Item:
XFMR OIL SAMPLE EVALUATION

Closure Documentation Required: WO/OIL SAMPLE RESULT

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 703 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** EDR

Description Of Item:
OIL FILLED XFMR LEAKAGE CHECKS

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 704 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** EDR

Description Of Item:
MAIN XFMR DEHYDRATING BREATHER FILTER CHECK

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 705 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** EDR

Description Of Item:
SERVICE TESTING OF NON-IE BATTERY SYSTEM

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 706 **Date Due:**

Responsible Group: PS&C **Source Of Item:** COMPGAS

Description Of Item:
COMPRESSOR FREE AIR REGULATOR - REVISE OPERATIONS PROCEDURE TO DRAIN THIS REGULATOR AT LEAST ONCE A WEEK.

Closure Documentation Required: 41OP-1ZZ15

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 707 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** COMPGAS

Description Of Item:
ALL SYSTEM DRAIN TRAPS (MOISTURE SEPARATORS, AIR RECEIVERS, AIR DRYER PREFILTERS) - CLEAN AND REPAIR AS REQUIRED.

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 708 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** COMPGAS

Description Of Item:
INSTRUMENT AIR DRYER - REPLACE DESICCANT IN ACTIVE AND STANDBY DRYERS.

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: **01/04/90** Report Time: **08:20:05**

Restart Item: Y **Record Number:** 709 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** COMPGAS

Description Of Item:
VERIFY PROPER OPERATION OF AIR DRYER CAN SETTINGS AND TOWER SOLENOID VALVES.

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 710 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** COMPGAS

Description Of Item:
INSTRUMENT AIR DRYER PREFILTER AND AFTERFILTER DIFFERENTIAL PRESSURE SWITCHES - CALIBRATE.

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 712 **Date Due:**

Responsible Group: MAINTENANCE **Source Of Item:** COMPGAS

Description Of Item:
MONITOR AIR QUALITY DOWNSTREAM OF THE AFTER FILTERS FOR MOISTURE CONTENT, PARTICULATES, AND HYROCARBONS EVERY THREE MONTHS.

Closure Documentation Required: PM'S

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 713 **Date Due:**

Responsible Group: PS&C **Source Of Item:** COMPGAS

Description Of Item:
ENSURE MAINTENANCE PROCEDURES ALLOW ONLY ONE AIR COMPRESSOR TO BE REMOVED FROM SERVICE AT ONY ONE TIME.

Closure Documentation Required: 41OP-1IA01

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 726 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** COMPGAS

Description Of Item:
LIQUID NITROGEN STORAGE TANK - VISUALLY INSPECT.

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 727 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** COMPGAS

Description Of Item:
TANK PRESSURE BUILDUP/REGULATOR - RUN THE REGULATOR THROUGH 10PSI OF ADJUSTMENT.

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 728 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** COMPGAS

Description Of Item:
CALIBRATE TANK LIQUID LEVEL GAUGE FOR "O".

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 729 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** COMPGAS

Description Of Item:
NITROGEN REGULATORS - RUN THE REGULATORS THROUGH 20 PSIG OF ADJUSTEMENTS. RETURN TO SETPOINT.

Closure Documentation Required: WO'S/73TI-9IA02

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 736 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** COMPGAS

Description Of Item:
PERFORM A LEAK RATE TEST IN THE CHECK VALVES BY RELEASE OF INSTRUMENT AIR PRESSURE.

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 743 **Date Due:**

Responsible Group: PS&C **Source Of Item:** MGMTMTG

Description Of Item:
THE S/U PROCEDURE REQUIRES ENHANCEMENTS ADDRESSING REACTIVITY CONTROL.

Closure Documentation Required: 41OP-1ZZ03

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 744 **Date Due:**

Responsible Group: PS&C **Source Of Item:** MGMTMTG

Description Of Item:
DEVELOP AND IMPLEMENT A TURBINE SPEED TEST FOR THE AFW

Closure Documentation Required: 41OP-1AF01

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 745 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** TS2-1

Description Of Item:
CONDUCT TURBINE OVERSPEED TEST FOR AFW

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 746 **Date Due:**

Responsible Group: TRAINING **Source Of Item:** TQ7-1

Description Of Item:
CONDUCT STA SIMULATOR TRAINING WITH STA ACTING IN THE CAPACITY OF AN STA

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 747 **Date Due:**

Responsible Group: PS&C **Source Of Item:** OA3-1

Description Of Item:
EVALUATE SU PROCEDURE TO ENSURE SUFFICIENT GUIDANCE IS PROVIDED FOR CONTROL OF REACTIVITY.

Closure Documentation Required: 41OP-1ZZ03

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 748 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** EDR

Description Of Item:
IMPLEMENT DCP FE-NA-041 (BUSHING CREEP EXTENDERS AND DRIP LOOPS)

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 749 **Date Due:**

Responsible Group: PS&C **Source Of Item:** AIT-70

Description Of Item:
ASSESS THE ADEQUACY OF PROCEDURES FOR REAPPLICATION OF ESSENTIAL LIGHTING LOADS TO CLASS 1E BUSSES.

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 750 **Date Due:**

Responsible Group: NED **Source Of Item:** COMPGAS

Description Of Item:
PERFORM A TEST ON THE N2 SUBSYS TO DETERMINE WHY IA DROPPED TO 64 LBS.

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 751 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** COMPGAS

Description Of Item:
CHECK PNEUMATIC COMP FOR LEAKS ON MSIV & FWIV

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 754 **Date Due:**

Responsible Group: EED **Source Of Item:** SBCS

Description Of Item:
PERFORM 18 MONTH PM OF CONTROL SYSTEM.

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 755 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** SBCS

Description Of Item:
PERFORM LIVE STEAM STROKE TIME TESTING ON EACH VALVE.

Closure Documentation Required: WO'S/36MT-9SF09

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 756 **Date Due:**

Responsible Group: MAINTENANCE **Source Of Item:** SBCS

Description Of Item:
IMPLEMENT TWICE MONTHLY SBCS VALVE TESTING.

Closure Documentation Required: PM'S/SG001

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 757 **Date Due:**

Responsible Group: EED **Source Of Item:** SBCS

Description Of Item:
PERFORM SBCS FUNCTIONAL TEST.

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 758 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** GECLTR

Description Of Item:
TEST CEA COILS TO IDENTIFY DEFECTIVE COILS. REPLACE ALL DEFECTIVE COILS

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 759 **Date Due:**

Responsible Group: PS&C **Source Of Item:** COMPGAS

Description Of Item:
MODIFY APPROPRIATE PROCEDURES TO INDICATE COMPENSATORY OPERATOR ACTIONS IN THE EVENT OF LOSS OF AIR

Closure Documentation Required: 41AO-1ZZ06

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 760 **Date Due:**

Responsible Group: PLT MGR **Source Of Item:** OMDLTR

Description Of Item:
ENSURE THAT A HIGHER STANDARD OF ANALYSIS, REVIEW, TRAINING AND PERFORMANCE ARE IN PLACE AND OPERATING EFFECTIVELY.

Closure Documentation Required: LTTR PLT MGR TO EVP

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 761 **Date Due:**

Responsible Group: PS&C **Source Of Item:** PM

Description Of Item:
DEVELOP AND IMPLEMENT QUARTERLY N2 LEAKAGE ST.

Closure Documentation Required: 41ST-1SG05

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 762 **Date Due:**

Responsible Group: PS&C **Source Of Item:** COMPGAS

Description Of Item:
INSTITUTE C/A REQUIRED FOR REGULATORS

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 763 **Date Due:**

Responsible Group: EED **Source Of Item:** U3IIR

Description Of Item:
DETERMINE ROOT CAUSE OF UNIT 3 MSSV LIFTING AT 31 PSI BELOW 1250 PSIG +-1%.

Closure Documentation Required: EER 89-SG-190

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 764 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** COMPGAS

Description Of Item:
Change the afterfilter internals (cartridge) from the current 1 micron rated filter to a .45 micron rated filter or smaller

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 768 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** LIGHTRP

Description Of Item:
INSTALL EMERGENCY LIGHTING IAW RESULTS OF THE 5/29 WALKDOWN

Closure Documentation Required: WO'S/U1 APP R RESULT

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: Y **Record Number:** 769 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** REVIEW

Description Of Item:
TEST MSSV

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: Y **Record Number:** 770 **Date Due:**

Responsible Group: EP **Source Of Item:** IIR3

Description Of Item:
REVISE EPIP 14 TO ADDRESS MANUAL DEFAULT

Closure Documentation Required: CLOSED U2 RESTART

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: 1 **Record Number:** 802 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** SBCS

Description Of Item:
TEST THE UNIT 1 PERMISSIVE TIMER

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:20:05

Restart Item: 1 **Record Number:** 803 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** SBCS

Description Of Item:
REPLACE ROSEMOUNT STEAM FLOW TRANSMITTERS UNIT 1 ONLY

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

ATTACHMENT 2

PVNGS RESTART DATA BASE REPORT

Report Date: **01/04/90** Report Time: **11:15:05**

Restart Item: 2 **Record Number:** 34 **Date Due:**

Responsible Group: MGT/U2 **Source Of Item:** CAL 3/7

Description Of Item:
Lessons learned from the Unit 3 event will be applied to Unit 2 expeditiously, commensurate with the safety signigicance of the deficiency

Closure Documentation Required:

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: 2 **Record Number:** 42 **Date Due:**

Responsible Group: COMPLIANCE **Source Of Item:** CAL3/28

Description Of Item:
Brief the NRC upon completion of your investigations and will not restart Unit 2 facilities prior to receiving NRC concurrence

Closure Documentation Required:

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: 2 **Record Number:** 508 **Date Due:**

Responsible Group: WORK CONT/U2&3 **Source Of Item:** IIR 2-1

Description Of Item:
UNIT 2 AND 3 TO EVALUATE 13.8 KV AND 4.16 KV CIRCUIT BREAKER PM STATUS.

Closure Documentation Required:

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 11:15:05

Restart Item: 2 **Record Number:** 590 **Date Due:**

Responsible Group: EED **Source Of Item:** IIR2-3D

Description Of Item:
INSPECT THE UNIT 2 PNENMATIC SYSTEM VALVES FOR EVIDENCE OF DIRT, MOISTURE OR CORROSION OF THE VALVE COMPONENTS OF IA SUBSYSTEM PIPING. ANALYZE ANY CONTAINMENTS FOUND AND REPAIR AS APPLICABLE.

Closure Documentation Required:

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: 2 **Record Number:** 722 **Date Due:**

Responsible Group: EED **Source Of Item:** COMPGAS

Description Of Item:
INSPECT 2 OF THE PNEUMATIC SYSTEM VALVES IN U2 FOR EVIDENCE OF DIRT/MOISTURE/CORROSION OF THE VALVE COMPONENTS OR INSTRUMENT AIR SYBSYSTEM PIPING. ANALYZE ANY CONTAMINATIONS FOUND. DEPENDING ON THE VALVE'S FILTER-REGULATOR, SOLENOID, POSITIONER, AND MOD

Closure Documentation Required:

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: 2 **Record Number:** 752 **Date Due:**

Responsible Group: EED **Source Of Item:** SBCS

Description Of Item:
TEST UNIT 2 PERMISSIVE TIMER.

Closure Documentation Required:

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 11:15:05

Restart Item: 2 **Record Number:** 753 **Date Due:**

Responsible Group: EED **Source Of Item:** SBCS

Description Of Item:
RECONNECT T-DAS TO SBCS VALVE POSITIONS (UNIT 2).

Closure Documentation Required:

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: 2 **Record Number:** 765 **Date Due:**

Responsible Group: EED **Source Of Item:** REVIEW

Description Of Item:
PREPARE JUSTIFICATION FOR DELAYING MSIV BYPASS RCFA

Closure Documentation Required:

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

Restart Item: 2 **Record Number:** 766 **Date Due:**

Responsible Group: EED **Source Of Item:** REVIEW

Description Of Item:
PREPARE JUSTIFICATION FOR DELAYING MSS RCFA

Closure Documentation Required:

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: **01/04/90** Report Time: **11:15:05**

Restart Item: 2 **Record Number:** 767 **Date Due:**

Responsible Group: ALLEN JM **Source Of Item:** ENGEVAL

Description Of Item:
REVISE 42OP-2ZZ015 TO PROVIDE INSTRUCTIONS FOR MONITORING DIFFERENTIAL PRESSURE ACROSS DRYER

Closure Documentation Required:

Compliance Engineering:

Status: CLOSED **Days Until Due Date:** 999

ATTACHMENT 3

PVNGS RESTART DATA BASE REPORT

Report Date: **01/04/90** Report Time: **08:48:17**

Restart Item: 1 **Record Number:** 30 **Date Due:**

Responsible Group: OPS MGR **Source Of Item:** CAL 3/7

Description Of Item:
Incorporate the central lessons learned from the March 3, 1989, Unusual Event at palo Verde 3 into your activities at Unit 1 prior to restart of Unit 1

Closure Documentation Required: NIGHT ORDER

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: 1 **Record Number:** 38 **Date Due:**

Responsible Group: COMPLIANCE **Source Of Item:** CAL 3/7

Description Of Item:
Brief the NRC upon completion of your investigation and will not restart the Palo Verde Unit 1 facility prior to receiving NRC concurrence

Closure Documentation Required: BRIEFING

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: 1 **Record Number:** 147 **Date Due:**

Responsible Group: QA **Source Of Item:** QI COMM

Description Of Item:
CHARGING PUMP - COMMENT 2B

Closure Documentation Required: U1 VERIFICATION

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: **01/04/90** Report Time: **08:48:17**

Restart Item: 1 **Record Number:** 494 **Date Due:**

Responsible Group: OCS **Source Of Item:** IIR 2-1

Description Of Item:
REPLACE FAILED COMPONENT (CEAC #2 PROCESSOR BOARD) AND RETEST. (UNIT 1)

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: 1 **Record Number:** 496 **Date Due:**

Responsible Group: OCS **Source Of Item:** IIR 2-1

Description Of Item:
PERFORM ROOT CAUSE OF FAILURE FOR THE PROCESSOR BOARD PER EER #89-SA-013.

Closure Documentation Required: EER 89-SA-013

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: 1 **Record Number:** 499 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** IIR 2-1

Description Of Item:
IMPLEMENT WR#319813 TO REPAIR THE 12V POWER SUPPLY.

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: **01/04/90** Report Time: **08:48:17**

Restart Item: 1 **Record Number:** 500 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** IIR 2-1

Description Of Item:
IMPLEMENT WO #328150 TO REPAIR/REPLACE THE INVERTER.

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: 1 **Record Number:** 501 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** IIR 2-1

Description Of Item:
REPLACE THE PUSH BUTTON INTERFACE CARD ON I N-C02 BAY 7 LOGIC HOUSING #5 BOARD #4 - PART #304342. WR#341328.

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: 1 **Record Number:** 512 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** IIR 2-1

Description Of Item:
IMPLEMENT SITE MOD 1-SM-ED-008 AT NEXT REFUELING OUTAGE.

Closure Documentation Required: WO/SITE MOD

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:48:17

Restart Item: 1 **Record Number:** 614 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** IIR2-3D

Description Of Item:
ENSURE THAT DCP 1FE-SQ-058 IS INSTALLED BY IMPLEMENTATION OF WOS 284976. (RELIABLE POWER TO UNIT 1 RMS MINI-COMPUTER).

Closure Documentation Required: WORK ORDER

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: 1 **Record Number:** 653 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** ADV

Description Of Item:
INSPECT UNIT 1 AND 2 ACTUATORS AND REMOVE EXTRA SPRING IF FOUND ON ADVS.

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

Restart Item: 1 **Record Number:** 802 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** SBCS

Description Of Item:
TEST THE UNIT 1 PERMISSIVE TIMER

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

PVNGS RESTART DATA BASE REPORT

Report Date: 01/04/90 Report Time: 08:48:17

Restart Item: 1 **Record Number:** 803 **Date Due:**

Responsible Group: WORK CONTROL **Source Of Item:** SBCS

Description Of Item:
REPLACE ROSEMOUNT STEAM FLOW TRANSMITTERS UNIT 1 ONLY

Closure Documentation Required: WORK ORDERS

Compliance Engineering:

Status: OPEN **Days Until Due Date:** 999

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

April 4, 1990

NOTICE OF SIGNIFICANT MEETING

Name of Licensee:	Arizona Public Service (APS)
Name of Facility:	Palo Verde Nuclear Generating Station - Units 1, 2, and 3
Docket Nos.:	50-528, 50-529, and 50-530
Date and Time of Meeting:	Tuesday, April 10, 1990, 8:30 a.m.
Location of Meeting:	APS Offices, Phoenix, Arizona
Purpose of Meeting:	Management Meeting including Status of Unit 1 Restart Activities
NRC Attendees:	J. Martin, Regional Administrator R. Zimmerman, Director, Division of Reactor Safety and Projects S. Richards, Chief, Reactor Projects Branch G. Yuhas, Chief, Emergency Preparedness and Radiological Protection Branch H. Wong, Chief, Reactor Projects, Section II T. Chan, Project Manager, NRR D. Coe, Senior Resident Inspector W. Ang, Project Inspector
Licensee Attendees:	W. Conway, Executive Vice President J. Levine, Vice President, Nuclear Production J. Bailey, Vice President, Nuclear Safety and Licensing Other APS Staff

Note: Attendance at this meeting by NRC personnel other than those listed above should be made known by April 6, 1990, 12:00 noon via a telephone call to H. Wong, FTS 463-3733.

Approved by: S. A. Richards, Chief
Reactor Projects Branch
Division of Reactor Safety and Projects

9004180355 2pp.

4/10

11

Distribution:
NRC Attendees listed above
J. Taylor, EDO
J. Sniezek, DEDO
T. Murley, NRR
J. Lieberman, OE
G. Holahan, NRR
J. Zwolinski, NRR
F. Congel, NRR
C. Trammel, NRR
J. Goldberg, OGC
J. Rogge, EDO
F. Miraglia, NRR/ADT
T. Chan, NRR/PD5
B. Faulkenberry, Region V
G. Cook, Region V

A G E N D A

NRC/APS MANAGEMENT MEETING
APRIL 10, 1990
8:30 AM - 1:00 PM

1. UNIT 1 STARTUP

2. CURRENT PLANT EVENTS

   - SHUTDOWN COOLING LEAK - UNIT 1
   - VENTING OF PRESSURIZER - UNIT 2
   - LEAKING PRESSURIZER PRESSURE INSTRUMENT ISOLATION VALVE (RC-207) - UNIT 3

3. MAINTENANCE INITIATIVES · DET - LACK OF COORDINATION, PLANNING, PMA W.O.
   - NO QA INVOLVEMENT IN MAINT

4. ENGINEERING PROGRAM

5. PROGRAM INITIATIVE INTEGRATION

6. QA INITIATIVES · MNGR - STILL GETTING OFF GROUND - EX. - [illegible]
   - CONT. [illegible]
   · IMPROVING
   · QA MUTUAL - COORDINATE [illegible]
   - CONCERN [illegible] SPRING LATER MARCH.

7. SIMULATOR UPGRADE

8. UNIT 2 REFUELING OUTAGE STATUS

9. FIRE PROTECTION AND SECURITY INITIATIVES

A G E N D A

NRC/APS MANAGEMENT MEETING
APRIL 10, 1990
8:30 AM - 1:00 PM

1. UNIT 1 STARTUP

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3. MAINTENANCE INITIATIVES

4. ENGINEERING PROGRAM

5. PROGRAM INITIATIVE INTEGRATION

6. QA INITIATIVES

---

7. SIMULATOR UPGRADE

8. UNIT 2 REFUELING OUTAGE STATUS

9. FIRE PROTECTION AND SECURITY INITIATIVES

LOCATION -
CORP. HQ
5TH STREET
3rd FLOOR
CAMERA VIEW ROOM

4/10/90 - MTG W/ APS

Co. 194 - NET FINDINGS: INTEGRATED ACTION PLAN BOARD
DEVELOPED MAP AS "BUSINESS PLAN" RAPP
JUST DEALING W/ DET ISSUES (UNCORRELATED
INITIATIVES)

EMPHASIZING PRIORITIES

12-18 MONTH WINDOW

BUSINESS PLAN, ROLLED BY JULY 4 (7/15) INCLUDES
DETAIL PLAN

S.M. ENGR/MAINT/QA

MARTIN TO DISCUSS W/ CEO ON APPROACH

RQ. FOR FUNDS -

- PRE-EVALUATION PRIORITIES
- PM/CM BACKLOG
- MAINT/ENGR INTERFACE + HOW IT WILL WORK

B/11

12.

APS/NRC

MANAGEMENT MEETING

APRIL 10, 1990

B/12
13.

APS/NRC MANAGEMENT MEETING
AGENDA

UNIT 1 STARTUP

OPERATIONAL READINESS	W. E. IDE
RESTART LIST STATUS	W. E. IDE
BACKLOGS	W. E. IDE
MRC	J. N. BAILEY
PLANT & SITE READINESS	J. M. LEVINE

- SENIOR MANAGEMENT
- OPERATIONS AND MAINTENANCE
- TECHNICAL SUPPORT
- TRAINING

CURRENT PLANT EVENTS

UNIT 1 SHUTDOWN COOLING LEAK	W. E. IDE
VENTING OF PRESSURIZER IN UNIT 2	D. R. HEINICKE
UNIT 3 VALVE PACKING LEAK	R. J. ADNEY

MAINTENANCE INITIATIVES W. C. MARSH

ORGANIZATION

WORK CONTROL IMPROVEMENT PROJECT

ENGINEERING PROGRAM	
ONSITE/OFFSITE INTERFACE	E. C. SIMPSON
SITE ENGINEERING PROGRAMS	T. H. COGBURN
PROGRAM INITIATIVE INTEGRATION	J. M. LEVINE
IDENTIFICATION OF PROGRAMS	
PRIORITIZATION	
SCHEDULES	
QUALITY ASSURANCE/RECENT INITIATIVES	B. E. BALLARD

APS/NRC MANAGEMENT MEETING
AGENDA
(ADDITIONAL ITEMS TO BE DISCUSSED AS TIME PERMITS)

SIMULATOR UPGRADE	
DESCRIPTION OF CHANGES	D. C. BROWN
SCHEDULE	D. C. BROWN
SCHEDULE PERFORMANCE	D. C. BROWN
- IMPACT ON TRAINING	E. G. FIRTH
- IMPACT ON EOP UPGRADE	W. C. MARSH
UNIT 2 REFUELING OUTAGE STATUS	D. R. HEINICKE
SECURITY/FIRE PROTECTION	P. J. CAUDILL
INITIATIVES	

UNIT 1 OPERATIONAL READINESS

SCOPE OF RESTART PROGRAM

- o MAJOR ISSUES
  - RADIATION MONITORS
  - SYSTEM ACCEPTANCE
  - TEAM BUILDING
  - MAINTENANCE BACKLOG
  - AREA WALKDOWNS
  - MANAGEMENT REVIEW OF MODE CHANGES
- o SPECIFIC AREAS
  - OPERATIONS
  - RADIATION PROTECTION
  - MAINTENANCE
  - WORK CONTROL
  - CHEMISTRY

UNIT 1 OPERATIONAL READINESS

MAJOR ISSUES

o RADIATION MONITORS

- GOAL

  ALL TECH SPEC MONITORS ARE OPERABLE PRIOR TO MODE 2

  NO MORE THAN 3 NON-TECH SPEC MONITORS OUT-OF-SERVICE PRIOR TO MODE 2

- METHOD

  ASSIGN DEDICATED PLANNER AND 2 I&C TECHS TO CHEMISTRY MANAGER FOR OVERALL COORDINATION OF RAD MONITOR WORK

- CURRENT MONITOR STATUS

  4 TS RAD MONITOR - OUT OF SERVICE
  - 1 SOME PROBLEM
  - 2 PENDING TERMINATION - MOD INITIATED (R4-141, 142)
  - 1 CHANGES HOLD

  2 NON TS RAD MONITOR -
  - 1 UNDER CYCLE REVIEW
  - 1 THAT WILL TAKE PROBLEM

DOING WORK TO LOOK AT DESIGN OF MAINT. WITH INTERNAL INDUSTRY SYSTEM NEXT YEAR?

UNIT 1 OPERATIONAL READINESS

o SYSTEM ACCEPTANCE

- GOAL: REVIEW STATUS OF EACH SYSTEM PRIOR TO MODE 4

  OPEN CORRECTIVE MAINTENANCE

  PM STATUS

  DESIGN STATUS

  RADIOLOGICAL AND CHEMISTRY CONCERNS

MGMT TEAM REVIEW OF SYSTEM STATUS - PRIORITIZE OUTS BY DUE DATE MODE 2

- METHOD: REVIEW PACKAGES PUT TOGETHER BY PLANNERS AND FOREMEN

  REVIEWED BY MANAGERS

  KEY SYSTEMS WALKED DOWN

- FINAL ACCEPTANCE BY OPERATIONS MANAGER

UNIT 1 OPERATIONAL READINESS

- o TEAM BUILDING
  - CONTINUING MONTHLY DEPARTMENTAL SUPERVISOR MEETINGS
  - CONDUCTED INDEPENDENT ANALYSIS

    Robinson unit 1 (CSI) - interactions between teams
    teamwork audit
  - MANAGEMENT TEAM SET INDIVIDUAL IMPROVEMENT GOALS

UNIT 1 OPERATIONAL READINESS

SPECIFIC AREAS

o OPERATIONS

- REVIEWED TRAINING STATUS - MODS + MODIFICATION TEAM COURSE INTEGRATION EVOLUTIONS
- ASSIGNED PROFICIENCY WATCHES IN OPERATING UNITS
- MANAGEMENT OBSERVED ALL CREWS IN THE SIMULATOR
- ESTABLISHED GUIDELINES FOR PRE-EVOLUTION BRIEFS
- 100% VALVE ALIGNMENTS ON SYSTEMS

UNIT 1 OPERATIONAL READINESS

o RADIATION PROTECTION

- ESTABLISHED A ROTATING SHIFT
- CONDUCTED PROFICIENCY WATCHES IN OPERATING UNITS
- CONDUCTED GAS STRIPPER HELIUM TEST
- IMPLEMENTED DECONTAMINATION PROGRAM (CURRENT - 10% - GOAL (W/IN 9. DMSCT DEC - 4%)
- IDENTIFIED POWER ASCENSION REQUIRED ACTIONS

RESTART LIST STATUS

- o REVIEWS
  - REVIEWS IDENTIFIED 190 RESTART ACTION ITEMS
  - RESTART ACTION ITEM LIST HAS BEEN PROVIDED TO THE NRC (CAL)
- o VERIFICATIONS
  - 100% INDEPENDENT REVIEW BY QUALITY ASSURANCE DEPARTMENT
- o PROCESS OVERVIEW
  - MANAGEMENT REVIEW COMMITTEE
- o CURRENT STATUS (4/9/90)
  - OF 190 IDENTIFIED RESTART ACTION ITEMS:

    143 ITEMS COMPLETED — TO NRC

    47 ITEMS TO BE COMPLETED PRIOR TO MODE 2 ENTRY

    15 WORK TO CLOSE PACKAGE

    14 INTERFACES

    14 MODE 3 MODIFICATIONS

RESTART LIST STATUS

- o ADV RESTART PROGRESS
  - 40 TOTAL RESTART ITEMS
  - 27 RESTART ITEMS CLOSED
  - 13 RESTART ITEMS REMAIN OPEN
    - 5 ITEMS IN PROGRESS
    - 6 ITEMS ARE COMPLETED; CLOSURE DOCUMENTATION IS IN REVIEW
    - 1 ITEMS REQUIRE MODE 3 TESTING
    - 1 ITEM IS PENDING COMPLETION OF ALL ADV INSTRUMENT AIR ITEMS

RESTART LIST STATUS

- o SBCS RESTART PROGRESS
  - 9 TOTAL RESTART ITEMS
  - 6 RESTART ITEMS CLOSED
  - 3 RESTART ITEMS REMAIN OPEN

- o EMERGENCY LIGHTING RESTART PROGRESS
  - 12 TOTAL RESTART ITEMS

    ALL PHYSICAL WORK IS COMPLETE

    ALL PM's ARE CURRENT
  - 7 RESTART ITEMS CLOSED
  - 5 RESTART ITEMS REMAIN OPEN

    3 ITEMS ARE COMPLETED; CLOSURE DOCUMENTATION IS IN REVIEW

    2 ITEMS REQUIRE REVIEW OF PM STATUS PRIOR TO MODE 2 ENTRY

MAINTENANCE BACKLOG
CORRECTIVE MAINTENANCE

PRIORITY 1 - 2 - 3

(TOTAL WO's & WR's/WO's & WR's GREATER THAN 90 DAYS OLD)

APRIL 7, 1989 - 2,281/1,319

APRIL 4, 1990 - 1,525/993 — Similar to other unit

2,751 WORK ORDERS COMPLETED DURING THE OUTAGE (4/4/90)

MAINTENANCE BACKLOG
CORRECTIVE MAINTENANCE
PRIORITY 5 - 6

1,100 WORK ITEMS INITIALLY IDENTIFIED FOR COMPLETION DURING THE OUTAGE

2,282 WORK ORDERS COMPLETED DURING THE OUTAGE (4/4/90)

34 OF THESE ITEMS ORIGINALLY IDENTIFIED AS OUTAGE WORK WILL NOT BE COMPLETED PRIOR TO RESTART

(WORK ORDERS/WORK REQUESTS)

APRIL 8, 1989 - 1,343/138

APRIL 4, 1990 - 642/108

MAINTENANCE BACKLOG
PREVENTIVE MAINTENANCE

- NUMBER OF PM's NOT CURRENT

  105

- PM's THAT MAY NOT BE COMPLETED PRIOR TO RESTART - CURRENTLY UNDER ENGINEERING EVALUATION

  11 — RELATED TO PARTS AVAILABILITY
  BOTH UNANTICIPATED
  + PLANNED — PER CODE

MAINTENANCE BACKLOG
DESIGN CHANGES

- o 134 MODIFICATIONS IN OUTAGE SCOPE

- o UNIT COMPARISON

  - UNIT 1 - 298
    (CORRECTED TO REFLECT PROJECTED DISPOSITIONING OF REMAINING DESIGN CHANGES)

  - UNIT 2 - ~334

  - UNIT 3 - ~326

UNIT 1 OPERATIONAL READINESS SUMMARY

- o RESTART LIST WILL BE COMPLETE
- o BACKLOGS ARE REDUCED
- o OPERATIONS STAFF
  - TRAINED
  - REORIENTATION TIME ON OPERATING UNIT
  - TEAM WORK IS IMPROVED

MANAGEMENT REVIEW COMMITTEE

REVIEW OF UNIT 1 STARTUP

- o SAME PROCESS OF REVIEW AS USED ON UNIT 3

  USED UNIT 3 EXPERIENCE

- o UNIT 1 PRESENTED STARTUP PLAN

- o REVIEWED COMPLETION OF ACTIONS

  – PLANT TOURS INCLUDED

MANAGEMENT REVIEW COMMITTEE

CONCLUSIONS

- o ORDERLY REVIEW
- o CONVEYANCE OF STANDARDS & EXPECTATIONS
- o TEAM WORK DEVELOPMENT
- o CONCURRENCE WITH RESULTS TO DATE

MRC to be used on an as needed basis in future, not a continuing effort

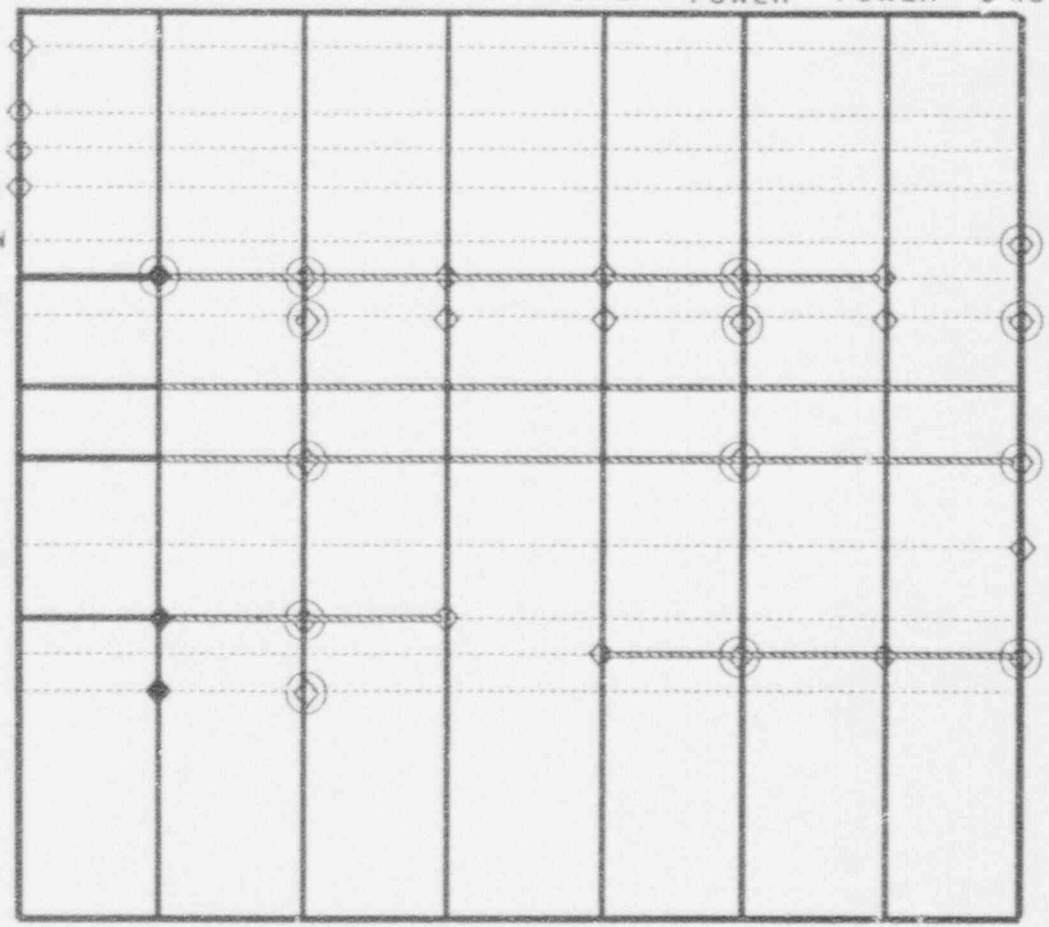
UNIT 1 STARTUP PROGRAM

ACTIVITY IN PROGRESS ◇ ACTIVITY SCHEDULE COMPLETE ◆ ACTIVITY COMPLETE ◇ MRC REVIEW

1. MANAGEMENT OVERSIGHT	JAN 22	MODE 4	MODE 2	MODE 1	30% POWER	60% POWER	100% POWER	+10 DAYS
D. EMPHASIZE QA INVOLVEMENT								
1. EXPAND OPERATIONS QA SURVEILLANCE								
2. REVIEW OUTSTANDING CARS								
E. MANAGEMENT COORDINATION & TEAM BUILDING								
1. WEEKLY STAFF MEETINGS WITH EXECUTIVE VP								
2. ISEG & NSG REVIEWS				AS NEEDED				
3. MRC REVIEW OF PRS'S				AS NEEDED				
4. REVIEW OF EVENTS BY ON SITE MANAGEMENT				AS NEEDED				

UNIT 1 STARTUP PROGRAM

ACTIVITY IN PROGRESS ◇ ACTIVITY SCHEDULE COMPLETE ◆ ACTIVITY COMPLETE ◇ MRC REVIEW



1. MANAGEMENT OVERSIGHT

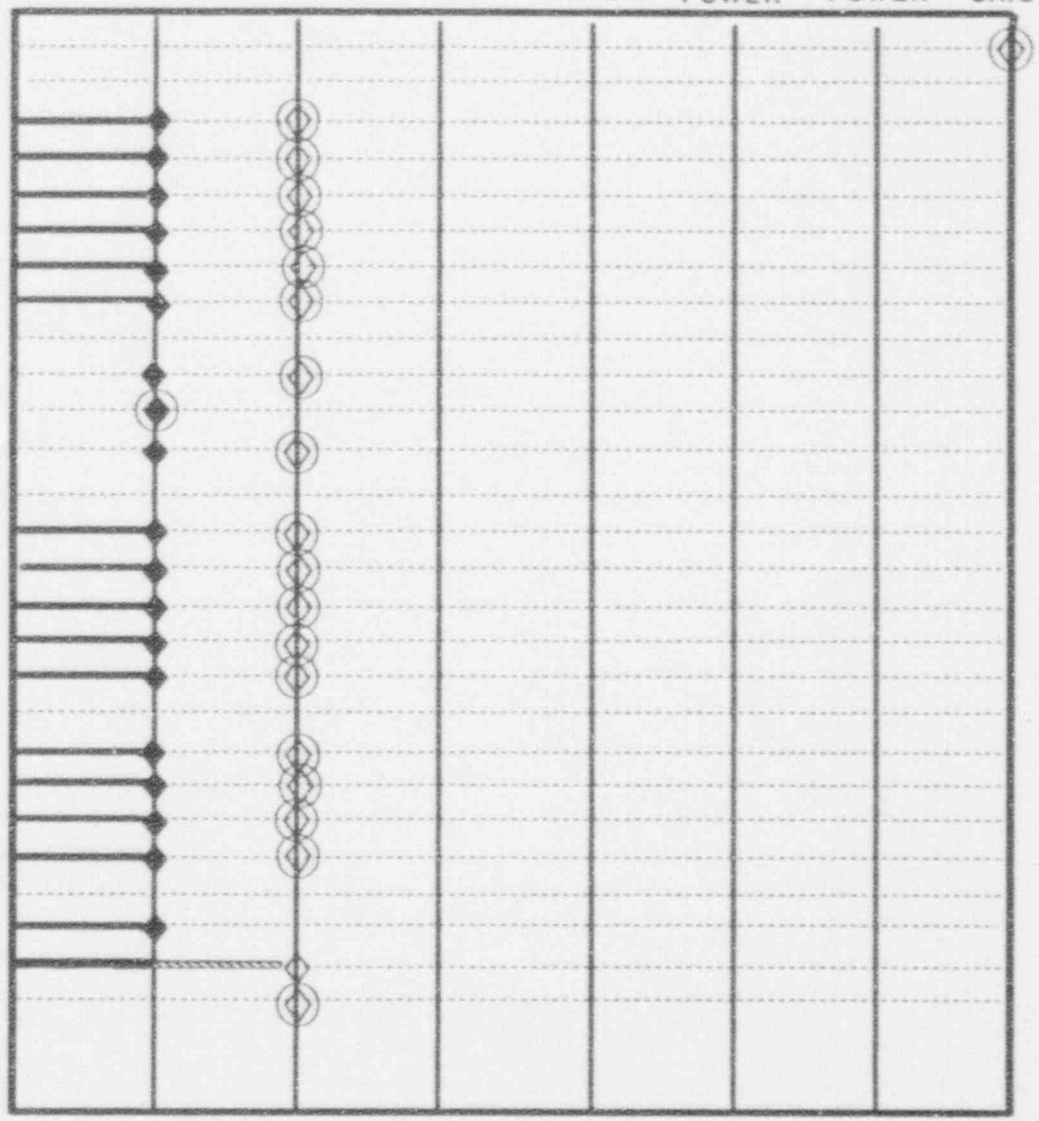
A. ESTABLISH MANAGEMENT REVIEW COMMITTEE
   1. ISSUE CHARTER
   2. DEFINE EVALUATION AREAS
   3. MEETING SCHEDULE

B. UPGRADE MANAGEMENT OBSERVATION
   1. LINE MANAGEMENT REVIEWS
   2. PLANT MANAGEMENT READINESS TOURS
   3. SELECTED SENIOR MANAGEMENT OBSERVATIONS
   4. MANAGEMENT OBSERVATION TOURS

C. PERFORM SELF ASSESSMENTS AT KEY MILESTONES
   1. MODE CHANGE READINESS
   2. PLATEAU WALKDOWNS
   3. MRC REVIEW OF EFDT & LONGSTANDING CONCERN LIST

UNIT 1 STARTUP PROGRAM

ACTIVITY IN PROGRESS ◇ ACTIVITY SCHEDULE COMPLETE ◆ ACTIVITY COMPLETE ◇ MRC REVIEW



2. PLANT EQUIPMENT AND SUPPORT PERSONNEL

A. REVIEW REQUIRED ACTIONS FOR STARTUP

1. RADIOLOGICAL CONTROLS
2. CHEMISTRY CONTROLS
3. TRAINING
4. ENGINEERING
5. MATERIAL CONDITION
6. QUALITY ASSURANCE

B. WORKPLAN COMPLETION

1. UNIT 1 RESTART LIST
2. UNIT 2 POST RESTART
3. SCHEDULED OUTAGE WORK

C. WORK BACKLOG REDUCTION (SITE)

1. ENGINEERING EVALUATION REQUEST
2. CORRECTIVE MAINTENANCE
3. PREVENTATIVE MAINTENANCE
4. OPERATIONS PROCEDURE CHANGES
5. IIR/PTR/SPEER

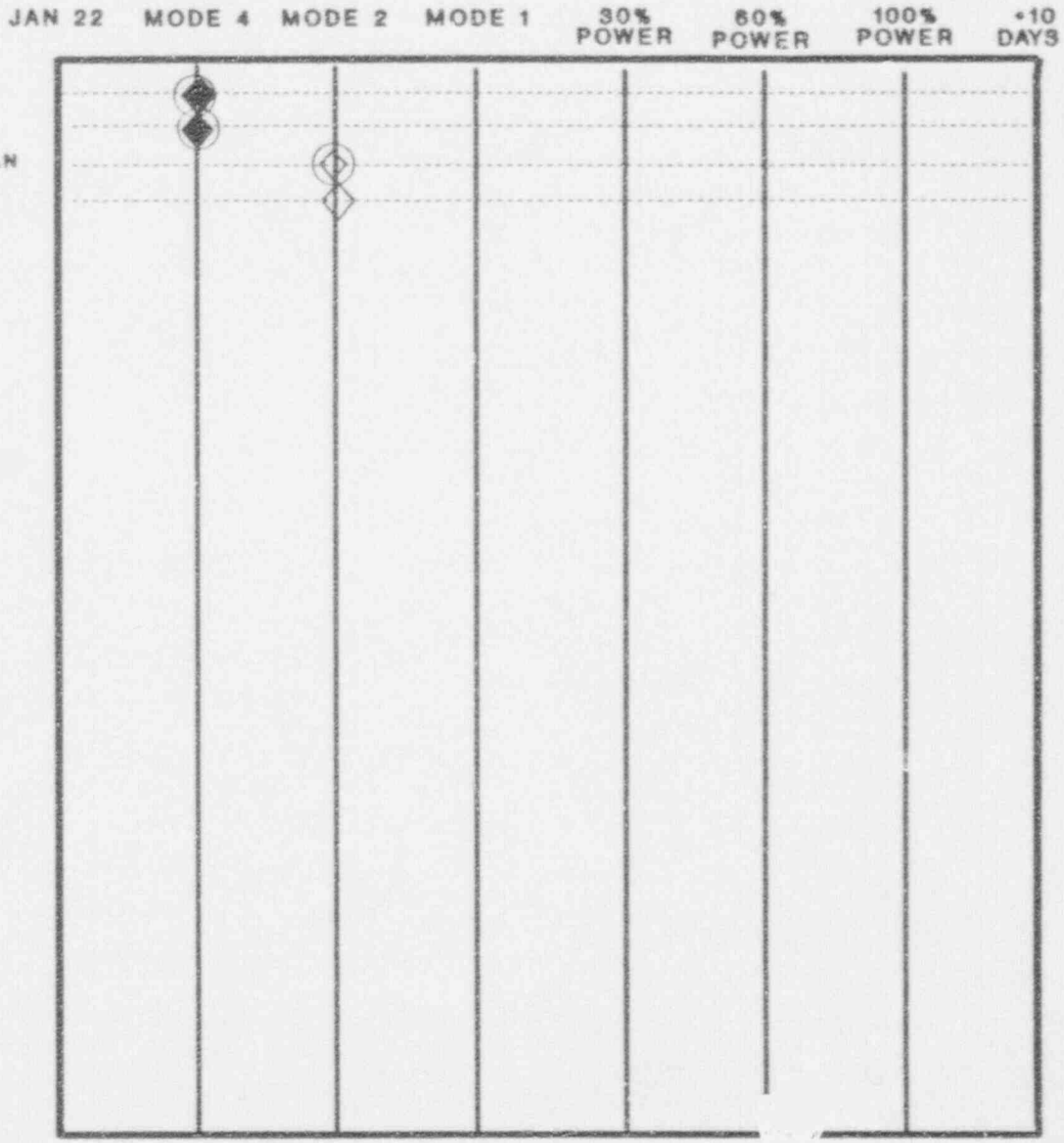
D. READINESS SELF ASSESSMENT

1. FIRE PROTECTION
2. CONTROL ROOM INST. STATUS
3. INST RETURN TO SERVICE
4. SECURITY
5. MODIFICATION RELATED DOCUMENTS
   A. CONTROL ROOM DOCUMENT AUDIT
   B. VALIDATE KEY DRAWINGS
6. TEST PROCEDURE & SCHEDULE AVAILABLE

UNIT 1 STARTUP PROGRAM

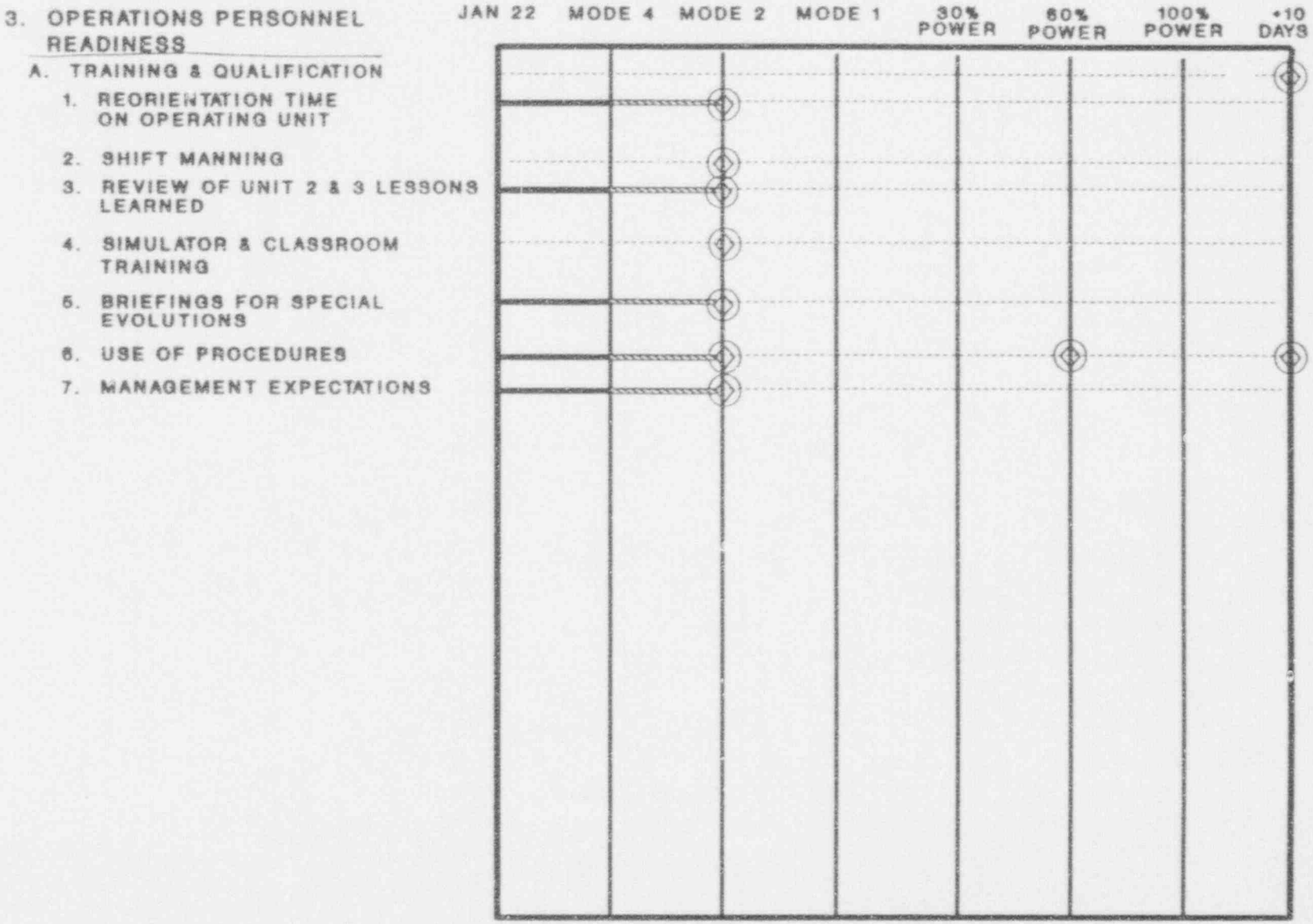
ACTIVITY IN PROGRESS ◇ ACTIVITY SCHEDULE COMPLETE ◆ ACTIVITY COMPLETE ◇ MRC REVIEW

2. PLANT EQUIPMENT AND SUPPORT PERSONNEL
   7. M & TE PERFORMANCE
   8. VALVE/ELECTRICAL REVIEW
   9. RADMONITOR SYSTEM ACTION PLAN
   10. SYSTEM RETURNED TO SERVICE



UNIT 1 STARTUP PROGRAM

ACTIVITY IN PROGRESS ◇ ACTIVITY SCHEDULE COMPLETE ◆ ACTIVITY COMPLETE ◇ MRC REVIEW



PLANT & SITE READINESS

- SENIOR MANAGEMENT
  - HIGHER STANDARDS
  - INTERFACE WITH EXECUTIVE MANAGEMENT
  - MANAGEMENT TOURS
  - MANAGEMENT EXPERIENCE AND DEPTH
  - PROGRAM IMPROVEMENTS
  - NUCLEAR PRODUCTION REALIGNMENT
- OPERATIONS AND MAINTENANCE
  - UNIT CONSISTENCY
  - NOT LIVING WITH PROBLEMS
  - COMPREHENSIVE AND CONSERVATIVE ACTIONS
  - TEAMWORK
  - MANAGEMENT ATTENTION TO PM STATUS

PLANT & SITE READINESS

- o TECHNICAL SUPPORT (EXTENSIVE CONTRACTOR SUPPORT)
  - ORGANIZATIONAL REALIGNMENT
  - RESOURCES
    - SITE BACKLOGS
  - ROOT CAUSE ANALYSIS
- o TRAINING
  - INCREASED SENSITIVITY TO IMPORTANCE OF TRAINING
  - ESTABLISHED TRAINING ADVISORY BOARD
  - IMPLEMENTED ACTION PLANS
  - SIMULATOR

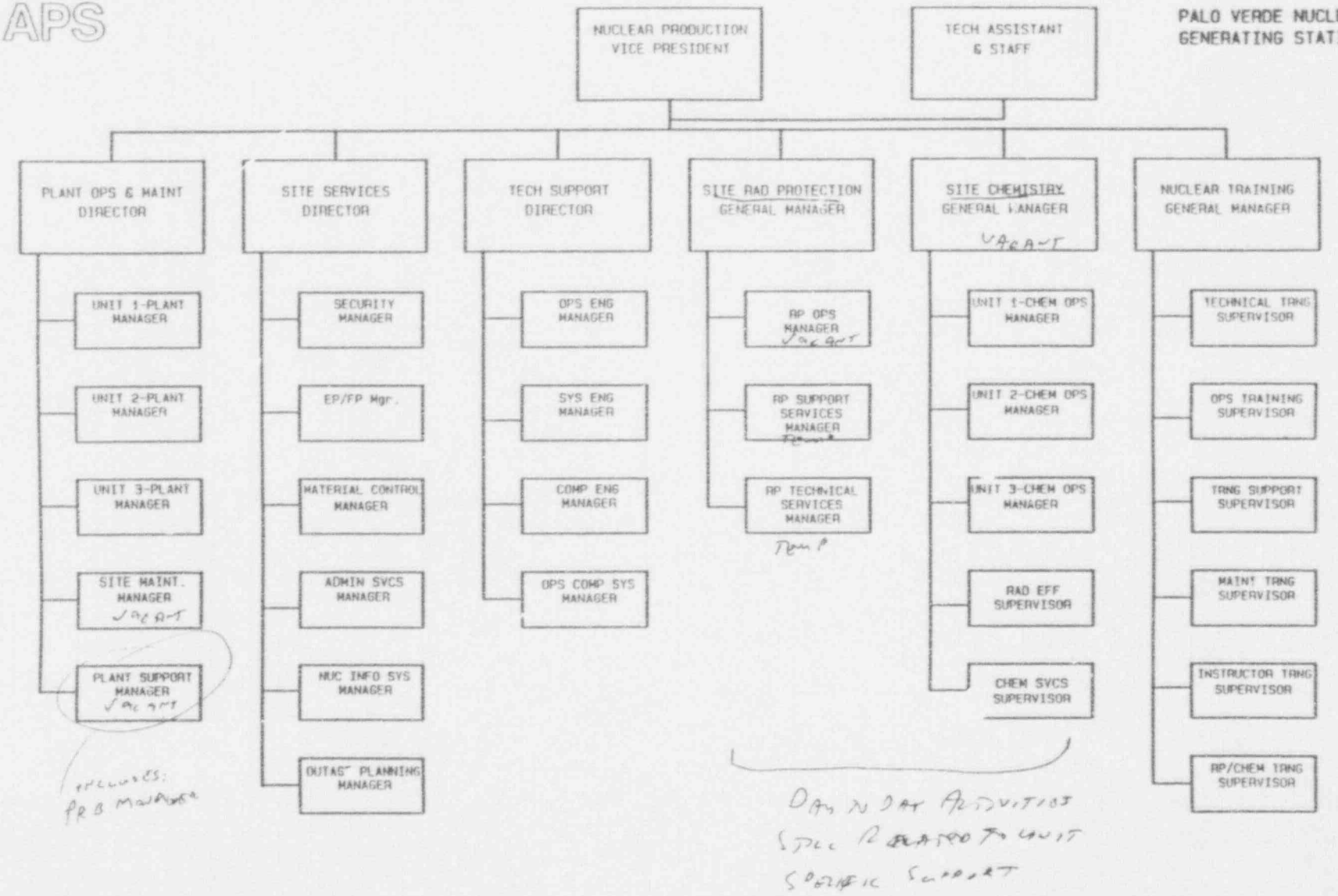
R SENIOR 48 OF 50 PASSED

INITIAL (FWD) 20 OF 20 PASSED

NUCLEAR PRODUCTION ORGANIZATION

APS

PALO VERDE NUCLEAR GENERATING STATION



UNIT 1 SHUTDOWN COOLING LEAK

INITIAL CONDITIONS (3/29)

150°F

- UNIT 1 WAS IN MODE 5, RCS PRESSURE AT 150 PSIA, WITH THE "A" SHUTDOWN COOLING LOOP IN SERVICE
- STEAM GENERATORS AND "B" TRAIN SHUTDOWN LOOP WERE AVAILABLE FOR DECAY HEAT REMOVAL
- CHARGING PUMPS AND HPSI PUMPS WERE AVAILABLE FOR RCS MAKEUP
- A WORK ORDER WAS APPROVED TO REPACK SAFETY INJECTION VALVE SI-458 IN THE "A" SHUTDOWN COOLING LOOP
  To SFP Cooling System
- THE VALVE IS A MANUALLY OPERATED 14 INCH WEDGE TYPE GATE VALVE WHICH SHOULD HAVE MADE IT POSSIBLE TO REPACK THE VALVE IN THE CLOSED POSITION

SEQUENCE OF EVENTS

- VALVE WAS VERIFIED SHUT AND WORK COMMENCED
- WHEN THE FINAL TWO RINGS OF PACKING WERE REMOVED WATER BEGAN LEAKING AT APPROXIMATELY 30 GPM FROM THE PACKING GLAND
- MECHANICS NOTIFIED THE CONTROL ROOM, RP, AND SUPERVISION

UNIT 1 SHUTDOWN COOLING LEAK

- AN ATTEMPT WAS MADE TO FURTHER CLOSE THE VALVE USING THE MANUAL REACH ROD RESULTING IN A REDUCTION IN THE LEAK RATE TO 15 GPM (NO NOTICEABLE MOVEMENT OF VALVE)
- THE "B" SHUTDOWN COOLING LOOP WAS PLACED IN SERVICE AND THE "A" TRAIN ISOLATED STOPPING THE LEAK
- MANAGEMENT AND NRC INFORMED

P21 (NO 55% or 47% + 1 CHARGING PUMP PROVIDED SUPP. MAKEUP

SIGNIFICANCE OF EVENT

- LEAK WAS CONTAINED BY UNIT DRAIN SYSTEM
- NO PERSONNEL CONTAMINATION
- NO INCREASE IN CONTAMINATED AREA WITHIN THE UNIT
- ROOT CAUSE OF LEAKAGE IS BEING INVESTIGATED — NOT COMPLETED CLOSED
- UNTIL ROOT CAUSE IS KNOWN NO VALVES WILL BE REPACKED WITH PRESSURE GREATER THAN SYSTEM ELEVATION HEAD — UNIT SPECIFIC? YES

AUTHORIZATION FOR VALVE WORK WHILE UNDER PRESSURE

UNIT 2 VENTING OF PRESSURIZER

(HEINICKE)

2/2

- o EVENT DESCRIPTION - SEQUENCE FOR 4 HRS
  (TIME TO CONCLUSION IT COULD TAKE 4-5 DAYS)
- o CRITIQUE OF EVENT
- o ACTIONS TAKEN SINCE EVENT

  OR SUPV. /RP CONTAIN. OVAL
  OF PRESSURIZER EXPOSURE
  (< 1% SKIN DOSE)

  - UNIT MANAGER

    DISCUSSED AT STAFF MEETINGS

    DIRECTED SCHEDULE REVIEW

    PROCEDURE ACTIONS
    · SCHEDULE PLANNING
    · ALT. MECHANISMS TO PREVENT EXPOSURE
    · COMMUNICATIONS - NOT AT LEVEL OF MOST KNOWLEDGEABLE OF ALL FACTS (i.e. PRESSURIZER IN CONT.)

  - RADIATION PROTECTION

    PROCEDURE CHANGES

    DISCUSSED WITH UNIT RP MANAGERS

    TRAINING CHANGES

    · SENSITIVITY TO PRESSURIZER ISSUES & COMMUNICATION

  - OPERATIONS

    MEMO TO UNIT SRO's CONCERNING EVENT

    DISCUSSION WITH SHIFT SUPERVISORS

E-MAIL USED TO TRANSMIT INFO. TO OTHER UNITS - QUICK TURNAROUND (FOR HINES)

UNIT 3 VALVE PACKING LEAK

PROBLEM DESCRIPTION

INTERNALLY OFF BACKSEAT

- o 3/4 INCH PRESSURIZER INSTRUMENT ISOLATION VALVE RC-207 DEVELOPED A PACKING LEAK AFTER THREE MONTHS OF OPERATION
- o VALVE PACKING GLAND FOLLOWER STUDS REQUIRE REPLACEMENT PRIOR TO TIGHTENING PACKING

CORRECTIVE ACTIONS

- o INVESTIGATED CONDITION & ESTABLISHED ACTION PLAN
- o TRIED TO SHUT VALVE AND REPACK
- o INJECT LEAK SEALANT (INITIAL RESULTS TO 1-2 DROPS/MIN LEAK)
- o REPLACE PACKING GLAND FOLLOWER STUDS

J.M. POINT TO WORK - DISCUSS W/ NRC ADMIN

MAINTENANCE ORGANIZATION

SITE MAINTENANCE MANAGER

- SINGLE POINT ACCOUNTABILITY FOR ALL ASPECTS OF MAINTENANCE
- MENTOR FOR UNIT AND CENTRAL MAINTENANCE
- PROVIDES TECHNICAL & PROGRAMMATIC GUIDANCE TO SUBORDINATE MANAGERS
- COORDINATE ON-GOING PROJECTS IN PREDICTIVE MAINTENANCE, RELIABILITY CENTERED MAINTENANCE, AND PREVENTIVE MAINTENANCE AREAS
- ESTABLISH POLICY AND PROGRAM DIRECTION

WORK CONTROL IMPROVEMENT PROJECT

TWELVE WEEK INTEGRATED SCHEDULES

- o COORDINATES PM/CM/ST WORK TO MAXIMIZE WORK DONE, MINIMIZE SYSTEM OUTAGE TIME
- o BAGS (BOUNDARY AREA GROUPS) – WILL LOOK AT AVAIL COORDINATED TO DO OTHER WORK AT SAME TIME BASED ON COMP. STATUS

STATUS

- o MAJORITY OF IMPLEMENTATION DETAILS WORKED OUT ON UNIT 2 PRIOR TO OUTAGE
- o UNIT 3 HAS INTEGRATED THE LESSONS LEARNED IN UNIT 2
- o PROGRAM REQUIRES ROLLING INTO 12 WEEK SCHEDULE WITHIN 90 DAYS OF COMPLETING OUTAGE

ON-LINE APPROVAL

- o INCREASES EFFICIENCY ALLOWING PARALLEL REVIEW AND ELECTRONIC ROUTING
- o STREAMLINES WORK ORDER REVIEW/APPROVAL

STATUS

- o ON SCHEDULE FOR REQUIRED SIMS CHANGES AND PERSONNEL TRAINING FOR IMPLEMENTATION

INDUSTRY MAINTENANCE INITIATIVES

SUPPORT NUMARC's POSITION

- o BUILDING FOR FUTURE
  - LOANED EMPLOYEE TO INPO
- o PARTICIPATING WITH INPO IN EVALUATION
- o SITE MAINTENANCE MANAGER WILL BE RESPONSIBLE FOR CONTINUING SUPPORT OF NUMARC

MOTOR OPERATED VALVES (MOVs)

- o ALL MOVs ARE BEING REVIEWED FOR PLANT STATUS REQUIRED FOR BASELINE TESTING AND WILL BE SCHEDULED FOR TESTING TO MEET THE REQUIREMENTS OF GENERIC LETTER 89-10
- o ALL NRC BULLETIN 85-03 VALVES HAVE BEEN DONE
- o REQUIRED ENGINEERING CALCULATIONAL DATA IS BEING PREPARED TO MEET TESTING COMMITMENTS OF GENERIC LETTER 89-10
- o CENTRAL MAINTENANCE MOV TEAMS HAVE BEEN PROVIDED VENDOR TRAINING ON DIAGNOSTICS WHICH HAS NOTICEABLY ENHANCED THEIR ABILITY TO DETECT AND RESOLVE MOV PROBLEMS

19 + CONTRACTOR W/ MOVATS COMPANY EMPLOYED FOR MOVATS WORK

INDUSTRY MAINTENANCE INITIATIVES

CHECK VALVES

- o COMPLETED DESIGN REVIEW USING EPRI GUIDELINES FOR 20 SYSTEMS

- o THE 10 CATEGORIES CONSIDERED SUCH THINGS AS VALVE SIZE, TYPE, FLOW RATES

- o 356 VALVES PER UNIT WERE EVALUATED AGAINST THE 10 CATEGORIES

- o 213 VALVES/UNIT DETERMINED TO NEED ROUTINE INSPECTION IN PM PROGRAM

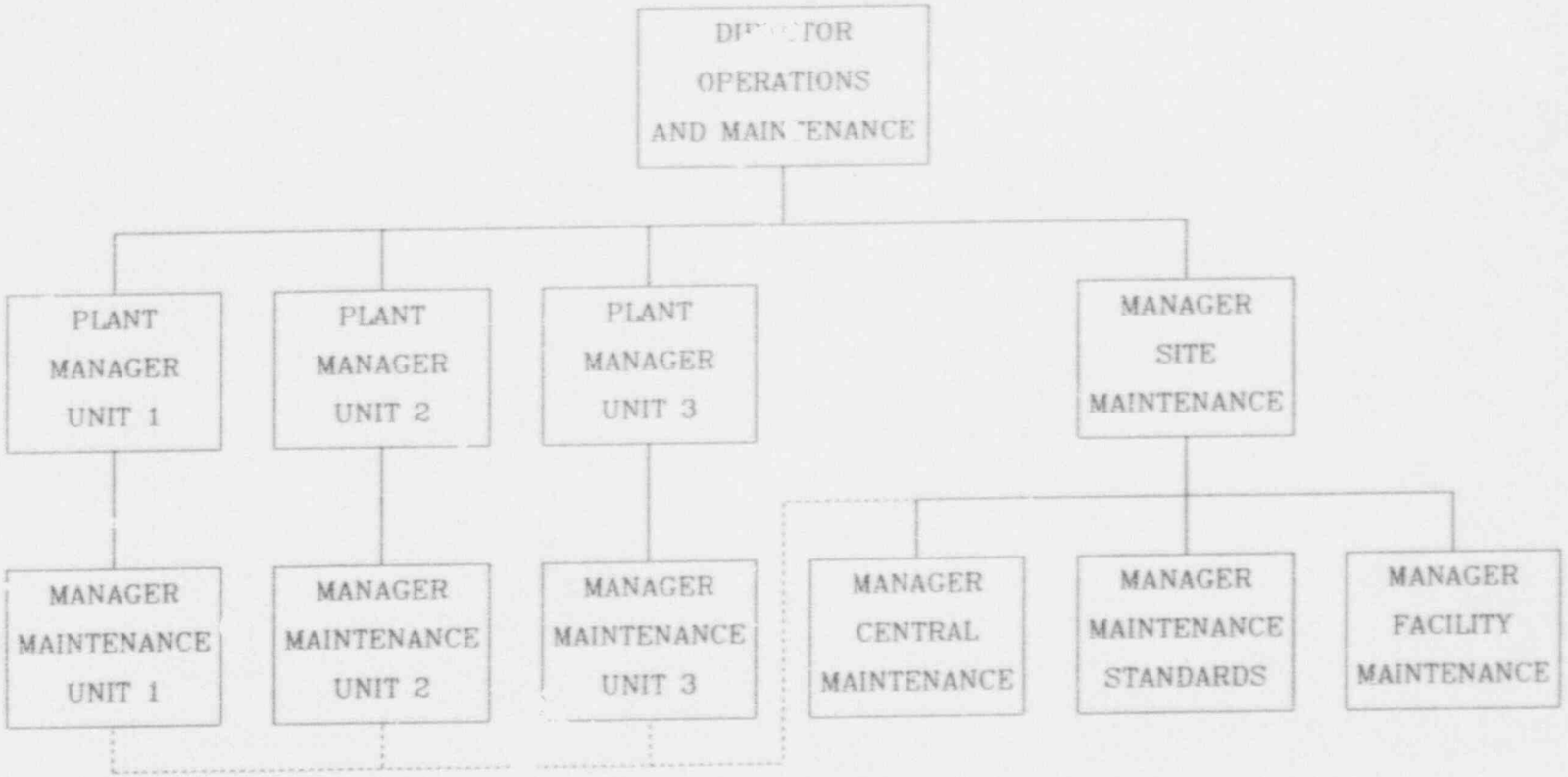
  43 VALVES SCHEDULED FOR UNIT 2 OUTAGE

  Results? ~~Also so far~~ I have no issue (minor)

- o PVNGS IS A MEMBER OF THE NUCLEAR INDUSTRY CHECK VALVE GROUP

  PARTICIPATED IN NONINTRUSIVE CHECK VALVE MONITORING TEST/DEMONSTRATION

PALO VERDE MAINTENANCE ORGANIZATION



MAJOR CHANGES PLACE CENTRAL MAINTENANCE AND MAINTENANCE STANDARDS UNDER OPERATIONS

ALL MAINTENANCE MANAGERS ARE RESPONSIBLE TO SITE MAINTENANCE MANAGER TO PROVIDE CONSISTENCY BETWEEN MAINTENANCE GROUPS

ENGINEERING PROGRAM

- o PREVIOUS DISCUSSIONS REGARDING NUCLEAR ENGINEERING AT PALO VERDE HAVE CENTERED AROUND PROPOSED PROGRAMS AND OTHER FUTURE EFFORTS.

- o TODAY I INTEND TO PROVIDE YOU WITH A STATUS REPORT OF WHAT WE HAVE ACCOMPLISHED SINCE OUR LAST MEETING IN THE AREAS OF:

  - ON-SITE DESIGN ENGINEERING
  - ENGINEERING EXCELLENCE PROGRAM
  - DESIGN BASES PROGRAM
  - BACKLOG REDUCTION EFFORT

ENGINEERING PROGRAM

- o OBJECTIVES OF THE PALO VERDE ENGINEERING ORGANIZATION

  - PROVIDE HIGH QUALITY ENGINEERING WORK.

  - UNDERSTAND, CONTROL AND CONVEY TO THE USERS THE DESIGN BASIS OF THE PLANT SYSTEMS AT PALO VERDE.

  - ENGINEERING MUST HAVE A PROACTIVE ROLE IN THE DAY-TO-DAY ACTIVITIES (OPERATIONS, MAINTENANCE, CHEM-RAD, ETC.) AT PALO VERDE.

ON-SITE DESIGN ENGINEERING

- NUCLEAR ENGINEERING (OFF-SITE) AND SITE TECHNICAL SUPPORT WERE THE TWO MAJOR ORGANIZATIONS ESTABLISHED TO ACHIEVE THE ENGINEERING OBJECTIVES.

- PREVIOUS ATTEMPTS TO ESTABLISH AN ON-SITE NUCLEAR ENGINEERING DESIGN FUNCTION INVOLVED A GROUP OF APPROXIMATELY TEN ENGINEERS THAT FUNCTIONED PRIMARILY AS A LIAISON GROUP.

- I HAVE DETERMINED THAT A MORE AGGRESSIVE APPROACH WAS NEEDED REGARDING ON-SITE DESIGN ENGINEERING TO EFFECT ENHANCEMENTS NEEDED IN THE ENGINEERING ORGANIZATIONS SUPPORTING PALO VERDE.

ON-SITE DESIGN ENGINEERING

- RECENT ENGINEERING & CONSTRUCTION REALIGNMENT:

  - EXPANDED RESIDENT ENGINEERING SECTION TO A SITE NUCLEAR ENGINEERING DEPARTMENT (SIZE?) PARALLELING THE OFF-SITE NUCLEAR ENGINEERING DEPARTMENT STRUCTURE.

  - TRANSFERRED PROCUREMENT ENGINEERING FROM SITE SERVICES TO ENGINEERING & CONSTRUCTION.

  - REVISED THE ROLE AND REPORTING RELATIONSHIP OF THE ENGINEERING ASSURANCE SECTION.

- FIGURE 1 REPRESENTS THE NEW ENGINEERING & CONSTRUCTION ORGANIZATION FOR PALO VERDE.

- FIGURE 2 PROVIDES A FURTHER BREAKDOWN OF THE NEW SITE NUCLEAR ENGINEERING ORGANIZATION.

ON-SITE DESIGN ENGINEERING

o SITE NUCLEAR ENGINEERING GROUP WILL PROVIDE:

- IMMEDIATE ON-SITE DESIGN ENGINEERING SUPPORT
- EER DISPOSITION
- TEMPORARY MODIFICATIONS
- SITE MODIFICATIONS (MINOR O&M PROJECTS - SHORT DURATION) TO SUPPORT DAY-TO-DAY OPERATIONS/MAINTENANCE
- MATERIAL SUBSTITUTION EVALUATION
- MNCR DISPOSITION
- OUTAGE SUPPORT
- FIELD CHANGES TO MODIFICATION PACKAGES

OFF-SITE DESIGN ENGINEERING

- o OFF-SITE NUCLEAR ENGINEERING ORGANIZATION WILL:

  - FUNCTION AS DESIGN AUTHORITY FOR PALO VERDE.
  - ESTABLISH, CONTROL AND MAINTAIN THE DESIGN BASES FOR PALO VERDE.
  - ESTABLISH AND CONTROL THE DESIGN PROCESSES AND PROCEDURES FOR ALL DESIGN ENGINEERING ORGANIZATIONS.
  - DISPOSITION EER'S.
  - DEVELOP MODIFICATIONS FOR MAJOR O&M AND CAPITAL PROJECTS.
  - PROVIDE TECHNICAL AND ANALYTICAL SUPPORT TO PALO VERDE.
  - PERFORM MODIFICATION CLOSURES/AS-BUILT DRAWING ACTIVITIES FOR ALL MODIFICATIONS.

ON-SITE DESIGN ENGINEERING

- ESTABLISHMENT OF ON-SITE NUCLEAR ENGINEERING ORGANIZATION WILL ALLOW THE SYSTEM ENGINEERS TO FOCUS ON SYSTEM PERFORMANCE RELATED ACTIVITIES.

- PROPOSE TO STAFF THE ON-SITE GROUP WITH APS AND CONTRACTOR ENGINEERING PERSONNEL IN ORDER TO GET THE GROUP FUNCTIONING AS SOON AS POSSIBLE.

- WHILE THE FINAL STAFFING LEVEL OF THIS GROUP HAS NOT BEEN DETERMINED AT THIS TIME, THE INITIAL LEVEL WILL BE APPROXIMATELY FIFTY ENGINEERS.

ENGINEERING EXCELLENCE PROGRAM

- 14 MAJOR OBJECTIVES ESTABLISHED.

- 153 MAJOR TASKS TO ACHIEVE THE 14 OBJECTIVES.

- DEVELOPED AS A LIVING PROGRAM
  - ADDRESS CHANGING NEEDS AND PRIORITIES.
  - INCORPORATE LESSONS LEARNED.

- STATUS:

MAJOR TASKS COMPLETE	**90**
MAJOR TASKS DUE FOR COMPLETION IN 1990	**47**
MAJOR TASKS DUE FOR COMPLETION IN 1991 & BEYOND	**10**
MAJOR TASKS THAT ARE ONGOING	**6**
TOTAL	**153**

DESIGN BASES PROGRAM

- o 70 TOTAL SAFETY RELATED/IMPORTANT SECONDARY SYSTEMS.
- o 4 PILOT DESIGN BASIS MANUALS COMPLETE:
  - DIESEL GENERATOR/CLASS IE STANDBY GENERATOR SYSTEMS
  - DIESEL GENERATOR BUILDING HVAC
  - DIESEL GENERATOR BUILDING
  - AUXILIARY FEEDWATER SYSTEM
- o DB MANUAL LESSONS LEARNED REPORT ISSUED/ RESULTS FACTORED INTO PROGRAM PROCESS AND SCHEDULE.
  - TEAM TRAINING
  - SCHEDULING OF SUPPORT RESOURCES
  - ORIGINAL DURATION ESTIMATES LOW
  - DB OPEN ITEM EVALUATION/DISPOSITION
- o 8 ADDITIONAL SYSTEM DB MANUALS ARE UNDERWAY. Completion ≈ 1990 - early 1991
- o ENTIRE DB PROGRAM WILL TAKE APPROXIMATELY 5 YEARS TO COMPLETE.

Integrated w/ Active Plant Assistance Operations

J.M. - Enhance Feedback to Design Organization

NUCLEAR ENGINEERING
BACKLOG REDUCTION EFFORT

- BACKLOG SCOPE IDENTIFIED FALL 1989.
- NED ESTABLISHED BACKLOG REDUCTION PROJECT TEAM.
- NED BACKLOG SCOPE HAS BEEN TRANSFERRED TO THE BACKLOG REDUCTION TEAM AND IS BEING DISPOSITIONED ON A SYSTEM BASIS. QA LOOKING AT THIS WORK
- BACKLOG TEAM INCLUDES 154 CONTRACTOR ENGINEERS AND SUPPORT PERSONNEL.
- CONTRACT ENGINEERS BADGED AND TRAINED ON PROCEDURES AND POLICIES FOR ASSIGNED WORK.
- NED ORGANIZATION IS ATTEMPTING TO DISPOSITION NEW WORK WITHIN ESTABLISHED BACKLOG GOALS.
- STATUS (3/31/90):

Total NED Backlog Items	Items Assigned	Items in Progress	Items Closed
7575	7505 (99%)	1105 (15%)	2901 (38%)

- 1990 COMPLETION GOAL: APPROXIMATELY 65% (of 7575)

FUTURE DIRECTION OF ENGINEERING/CONSTRUCTION

- FURTHER REFINE ROLES/RESPONSIBILITIES FOR ENGINEERING GROUPS WITH EMPHASIS ON NARROWER AREAS OF FOCUS.

- UTILIZE A PROJECT MANAGER CONCEPT FOR MAJOR PROJECTS AND PROGRAMS TO ENSURE SINGLE POINT OF ACCOUNTABILITY FROM BEGINNING TO END.

- CONTINUE TO FOCUS MANAGEMENT ATTENTION ON THE COMPLETION OF THE ENGINEERING EXCELLENCE PROGRAM AND THE TIMELY COMPLETION OF CORRECTIVE ACTION ASSIGNMENTS.

- ENHANCE DESIGN BASES/ CONFIGURATION MANAGEMENT PROGRAMS TO REFLECT NUMARC/NRC INITIATIVES.

- CONTINUE TO REDUCE EXISTING BACKLOGS WITHIN NUCLEAR ENGINEERING AND SITE TECHNICAL SUPPORT.

FIGURE 1

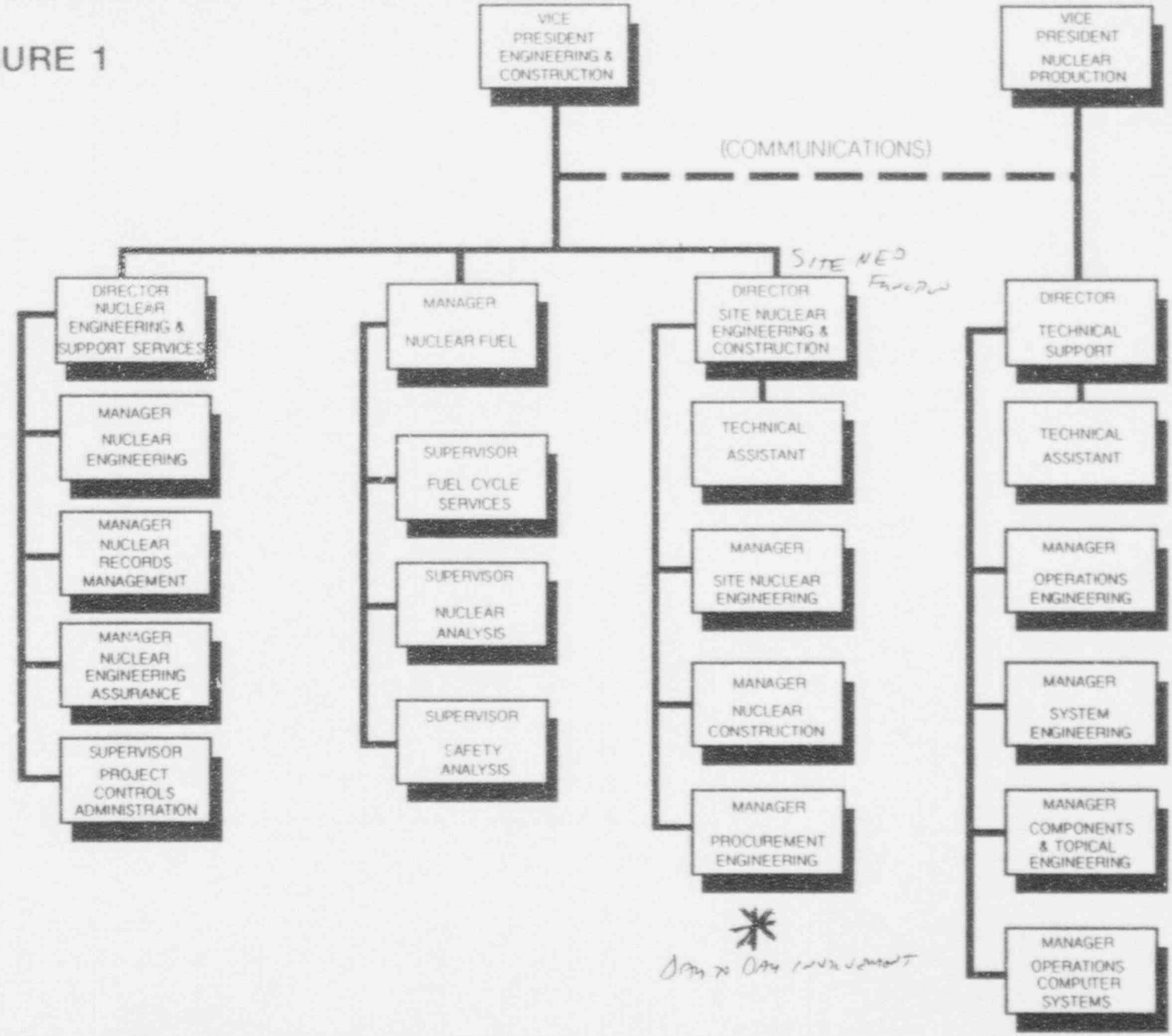
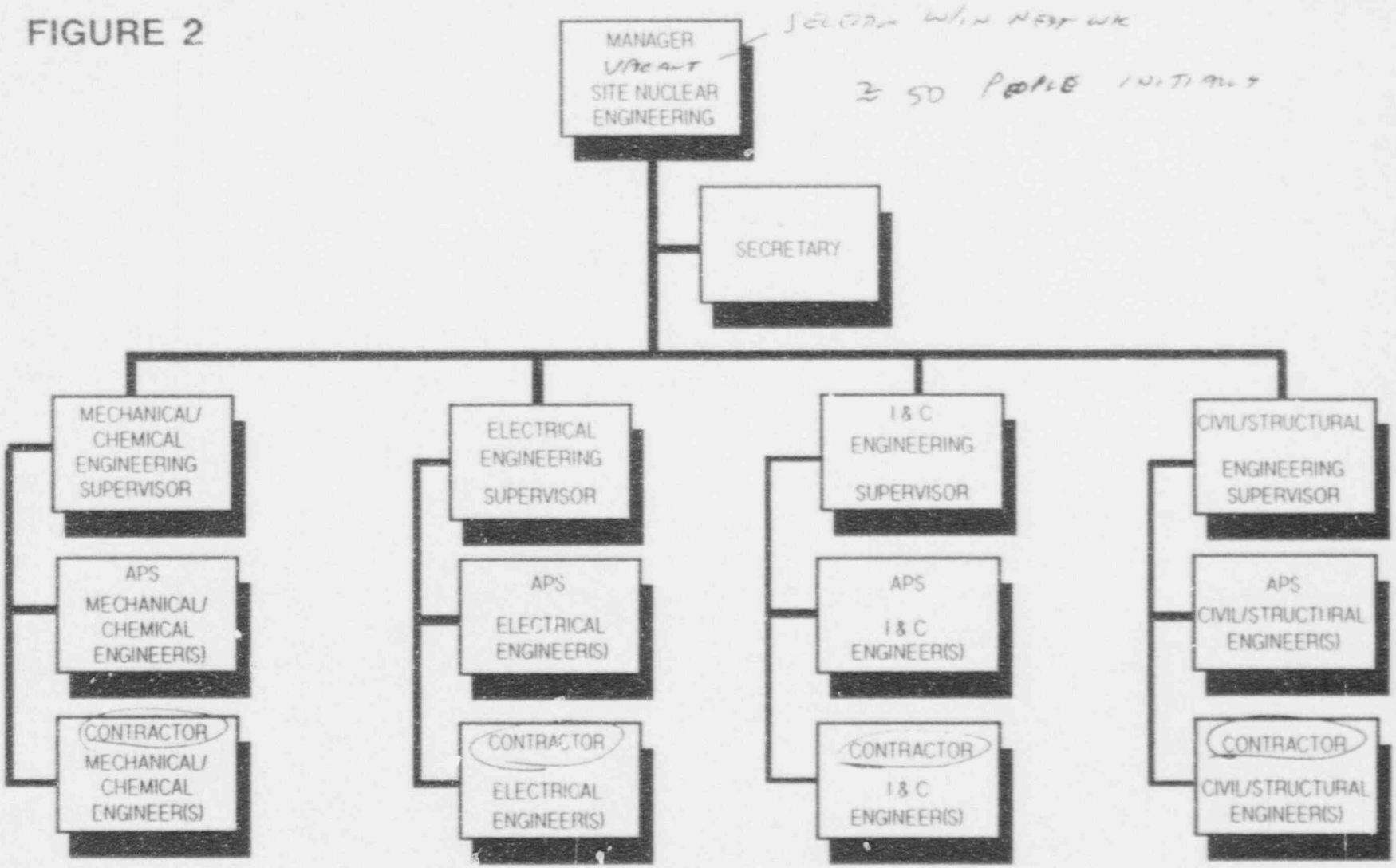

VICE PRESIDENT ENGINEERING & CONSTRUCTION
VICE PRESIDENT NUCLEAR PRODUCTION
(COMMUNICATIONS)
DIRECTOR NUCLEAR ENGINEERING & SUPPORT SERVICES
MANAGER NUCLEAR ENGINEERING
MANAGER NUCLEAR RECORDS MANAGEMENT
MANAGER NUCLEAR ENGINEERING ASSURANCE
SUPERVISOR PROJECT CONTROLS ADMINISTRATION
MANAGER NUCLEAR FUEL
SUPERVISOR FUEL CYCLE SERVICES
SUPERVISOR NUCLEAR ANALYSIS
SUPERVISOR SAFETY ANALYSIS
DIRECTOR SITE NUCLEAR ENGINEERING & CONSTRUCTION
TECHNICAL ASSISTANT
MANAGER SITE NUCLEAR ENGINEERING
MANAGER NUCLEAR CONSTRUCTION
MANAGER PROCUREMENT ENGINEERING
DIRECTOR TECHNICAL SUPPORT
TECHNICAL ASSISTANT
MANAGER OPERATIONS ENGINEERING
MANAGER SYSTEM ENGINEERING
MANAGER COMPONENTS & TOPICAL ENGINEERING
MANAGER OPERATIONS COMPUTER SYSTEMS
4/5/90
ECS1

FIGURE 2



SELECTION WILL NEXT WK

≈ 50 PEOPLE INITIALLY

WILL TAKE NOD PEOPLE AND PUT INTO SITE POSITIONS (WORKING W/ REMAINING STAFF)

4/5/90

ECS3

SITE ENGINEERING PROGRAM OBJECTIVES

- RE-DEFINE THE SYSTEM ENGINEER'S WORK SCOPE

- INCREASED EMPHASIS ON PLANT PERFORMANCE AND EQUIPMENT RELIABILITY (OPERATIONS SUPPORT)

- CONTINUED EMPHASIS ON CONSERVATIVE, DELIBERATE AND COMPREHENSIVE ENGINEERING EVALUATIONS

SITE ENGINEERING INTERFACES

OBJECTIVE:

DEVELOP DETAILED INTERFACE PHILOSOPHIES; APPLY THEM TO ACTIVITIES PRESENTLY BEING PERFORMED; MODIFY THE PROCEDURES ACCORDINGLY; AND TRAIN AFFECTED PERSONNEL.

DEVELOP CLEARER RESPONSIBILITIES FOR SITE ENGINEERS AND BETTER DEFINED INTERFACES WITH:

- o THE UNITS
  - MAINTENANCE/WORK CONTROL
  - OPERATIONS
- o OTHER ENGINEERING GROUPS
  - NUCLEAR ENGINEERING
  - NUCLEAR FUEL MANAGEMENT
  - PROCUREMENT ENGINEERING

SYSTEM ENGINEERING IMPROVEMENTS

ACTIONS:

BETTER DEFINITION OF THE SYSTEM ENGINEER'S RESPONSIBILITIES TO FOCUS WORK SCOPE

MORE:

- PERFORMANCE MONITORING & TESTING
- FAILURE TRENDING
- ROOT CAUSE EVALUATIONS
- SYSTEM/EQUIPMENT WALKDOWNS
- OVERSIGHT OF MAINTENANCE and MODIFICATIONS
- INPUT TO OPERATING and MAINTENANCE PROCEDURES AND PRACTICES

JM.
OWL + MAINT. [illegible]
T/O + S.M.S MAINT.

ISLAND MAY BE HANDLED AS MAINT. ISS

OPER/DESIGN ISSUES

SYSTEM ENGINEERING IMPROVEMENTS

LESS:

- ADMINISTRATIVE INVOLVEMENT IN MODIFICATIONS
- MAINTENANCE TROUBLESHOOTING
- PARTS/PROCUREMENT SUPPORT OF MAINTENANCE

SITE ENGINEERING ORGANIZATIONAL CHANGES

- o FOCUS TECH SUPPORT ORGANIZATION ON SITE ENGINEERING SUPPORT

- o FOCUS ENGINEERING SUPPORT IN THE FOLLOWING AREAS:

  - SYSTEM ENGINEERING
  - COMPONENT ENGINEERING
  - TECHNICAL SUPPORT/SPECIALTY AREAS
  - REACTOR ENGINEERING
  - SHIFT TECHNICAL ADVISORS
  - PROCESS COMPUTER SUPPORT

SITE ENGINEERING EXCELLENCE PROGRAM

- o PURPOSE
  - COMMUNICATE, MANAGE AND MEET OUR GOALS AND OBJECTIVES
  - ESTABLISH AN ATMOSPHERE WHICH PROMOTES "EXCELLENCE"
- o SCOPE
  - ENGINEERING EVALUATIONS DEPARTMENT/OPERATIONS COMPUTER SYSTEMS
  - SHIFT TECHNICAL ADVISORS

SITE ENGINEERING EXCELLENCE PROGRAM

- o CONTENT
  - MANAGEMENT CONTROLS
  - ORGANIZATIONAL DEVELOPMENT
  - TRAINING
  - WORK PRODUCT IMPROVEMENT
- o SCHEDULE
  - DRAFT PROGRAM COMPLETED
  - PROGRAM IMPLEMENTATION - 5/90

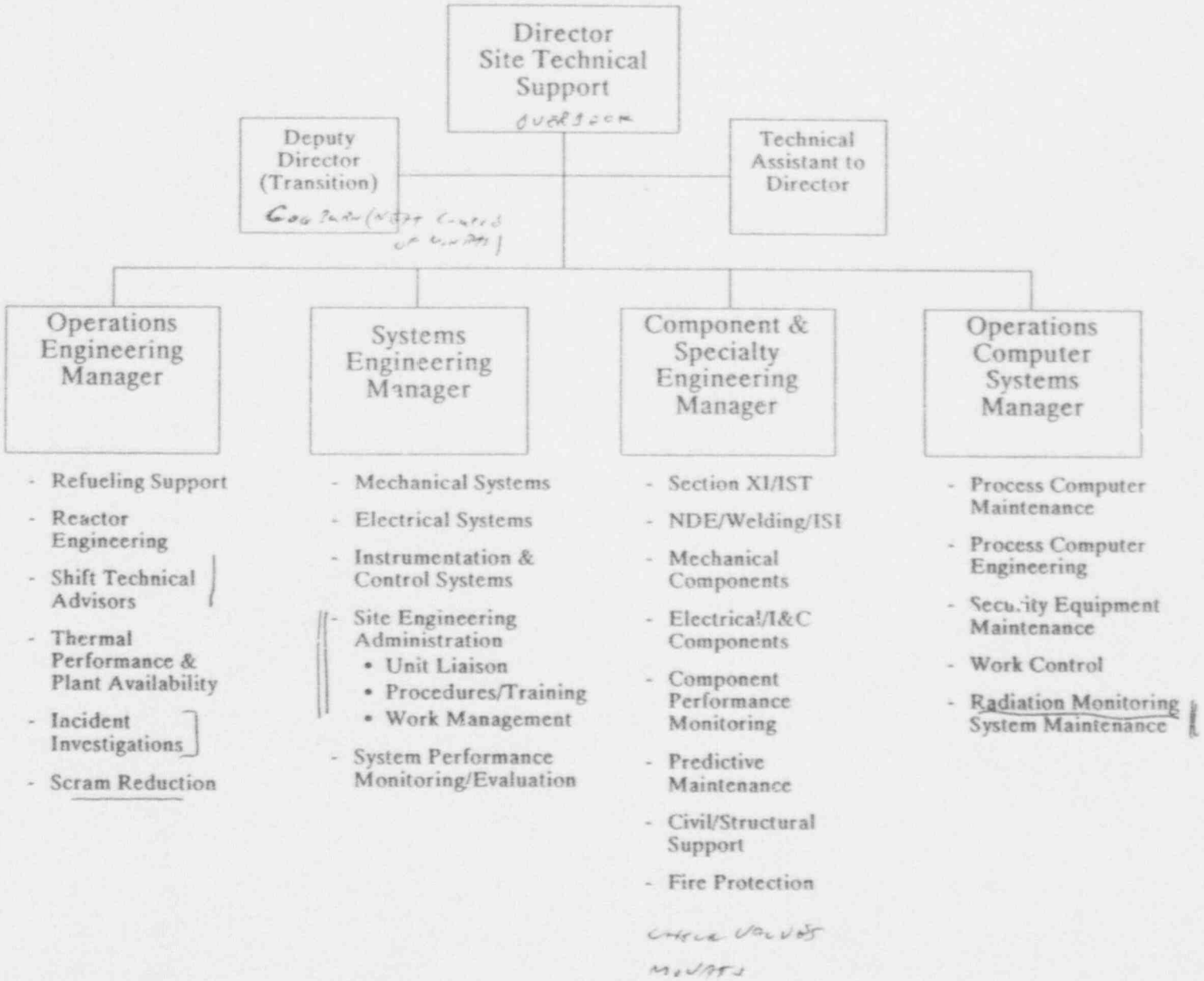
SITE ENGINEERING PROGRAM OBJECTIVES

- MANAGEMENT CONTROLS
  - ROLES AND RESPONSIBILITIES
  - WORK MANAGEMENT
  - BACKLOG REDUCTION
  - PROCEDURE IMPROVEMENT
  - PERFORMANCE INDICATORS
- WORK PRODUCTS
  - OPERATIONAL BASIS
  - PERFORMANCE MONITORING
  - MAINTENANCE SPECS
  - MODIFICATION PROCESS
  - FACILITIES/TOOLS
- ORGANIZATIONAL DEVELOPMENT
  - ORGANIZATIONAL TRANSITION
  - STAFFING
  - CAREER PLANNING/INCENTIVES
  - TEAM BUILDING/COMMUNICATION
- TRAINING
  - TECHNICAL TRAINING
  - MANAGEMENT SKILLS
  - PROFESSIONAL DEVELOPMENT

SITE ENGINEERING IMPROVEMENT PRIORITIES

- RE-DEFINE ROLES/RESPONSIBILITIES
- STAFFING/HIRING/QUALIFICATIONS
- BACKLOG REDUCTION
- IMPROVED WORK MANAGEMENT
- IMPROVED COMMUNICATIONS
- TRAINING PROGRAM

PVNGS Site Technical Support Organization



MANAGEMENT ACTION PLAN FOR PVNGS IMPROVEMENT PROGRAMS/INITIATIVES

- NEAR TERM ACTIONS/OBJECTIVES
  - BEGAN IN FEBRUARY, 1990
  - COMPLETE MAY, 1990

- CONTINUING AND LONG TERM ACTIONS/OBJECTIVES
  - BEGIN IN JUNE, 1990
  - IMPLEMENTED BY SEPTEMBER, 1990

NEAR TERM ACTIONS

- o IDENTIFY SCOPE OF CURRENT INITIATIVES, AND IDENTIFY RESPONSIBLE DIVISIONS/MANAGERS, AND IDENTIFY STATUS

- o REEVALUATE CURRENT OR ONGOING PROGRAMS WITH RESPECT TO;

  - PLANT SAFETY
  - RESOURCE REQUIREMENTS (COSTS AND MANPOWER)
  - PVNGS 1990 AND 1991 GOALS AND OBJECTIVES
  - POTENTIAL RESTRICTIONS OR CONSTRAINTS
  - PAST COMMITMENTS AND DET REPORT

- o COMBINE, MODIFY OR CANCEL INITIATIVES AND ESTABLISH PRIORITIES

- o SEPARATELY TRACK PROGRAM AND INITIATIVE INFORMATION

ACTIVITIES COMPLETED OR IN PROGRESS

- o COMPLETED DESCRIPTIONS AND SUMMARIES OF APPROXIMATELY 50 MAJOR INITIATIVES INCLUDING RESPONSIBLE MANAGERS AND STATUS

- o DISTRIBUTED TO SENIOR MANAGEMENT MANUALS CONTAINING THE ABOVE INFORMATION; TO BE UPDATED AS NECESSARY

- o PRESENTATION OF CURRENT INITIATIVES BY RESPONSIBLE MANAGERS TO SENIOR MANAGEMENT SCHEDULED FOR APRIL/MAY 1990

CONTINUING AND LONG TERM ACTIONS

- IDENTIFY NEW PROGRAMS OR INITIATIVES AND ASSESS AS PREVIOUSLY DESCRIBED

- DEVELOP AND IMPLEMENT PLAN TO ASSESS AND MONITOR PERFORMANCE OF FAST PROGRAMS AND INITIATIVES

- DEVELOP AND IMPLEMENT PROCESS TO ENSURE ALL PROGRAMS AND INITIATIVES ARE INCORPORATED INTO INTEGRATED ACTION PLAN

- ENSURE MANAGEMENT AWARENESS OF INITIATIVE AND STATUS THROUGH DOCUMENT UPDATES, AND PERFORMANCE REPORTS

PVNGS QUALITY PERFORMANCE INDICATORS

- o ASSUMING OWNERSHIP OF QUALITY PROBLEMS

  MRC MTG. SHOWS OWNERSHIP OF UNIT OWNERSHIP OF QA DOCUMENTATION PROBLEM

- o UTILIZATION OF QUALITY DEFICIENCY PROGRAMS (IMPROVING TRENDS)

  LINE ORGANIZATIONS WRITING MNCR'S

- o RELUCTANCE TO "ENGINEER AWAY" MNCRs

  60% REWORK ~~[illegible]~~ DISPOSITIONS

  5-6% USE AS IS DISPOSITION

- o UTILIZATION OF INDEPENDENT OVERSIGHT GROUPS

  REQUESTS FROM OTHERS FOR QA ASSISTANCE

- o ATTENTION TO LONG TERM OUTSTANDING QUALITY DEFICIENCIES

  11 (AR'S OVERDUE

PVNGS SELF ASSESSMENT GROUP INITIATIVES

OBJECTIVE

- PROVIDE MANAGEMENT AN INTEGRATED ASSESSMENT OF QUALITY AND SAFETY ISSUES THAT HAVE BEEN IDENTIFIED BY THE INDEPENDENT OVERSIGHT ORGANIZATIONS (QA/PRB/NSD/ISEG)

METHODOLOGY

- HOLDING SELF ASSESSMENT GROUP (PSAG) MEETINGS
- TRENDING QUALITY AND SAFETY ISSUES (MNCRs/CARs/QDRs/LERs/COTs/ETC.)
- IDENTIFYING THE BASIS AND RELATIVE SIGNIFICANCE OF THE INDIVIDUAL ISSUES AS WELL AS ANY GENERIC IMPACTS

RESULTS (IN PROGRESS)

- SUBMITTED TWENTY FOUR ISSUES INITIALLY FOR REVIEW
- DEVELOPED SET OF SELECTION CRITERIA
- PROVIDE RESULTS OF THE REVIEW TO SENIOR MANAGEMENT

April 16, 1990

Docket Nos. 50-528
50-529
50-530

Arizona Public Service Company
Attn: Mr. O. M. DeMichele, President
and Chief Executive Officer
Post Office Box 52034
Phoenix, Arizona 85072-2304

Dear Mr. DeMichele:

SUBJECT: DIAGNOSTIC EVALUATION TEAM REPORT FOR PALO VERDE NUCLEAR GENERATING STATION

NRC letter dated March 16, 1990, forwarded the Diagnostic Evaluation Team Report for Palo Verde. The results were reviewed with you and other Senior APS personnel on January 24, 1990.

Based on discussions between APS and the NRC staff on April 10, 1990, I understand that your plans are to develop a business plan for Palo Verde which will integrate and prioritize the various improvement programs. This is to be developed in successive stages over the next 12 to 18 months with the initial version available by the end of July.

Accordingly, I would modify my request in my March 16, 1990 letter to request that you submit the initial version of your business plan by the end of July and indicate, at least in broad outline, how it deals with the appropriate categories of observations in our Diagnostic Evaluation. I understand that you would plan more detailed discussions in the periodic NRC-APS management meetings as successive versions of your plan are developed.

Sincerely,

Original Signed By:
James M. Taylor

James M. Taylor
Executive Director
for Operations

cc: See page 2

Distribution: See page 3

OFC	RA:RV	NRR	D:NRR	D:AEOD	EDO		
NAME	JBMartin	MVirgilio	TEMurley	EJJordan	JMTaylor		
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

April 16, 1990

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Docket Nos. 50-528
50-529
50-530

Arizona Public Service Company
Attn: Mr. O. M. DeMichele, President
and Chief Executive Officer
Post Office Box 52034
Phoenix, Arizona 85072-2304

Dear Mr. DeMichele:

SUBJECT: DIAGNOSTIC EVALUATION TEAM REPORT FOR PALO VERDE NUCLEAR GENERATING STATION

NRC letter dated March 16, 1990, forwarded the Diagnostic Evaluation Team Report for Palo Verde. The results were reviewed with you and other Senior APS personnel on January 24, 1990.

Based on discussions between APS and the NRC staff on April 10, 1990, I understand that your plans are to develop a business plan for Palo Verde which will integrate and prioritize the various improvement programs. This is to be developed in successive stages over the next 12 to 18 months with the initial version available by the end of July.

Accordingly, I would modify my request in my March 16, 1990 letter to request that you submit the initial version of your business plan by the end of July and indicate, at least in broad outline, how it deals with the appropriate categories of observations in our Diagnostic Evaluation. I understand that you would plan more detailed discussions in the periodic NRC-APS management meetings as successive versions of your plan are developed.

Sincerely,

James M. Taylor
Executive Director
for Operations

cc: See page 2

cc:
William F. Conway, APS
Jack N. Bailey, APS
James M. Levine, APS
Arthur C. Gehr, Esq.,
Snell & Wilmer
Charles R. Kocher, Esq.,
James A. Boeletto, Esq.,
Southern California Edison Company
Jack R. Newman,
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Charles Tedford,
Arizona Radiation Regulatory Agency
Chairman, Maricopa County Board
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Charles B. Brinkman, Washington Nuclear
Operations Combustion Engineering, Inc.
John B. Martin, NRC/RV
Douglas Coe, NRC/RV

Arizona Public Service Company
P.O. BOX 53999 • PHOENIX, ARIZONA 85072-3999

WILLIAM F. CONWAY
EXECUTIVE VICE PRESIDENT
NUCLEAR

268-00052-WFC/JNB
June 1, 1990

Mr. James M. Taylor
Executive Director for Operations
U. S. Nuclear Regulatory Commission
One White Flint North
11555 Rockville Pike
Rockville, MD 20852

Dear Mr. Taylor:

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Pinnacle West Response to Arizona Corporation Commission Filing
re Pinnacle West with U.S. Securities and Exchange Commission
File: 90-056-026; 90-001-028.6

In my May 14, 1990, letter to you, I sent a copy of a complaint filed by the Arizona Corporation Commission with the U. S. Securities and Exchange Commission seeking to revoke the exemption from the Public Utilities Holding Company Act held by APS's Corporate parent, Pinnacle West Capital Corporation. As I noted, that complaint was based, in part, on incomplete extracts from NRC documents, especially the recent Diagnostic Evaluation Report.

Enclosed is a copy of the response to the complaint filed on May 21, 1990, by Pinnacle West. The section addressing misstatements based on NRC documents appears at pp. 12-15.

We will advise you of any future developments which may be of interest to the NRC.

Sincerely,

WFC/JNB/sg

enc.

cc: J. Martin
D. Crutchfield
Document Control Desk

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New York, New York
May 21, 1990

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Mr. Jonathan G. Katz, Secretary
Securities and Exchange Commission
450 Fifth Street, N.W.
Washington, D.C. 20549

Re: Pinnacle West Capital Corporation-
Response to Complaint Filed by
Arizona Corporation Commission
File No. 69-306

Gentlemen:

I. INTRODUCTION

We are acting as counsel to Pinnacle West Capital Corporation ("Pinnacle West"), a holding company exempt under Section 3(a)(1) of the Public Utility Holding Company Act of 1935 (the "'35 Act") pursuant to annual filings with the Securities and Exchange Commission (the "SEC") in accordance with Rule 2.[1]

1. In April 1985, the shareholders of Arizona Public Service Company ("APS") approved the formation of Pinnacle West, then known as AZP Group, Inc. Since 1985, Pinnacle West has made annual filings with the SEC on Form U-3A-2 claiming an exemption from registration pursuant to the provisions of Section 3(a)(1) of the '35 Act. Pinnacle West's principal subsidiaries, in addition to APS, are Malapai Resources Company ("Malapai"), El Dorado Investment Company ("El Dorado") and SunCor Development Company ("SunCor"). Malapai is engaged in the business of producing and selling uranium concentrates for use in nuclear power plants; El Dorado is engaged in the business of making equity investments in other companies; and SunCor is engaged primarily in the business

(footnote continued)

This letter is submitted by the undersigned on behalf of Pinnacle West in response to the submission to the SEC on May 1, 1990, by the Arizona Corporation Commission (the "ACC"), of a Complaint, Petition for Revocation or Modification of Pinnacle West Capital Corporation's Exemption, Request for Hearing and Petition to Intervene (the "Complaint"),[2] pursuant to which, among other things, the ACC has requested the SEC to revoke or modify Pinnacle West's exemption from the '35 Act.[3]

For the reasons summarized below and set forth in greater detail herein, Pinnacle West believes that the public interest and the interest of investors and consumers would best be served by the SEC refusing to take any of the actions requested by the ACC in the Complaint and promptly notifying Pinnacle West and the ACC of such decision.

Pinnacle West's diversification-related financial difficulties are now largely behind it. These difficulties were primarily attributable to the acquisition of MeraBank, A Federal

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of owning, holding, and developing real property in the State of Arizona.

2. According to Mr. Timothy M. Hogan, Chief Counsel of the ACC, the Complaint was principally prepared by him with the assistance of Ms. Janice M. Alward, an ACC staff attorney, and Mr. Scott F. Hempling, an attorney previously with the Environmental Action Foundation in Washington, D.C., who is now in private practice. The decision to submit the Complaint to the Commission was made by a 2-1 vote of the ACC, concluding a politically-charged public meeting at which the matter was decided upon after very brief testimony presented that same day. Public notice of such meeting was given only 24 hours in advance, and, at the meeting itself, the ACC refused Pinnacle West's request for additional time to evaluate the Complaint and to correct the misstatements contained therein.

3. In requesting that the SEC revoke or modify Pinnacle West's exemption, the ACC proffered four reasons why such highly unusual relief was necessary: (1) diversification-induced financial pressures on APS have worsened its "strapped" cash position by constraining its access to external debt and equity financing; (2) the interaction between APS' problems at the Palo Verde Nuclear Generating Station ("Palo Verde") and Pinnacle West's financial problems has left APS in a dangerously weakened financial state; (3) Pinnacle West's diversification efforts have jeopardized the effectiveness of ACC regulation; and (4) the Pinnacle West holding company system fails to meet the criteria for an exemption under Section 3(a)(1).

Savings Bank ("MeraBank"), which, as discussed in more detail below, has since been disposed of. Under the leadership of its new President, Chief Executive Officer and Chairman of the Board, Richard Snell, Pinnacle West is implementing a well-conceived program for its financial recovery which is aimed at maximizing shareholder values, and APS remains committed to providing quality utility service in Arizona. Thus, there is no compelling reason at this time for the SEC to take any of the actions suggested in the Complaint as these actions would have the effect of hindering new management in its efforts in this regard. Moreover, Pinnacle West's present corporate strategy is not to further diversify, and, by virtue of contractual restrictions contained in its various loan agreements, Pinnacle West would be severely restricted in so doing.

Secondly, the ACC provides no basis for its allegation that its ability to regulate APS, or protect APS ratepayers, has been impeded by Pinnacle West's past diversification activities, or that the ACC will be so impeded in the future. One point is quite clear, however. The ACC has a legal responsibility to authorize just and reasonable rates for APS and its customers in the rate case that APS filed with the ACC over five (5) months ago. A procedural order setting hearing dates in the case has not yet been issued. It is this rate case, the outcome of which is within the control of the ACC not Pinnacle West, that will largely determine APS' future financial condition.

Significantly, Pinnacle West's prospects could also be affected by the fact that it has received multiple offers, including one just last Thursday, from PacifiCorp, a highly-diversified, Oregon-based utility with public utility operations in seven (7) states, to acquire Pinnacle West or APS. To further complicate matters, the day after PacifiCorp's latest offer, Pinnacle West received a proposal from Salt River Project Agricultural Improvement and Power District ("SRP"), another major provider of electric power in Arizona, to acquire certain of APS' assets for a purchase price of up to $500 million. In responding to the Complaint, we urge that the SEC not act in a manner that could or would affect the ability of Pinnacle West's Board of Directors to protect the interests of its shareholders in matters of this nature.

Fourthly, the ACC's allegation that Pinnacle West no longer meets the objective criteria for an "intrastate" exemption is entirely without merit.

And, finally, the Complaint materially misstates facts concerning Palo Verde, quotes Nuclear Regulatory Commission ("NRC") documents out of context, and fails to recognize the pervasive nature and effectiveness of NRC regulation of Palo Verde. The ACC's allegations in this respect are representative of the many instances in which the Complaint contains material misstate-

ments of fact, presenting the SEC with an incomplete and distorted view of the current business, financial condition and prospects of Pinnacle West and APS.

II. DISCUSSION

A. Pinnacle West is Implementing a Program for Financial Recovery and its Financial Condition Has Stabilized

The MeraBank Settlement

Pinnacle West acquired MeraBank in December 1986. MeraBank recorded earnings for 1986 and 1987 of approximately $37.4 million and $25.1 million, respectively. However, due to the widespread deterioration of the real estate market in the Southwest, MeraBank recorded significant losses in 1988 and 1989. Pinnacle West suspended its quarterly dividends to shareholders in the fourth quarter of 1989, and, on January 31, 1990, MeraBank was placed in receivership by the Office of Thrift Supervision, United States Department of Treasury ("OTS").

As a condition to its acquisition of MeraBank, Pinnacle West signed a stipulation with Federal regulators (the "Stipulation") stating that, as long as it controlled MeraBank, Pinnacle West would cause the regulatory capital of MeraBank to be maintained at the level required by certain Federal regulations and, as necessary, Pinnacle West would infuse additional equity capital into MeraBank to meet such requirements. Although the enforceability of the Stipulation was a matter of dispute between Pinnacle West and such regulators, Pinnacle West's potential financial exposure thereunder contributed significantly to Pinnacle West's financial difficulties in 1989, including the steep decline in the market value of its common stock and its inability to refinance or repay maturing debt.

On December 6, 1989, after months of negotiation, Pinnacle West entered into an agreement with the OTS whereby Pinnacle West would be released from its purported "keep-well" obligations under the Stipulation if Pinnacle West delivered to MeraBank, on or before March 31, 1990, a $300 million cash payment and a $150 million promissory note, each with interest payable from December 6, 1989 (the "MeraBank Settlement"). The financial markets reacted very favorably to the MeraBank Settlement. The closing price of Pinnacle West's common stock on the New York Stock Exchange on December 7, 1989, was $10.25, compared to a closing price on the previous day of $5.375.

On March 22, 1990, Pinnacle West made the agreed upon cash payment to MeraBank of approximately $310.5 million, obtained from the proceeds of the sale of Senior Secured Debentures, and delivered to the Resolution Trust Corporation, as

receiver for MeraBank, a promissory note in the principal amount of $155 million. Thereupon, Pinnacle West was released from its purported obligation to infuse capital into MeraBank under the Stipulation or any other source of such an alleged obligation.

As a result of the MeraBank Settlement, the uncertainty regarding Pinnacle West's financial exposure under the Stipulation was eliminated, thereby stabilizing Pinnacle West's financial condition. In addition to causing a dramatic increase in the market value of Pinnacle West's common stock, the MeraBank Settlement permitted Pinnacle West to restructure substantially all of its debt because, prior to the MeraBank Settlement, Pinnacle West's lenders were unwilling to restructure their loans in the face of Pinnacle West's unknown financial exposure under the Stipulation. In short, the MeraBank Settlement resolved Pinnacle West's most immediate financial problem and put it on the road to financial recovery.

The Restructuring of Pinnacle West's Debt

Immediately after Pinnacle West obtained the MeraBank Settlement, Pinnacle West began negotiating with over 40 of its lenders to restructure substantially all of its debt so that Pinnacle West would have additional time to meet its repayment obligations and to implement its program for financial recovery. On January 31, 1990, less than two months after the MeraBank Settlement, Pinnacle West and these lenders completed a restructuring of approximately $676 million in principal amount of Pinnacle West's long-term debt. Pursuant to the restructuring, Pinnacle West was able to extend the principal maturities of its debt for two years, subject to a mandatory $65 million principal prepayment on or before June 30, 1990. Since the date of the MeraBank Settlement, Pinnacle West has already repaid approximately $40 million of its debt, and it expects to repay another $35 million by the end of June 1990.

The restructuring of Pinnacle West's debt, accomplished in a remarkably short period of time, required the unanimous approval of affected lenders. This restructuring, made possible by the MeraBank Settlement, further strengthened Pinnacle West's financial condition.

As a condition to the restructuring of its debt, Pinnacle West granted substantially all of its lenders and the holders of the Senior Secured Debentures a security interest in the outstanding common stock of APS pursuant to a Pledge Agreement, dated as of January 31, 1990 (the "Pledge Agreement").[4]

4. In conjunction with the negotiation of the Pledge Agreement and related documents, questions arose as to the status of

(footnote continued)

On March 31, 1990, the APS common stock secured approximately $956 million in principal amount of Pinnacle West's outstanding debt.

In addition to having successfully restructured its debt, by the end of this month, Pinnacle West expects to have in place a $100 million liquidity facility with a major commercial bank, thus providing Pinnacle West with an additional source of funds.

Pinnacle West's Contractual Restrictions

In the Complaint, the ACC focuses heavily on Pinnacle West's unsuccessful diversification efforts and asks the SEC to require Pinnacle West to divest itself of its remaining non-utility subsidiaries and to prohibit further investments by Pinnacle West in new non-utility businesses. As the ACC is aware, however, and as Pinnacle West has disclosed in numerous SEC filings, the terms and conditions of the various agreements under which Pinnacle West completed its debt restructuring and made the capital infusion into MeraBank severely restrict Pinnacle West from investing in new non-utility businesses, as well as from making additional investments in its current non-utility businesses. Moreover, while any such debt is outstanding (the latest maturity date falls in the year 2001), Pinnacle West is (a) prohibited from issuing new debt except under very limited circumstances, (b) required to repay debt with any available excess cash (including cash obtained from the sale of certain subsidiaries or substantially all of their assets), and (c) severely restricted in its ability to pay cash dividends.

Any new investments by Pinnacle West in its existing subsidiaries (excluding APS) are generally restricted to $15 million in the aggregate until Pinnacle West's lenders are fully repaid. Any other new investments by Pinnacle West are generally restricted to $20 million in the aggregate until the lenders are fully repaid and may not be made until Pinnacle West is able to meet the dividend test referred to below.

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the various lenders under the '35 Act given the pledge. As a result, the subject was completely addressed in a "no action" letter issued earlier this year by the Staff of the SEC. The "no action" letter, in effect, clarified that prior to an Event of Default (as defined in the Pledge Agreement) giving the lenders the right to vote the pledged stock of APS, the lenders would not be deemed to be a "holding company" as defined in Section 2(a)(7) of the '35 Act. See Pinnacle West Capital Corporation (available April 23, 1990).

Pinnacle West may not incur additional debt, except generally (and with certain restrictions) for (a) borrowings to reduce, refinance, or prepay existing debt, (b) extensions or replacements of existing reimbursement obligations, guarantees, or letters of credit, and (c) borrowings under the liquidity facility.

Pinnacle West's ability to pay cash dividends or to make other corporate distributions is dependent upon the satisfaction of a specified interest coverage ratio. This dividend test effectively prohibits Pinnacle West from paying cash dividends for the foreseeable future. The amount of permitted dividends or other corporate distributions may not exceed fifty percent (50%) of Pinnacle West's net income calculated from and after April 1, 1990. Any excess cash available to Pinnacle West must be applied to the repayment of existing debt.

Finally, in the event of a sale of all or substantially all of the assets or shares of common stock of Malapai, SunCor, or El Dorado, the net cash proceeds must be applied by Pinnacle West to reduce its outstanding debt.

If the ACC honestly believes that Pinnacle West's business activities must be severely restricted to protect the public interest and the interest of investors and consumers, one need look no further than Pinnacle West's loan agreements to confirm that such restrictions are currently in place and will be so for at least the next several years.

Sale of Non-Utility Assets

In addition to obtaining the MeraBank Settlement and restructuring substantially all of its debt, Pinnacle West has taken other steps to improve its financial condition. On April 4, 1990, SunCor completed the sale of certain of its properties for $70 million. SunCor immediately applied $29.5 million of the proceeds of such sales to the repayment of its debt. On April 26, 1990, Pinnacle West entered into an agreement in principle to sell Malapai to a U.S. affiliate of Electricite' de France. In accordance with Pinnacle West's financing agreements, the net cash proceeds from the sale of Malapai, as well as from the sale of all or substantially all of the assets or shares of common stock of SunCor or El Dorado, must be used to reduce Pinnacle West's outstanding debt.

As demonstrated above, Pinnacle West is implementing a program for financial recovery and its financial condition has stabilized. The public interest and the interest of investors and consumers would best be served by Pinnacle West continuing its progress in this regard.

B. The Financial Condition of Pinnacle West and APS is Dependent Primarily on the ACC

As previously discussed, Pinnacle West's diversification-related financial difficulties, stemming primarily from MeraBank, are largely a thing of the past. However, the financial condition of Pinnacle West and APS will continue to be adversely affected by the failure of the ACC to grant APS the opportunity to earn a just and reasonable return on its public utility properties, including its prudent investment in all three Palo Verde units.[5] Palo Verde Unit 3 commenced commercial operation on January 8, 1988. As of March 31, 1990, APS' investment in Palo Verde Unit 3 was approximately $1.2 billion. APS' investment in Palo Verde Unit 3, as well as its investment in Unit 4 of the Cholla Plant ("Cholla 4") (totalling $242 million as of March 31, 1990), are not currently reflected in APS' retail rates. On January 11, 1990, APS filed an application with the ACC for a permanent increase in annual retail rates. The filing, which was revised on May 11, 1990, seeks a permanent increase in annual retail rates of approximately $259 million, to be phased in in three annual installments commencing January 1, 1991. The proposed rate increase seeks to recover the costs of Palo Verde Unit 3 and Cholla 4, as well as costs incident to the increase in retail customers since the prior test year of 1986, and the increase in APS' cost of service since that test year. Hearings on the rate application have not yet been scheduled. APS' and Pinnacle West's financial condition will be adversely affected so long as APS is unable to include these assets in rate base and have the opportunity to earn a just and reasonable return thereon. Pinnacle West believes, therefore, that the prospects for its continued financial recovery, and the financial condition of APS, depend in large measure on the ACC.[6]

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5. An ACC-mandated audit of the costs of Palo Verde, which was completed in March 1989, identified approximately $60 million of costs for the entire Palo Verde project that were unreasonably incurred, of which APS' share is approximately $18 million. This represents only about one percent (1%) of APS' total investment in Palo Verde. The audit also identified approximately $300 million of cost savings attributable to performance. APS' share of such savings is approximately $85 million. The ACC has not established a procedural framework to consider formally the results of the audit or the reasonableness of the costs of Palo Verde.

6. Independent rating agencies apparently agree with that conclusion. On March 28, 1990, Moody's Investors Service raised the securities ratings of Pinnacle West and lowered those of the preferred stock of APS, stating that factors related to Palo Verde "continue to dominate the uncertain-

(footnote continued)

C. The ACC Must Not be Permitted to Abdicate its Legal Duties

The ACC's allegation that it is unable properly to carry out its legal duties to authorize just and reasonable rates for APS and its customers because in so doing it fears triggering a Pinnacle West default under its financing agreements, and a consequential loss of control over APS, is without foundation and entirely specious. Only a confiscatory rate order by the ACC would raise doubts about APS' ability to make prudent dividend payments to its shareholders, including Pinnacle West, thereby raising the possibility that Pinnacle West could not service its debt. If the ACC carries out its legal responsibility to authorize just and reasonable rates for APS and its customers, the ACC need not, and, indeed, should not worry about the possibility of Pinnacle West defaulting under its financing agreements.

Pinnacle West believes that APS is entitled to the rate relief it has requested in the rate case that has been pending before the ACC for more than five (5) months. However, irrespective of the merits of that case, it is clear that such issues properly reside at the ACC, not at the SEC. The '35 Act is not a

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ties facing Arizona Public Service and will be the key determinants in any future rating adjustments." Moreover, in February of this year, Duff & Phelps Inc. lowered the ratings on APS' first mortgage bonds, preferred stock, commercial paper and certain secured lease obligation bonds serviced by APS lease payments because:

> "[APS] has heavy dependence upon regulation for the restoration of its financial health...Regulation in Arizona has been increasingly difficult; the Chairman of the Arizona Corporation Commission (ACC) is running for re-election in 1990... Adequacy of rate treatment has become increasingly uncertain."

Similarly, on May 11, 1990, Fitch Investors Service, Inc. ("Fitch") lowered its securities ratings on APS' first mortgage bonds, preferred stock, and certain collateralized pollution control revenue bonds, citing the fact that "[t]he regulatory climate in Arizona...is extremely politicized against APS and its parent." Fitch also noted that "[t]he Arizona Corporation Commission recently voted to request the SEC to revoke the parent's exempt holding company status and require divestiture of all non-utility operations."

ratemaking statute;[7] Congress never intended that the '35 Act should be used as a vehicle for a state public service commission to abdicate its legal responsibility to establish just and reasonable rates for utilities subject to its jurisdiction.

Moreover, the ACC's allegations that it cannot effectively regulate the business of APS are not supported by the facts.[8] APS is currently restricted in the amount of common stock dividends it can pay to Pinnacle West. Specifically, pursuant to an agreement among APS, Pinnacle West, the Pinnacle West Shareholders' Association, Inc., the Residential Utility Consumer Office, and the ACC (the "ACC Settlement Agreement"),[9] APS may not, without prior ACC approval, directly or indirectly transfer any funds to Pinnacle West except for, among other things, regular quarterly dividends to Pinnacle West at the level paid out on July 13, 1989. The ACC alleges that, because Pinnacle West mounted a legal challenge to the ACC's jurisdiction to restrict the payment of dividends by APS to Pinnacle West, the ACC is essentially powerless to impose whatever limits on such dividends it believes are necessary to protect APS and its customers. Despite the legal challenge, APS and Pinnacle West have been and continue to be subject to the limitations of the ACC Settlement Agreement. Clearly, the existence of the dividend restrictions in the ACC Settlement Agreement, when coupled with the covenants in certain of Pinnacle West's financing agreements and Pinnacle West's present corporate strategy not to further diversify, render without merit the ACC's allegations that renewed diversification remains a plausible threat.

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7. Ohio Power Co. v. FERC, 880 F.2d 1400, 1407 (D.C. Cir. 1989), cert. granted sub nom. Arcadia, Ohio v. Ohio Power Co., 110 S. Ct. 1522 (1990).

8. The ACC is a constitutionally created agency pursuant to Article 15 of the Arizona Constitution ("Article 15"). Its three (3) members are popularly elected for six (6) year terms. Article 15, Section 1. The ACC has long been regarded in Arizona as a "fourth branch of government." State v. Tucson Gas, Electric Light & Power Company, 15 Ariz. 294, 306, 138 P. 781, 785-86 (1914). The ACC's constitutional status and the regulatory powers bestowed therein make it uniquely capable of fully protecting APS ratepayers by regulating APS directly.

9. The ACC Settlement Agreement was reached on August 15, 1989, and was amended effective March 1, 1990, to remain in effect until the earlier of September 30, 1991, or the issuance by the ACC of a final rate order in the rate case filed by APS on January 11, 1990.

D. In Evaluating the Complaint, the SEC Should Consider How its Actions Could Impact the PacifiCorp and SRP Offers

As is widely known, Pinnacle West has received multiple offers from PacifiCorp, the most recent being only last Thursday, indicating its desire to acquire Pinnacle West or APS. In addition, after the close of the market last Friday, Pinnacle West received a proposal from SRP to purchase certain of APS' distribution and transmission facilities for up to $500 million. Against this backdrop of shifting, fast-moving developments, we urge that the SEC not act in a manner that could or would affect the ability of Pinnacle West's Board of Directors to protect the interests of its shareholders.[10]

The latest of PacifiCorp's overtures offered cash consideration of $21 for each share of Pinnacle West common stock. Pinnacle West's Board of Directors has not yet responded to this proposal. This most recent offer, however, in our view, readily illustrates two of the points we urge the SEC to consider in connection with its deliberations as to how best to respond to the Complaint: First, PacifiCorp's attempts to acquire Pinnacle West have had a significant and immediate impact on the interests of investors. The closing price of Pinnacle West's common stock on the New York Stock Exchange was $12.75 on May 16, 1990, the day prior to the announcement of PacifiCorp's latest offer, and was $16.375 on the day of such offer. Secondly, it illustrates PacifiCorp's judgment that the recovery plan initiated by Pinnacle West's new management is having its intended effect.

SRP's offer of last Friday to purchase certain of APS' assets for up to $500 million obviously only further complicates matters.

E. The ACC's Allegation that Pinnacle West No Longer Meets the Objective Criteria for an Exemption Under Section 3(a)(1) is Entirely Without Merit

The ACC's allegation that Pinnacle West no longer meets the objective criteria for an "intrastate" exemption under Sec-

10. Indeed, we respectfully submit that it would be appropriate for the SEC to consider at this juncture the possible effects, were it to institute a Rule 6 proceeding or to take any or all of the other actions sought by the ACC, on the protection of the interests of Pinnacle West's shareholders in dealing with PacifiCorp's unsolicited offers or that of SRP (as well as any competing overtures, should others materialize). We suggest that the SEC's procedures -- involving potential delays in response time and possible premature public exposure of delicate deliberations -- could, in this context, adversely affect the very shareholder interests that the SEC would be seeking to protect.

tion 3(a)(1) is entirely without merit.[11] Pinnacle West is organized in Arizona, as is APS, its only public utility subsidiary, and each is predominantly intrastate in character and carries on its business substantially in Arizona. The ACC suggests that the fact that Pinnacle West raises capital in interstate commerce disqualifies it for exemption under Section 3(a)(1). For the SEC to give any credence to this assertion would be to render the standards of Section 3(a)(1) entirely without meaning.

F. The Complaint Misstates Facts Concerning Palo Verde, Quotes NRC Documents Out of Context, and Fails to Recognize the Pervasive Nature of NRC Regulation

The NRC, under the Atomic Energy Act of 1954 ("AEA"), has jurisdiction over APS and Palo Verde with respect to nuclear safety issues, including jurisdiction over questions relating to financial qualifications and corporate control of the operator of a nuclear power plant. In exercising its jurisdiction, the NRC has continually evaluated APS' and Palo Verde's performance, as documented in numerous inspection reports, in Systematic Assessments of Licensee Performance ("SALPs"), and very recently in a lengthy diagnostic evaluation report of Palo Verde operations ("DER").[12] The Complaint singled out a few pages of the DER to paint a picture about Pinnacle West, APS and Palo Verde that is

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11. Rule 2 provides, in relevant part, that "[a]ny holding company, and every subsidiary company thereof as such, shall, upon the filing of an exemption statement on Form U-3A-2 and subject to the filing of such exemption statement on or before March 1 of each year thereafter, and subject to the provisions of [Rule 6], be exempt from all the provisions of the ['35 Act] and rules thereunder, except section 9(a)(2) of the ['35 Act], if --

(1) such holding company, and every subsidiary company thereof which is a public-utility company from which such holding company derives, directly or indirectly, any material part of its income are predominantly intrastate in character and carry on their business substantially in a single State in which such holding company and every such subsidiary company thereof are organized..."

12. A SALP is "an integrated NRC staff effort to collect available observations and data on a periodic basis and to evaluate a licensee's performance based on this information. The program is supplemental to normal regulatory processes used to ensure compliance with NRC rules and regulations." NRC SALP Report, Docket Nos. 50-528/89-48, 50-529/89-48, 50-530/89-48 at 1 (Nov. 22, 1989) ("1989 Palo Verde SALP Report").

neither an accurate representation of the NRC's regulatory assessment nor an accurate representation of the DER.

Perhaps the best evidence of the NRC's current views concerning the overall performance of Palo Verde may be drawn from the most recent NRC SALP report for Palo Verde:

> Overall, the SALP Board found the performance of licensed activities at Palo Verde to be satisfactory and directed toward safe facility operation...[M]ost indications are that improved performance can continue in the future, assuming that senior management successfully implements the various corrective action programs and initiatives laid out during this SALP period.[13]

The Complaint also misstates the current facts concerning operations at Palo Verde; in particular, those relating to the likelihood of the NRC issuing an order to shut Palo Verde down. Although Palo Verde experienced operational problems in 1989 and early this year, these matters are being addressed to the NRC's satisfaction. In June 1989, the NRC gave its approval to restart Palo Verde Unit 2; approval followed to restart Unit 3 in December 1989. APS expects to request NRC approval to restart Unit 1 in the near future.

The Complaint also mischaracterizes the DER and its contents. It incorrectly refers to the DER as an "NRC Deficiency Letter," thus implying that the areas presenting opportunities for improvement may be violations of NRC requirements. This is not true.[14] The DER does not support any conclusion that Pinnacle West's financial difficulties have impaired operations at Palo Verde:

> [T]he [Palo Verde Diagnostic Evaluation] team found no evidence to suggest that financial difficulties at Pinnacle West or APS appropriation levels had jeopardized safety systems or

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13. Letter from J.B. Martin (NRC Region V Administrator) to W.F. Conway (Executive Vice President, Nuclear, Arizona Nuclear Power Project) at 1 (Nov. 22, 1989) (transmitting the 1989 Palo Verde SALP Report for the period Nov. 1, 1988 through Oct. 31, 1989).

14. In fact, a DER is an evaluation conducted "for the purpose of gaining expert insight into significant aspects of plant operations, plant performance, safety, and compliance with NRC regulations." NRC Manual Chapter 0520, "NRC Diagnostic Evaluation Program," at 4041 (March 3, 1988).

> safe operation of the units. Interviews and documents revealed that the resources (money, people, equipment, materials and facilities) provided to Palo Verde by APS were generally adequate to meet needs...Senior management at both the site and corporate offices indicated a strong commitment of resources to operate the plant safely and reliably.[15]

In sum, the DER does not support the ACC's allegations that Pinnacle West's financial difficulties have impaired the ability of APS to operate Palo Verde in a reliable and safe manner.

The SEC should also be mindful of the NRC's pervasive regulatory jurisdiction over nuclear safety issues under the AEA and the Energy Reorganization Act of 1974.[16] As the foregoing discussion clearly indicates, the NRC has been closely monitoring operations at Palo Verde to assure that any performance problems which may have previously existed at Palo Verde either have already been resolved, or are in the process of being resolved, to the NRC's satisfaction. Moreover, the DER made clear that Pinnacle West's financial condition has not had an adverse effect on the operations of Palo Verde. As a matter of comity and administrative regulatory efficiency, the SEC should, therefore, defer to the NRC's expertise with respect to those allegations of the ACC concerning Palo Verde.[17]

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15. Palo Verde DER at 25.

16. 42 U.S.C. §§ 2011 et seq.; 42 U.S.C. §§ 5801 et seq. See Pacific Gas & Electric Co. v. State Energy Resources Conservation and Development Commission, 461 U.S. 190, 212 (1983) (NRC has "exclusive authority" over nuclear power plant construction and operation); Siegel v. ACC, 400 F.2d 778, 783 (D.C. Cir. 1968) (AEA is "virtually unique in the degree to which broad responsibility is reposed in the administering agency, free of close prescription in its charter as to how it shall proceed in achieving the statutory objective").

17. The AEA is "hallmarked by the amount of discretion granted the Commission in working to achieve the statute's ends," Public Service Co. of New Hampshire v. NRC, 582 F.2d 77, 82 (1st Cir. 1978), cert. denied, 439 U.S. 1046, and the NRC's interpretation of what is properly within its jurisdictional scope is entitled to great deference, Power Reactor Development Co. v. International Union of Electrical, Radio and Machine Workers, 367 U.S. 396, 408 (1961), Nader v. NRC, 513 F.2d 1045, 1055-56 (D.C. Cir. 1975), and "will not be over-

(footnote continued)

G. The Complaint Contains Other Material Misstatements of Fact

The Complaint contains a number of material misstatements of fact, the result of which is that the ACC has presented the SEC with an incomplete and distorted picture of the current business, financial condition and prospects of Pinnacle West and APS. Several of these misstatements were pointed out to the ACC by Pinnacle West in the ACC's public meeting of May 1. However, the ACC refused Pinnacle West's request that the misstatements be corrected before filing the Complaint with the SEC. These misstatements will be addressed in turn.[18]

1. In several places in the Complaint, the ACC materially misstates existing limitations on Pinnacle West's ability to raise capital, suggesting that these alleged limitations severely weaken APS by leaving it with no prospect of gaining access through Pinnacle West to the capital markets. On page 30, the ACC alleges that "[u]nder [Pinnacle West's] long-term financing agreements, Pinnacle West's creditors could block [sales of Pinnacle West common stock]," and that "Pinnacle West's creditors could block any stock dilution." On page 34, the ACC alleges that "[Pinnacle West's] long-term financing agreements...restrict Pinnacle West's access to equity markets...," that

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turned if reasonably related to the language and purposes of the statute." Public Service Co. of New Hampshire v. NRC, 582 F.2d at 82. In this regard, "the...[AEA] gives the NRC complete discretion to decide what financial qualifications are appropriate" for its licensees (see Coalition for the Environment v. NRC, 795 F.2d 168, 174 (D.C. Cir. 1986); Public Service Co. of New Hampshire v. NRC, 582 F.2d at 93). When appropriate, the NRC has used this authority to impose license conditions requiring greater financial assurances from licensees when the operator is experiencing financial difficulties. Public Service Co. of New Hampshire (Seabrook 1 & 2), CLI-88-10, 28 NRC 573 (1988). The NRC also has the authority to approve direct or indirect transfers of control over NRC licenses or NRC licensees, such as APS. See 42 U.S.C. § 2234 (1988). See also 10 C.F.R. §§ 50.80, 50.81 (NRC license transfer and creditor regulations); Arizona Public Service Co., et al. (Palo Verde Nuclear Generating Station, Unit 1), CLI-85-17, 22 NRC 875 (1985) (statutory prohibition on license transfers without NRC consent applies to direct or indirect transfers of control over NRC licensees).

18. All subsequent page numbers refer to those in the Complaint.

"Pinnacle West is hindered in its ability to raise more money for APS, at least through the sale of new stock," and that "any [Pinnacle West stock issuance] can be vetoed by [Pinnacle West's] creditors."

In fact, Pinnacle West is not prohibited from issuing new common stock under such financing agreements. Although such agreements place limitations on Pinnacle West's ability to infuse capital into other Pinnacle West subsidiaries, Pinnacle West obtained from its lenders the right to infuse an unlimited amount of capital into APS, subject to the maintenance of certain specified financial ratios.

2. On page 29, the ACC alleges that "[a]s for equity, APS is completely dependent on Pinnacle West..."; and on page 34, the ACC alleges that "APS, of course, cannot issue its own equity..."

Again, such allegations are simply untrue. There is nothing contained in the Pledge Agreement or any other Pinnacle West financing agreement that restricts APS' ability to issue equity in the form of preferred stock to finance its ongoing operations.

3. On pages 8-9, in describing the effects of the pledge by Pinnacle West of the stock of APS under the Pledge Agreement, the ACC alleges that Pinnacle West's "creditors might be 'holding companies' subject to regulation" under the '35 Act both by reason of "taking a security interest in APS' stock" and "by virtue of [the creditors'] rights under Pinnacle West's financing agreements to restrict certain activities of Pinnacle West or APS..." In support of this argument, the ACC alleges on page 30, that "Pinnacle West's creditors...have the power to block any vote by the Pinnacle West Board which, in the creditors' sole judgment, will reduce the value of Pinnacle West's common stock." The ACC alleges on pages 40-41 that, as a consequence, "major decisions affecting APS, such as whether Pinnacle West can issue new stock to finance APS' needs, now are under the control of non-Arizona entities."

Pinnacle West's creditors do not have the power to block votes of Pinnacle West's Board of Directors on matters which may reduce the value of Pinnacle West's common stock. The Pledge Agreement provides that, until Pinnacle West and the collateral agent under the Pledge Agreement (the "Collateral Agent") receive notice of the occurrence and continuation of an Event of Default (as defined in the Pledge Agreement), Pinnacle West is

entitled to exercise or refrain from exercising any and all voting and all other consensual rights pertaining to the pledged stock. As to matters other than the election of directors, Pinnacle West has agreed not to exercise or refrain from exercising any such rights if, in the Collateral Agent's judgment, such action would have a material adverse effect on the value of the pledged stock. Such a provision, which is designed to ensure against a material impairment of the lenders' collateral, is common in commercial lending transactions.[19]

> 4. The ACC alleges on page 11, that the existence of the "keep-well" arrangements regarding MeraBank "was not even disclosed until MeraBank's financial problems became the subject of formal action by federal regulatory agencies [in June 1989]."

On the contrary, the existence of the "keep-well" agreement was disclosed in publicly-filed documents in 1987, shortly after the acquisition of MeraBank.[20]

H. The Existence of the Complaint, when Coupled with the Lack of a Negative Response to it by the SEC, Is Likely to Have an Adverse Effect on Pinnacle West and its Shareholders and Consumers

A prompt response by the SEC refusing to take any of the actions requested in the Complaint would be very much in the public interest and the interest of investors and consumers. Simply the existence of the Complaint, when coupled with the lack of such a negative response by the SEC, is likely to have an adverse effect on Pinnacle West and its shareholders and consumers. For example, SunCor's ability to sell or enter into

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19. Cf. Narragansett Capital Corporation (available May 4, 1978).

20. For example, the Form 10-K of Pinnacle West for the fiscal year ended December 31, 1986, contained the following:

> "The Company has stipulated to the [Federal Savings and Loan Insurance Corporation] that, as long as it controls MeraBank, the Company will cause the regulatory capital of MeraBank to be maintained at the level required by applicable regulations and, as necessary, will infuse sufficient additional equity capital to effect compliance with such requirement. Regulatory amendments effective January 1, 1987, are expected to increase the minimum regulatory net worth required of MeraBank..."

joint ventures to dispose of or otherwise to maximize the value of its real estate assets is likely to be hindered by the uncertainty surrounding the Complaint and the SEC's response to it. Moreover, even the theoretical possibility of a forced divestiture by Pinnacle West of its non-utility assets could prevent Pinnacle West from realizing the fair value of such assets, thereby reducing the amount of debt that Pinnacle West would be able to repay with the proceeds of any such sale. This is especially significant in view of the fact that the book value of Pinnacle West's non-utility assets represents approximately one-half of the total outstanding principal amount of its debt. As a result, it is in the public interest and in the interest of investors and consumers for the SEC to dispose of the Complaint in as expeditious a manner as possible.

III. CONCLUSION

Pinnacle West believes that the ACC's allegations in the Complaint are based, in part, on material misstatements of fact, are legally without substance, or, given the successful implementation to date by Pinnacle West of its program to maximize shareholder values, are based upon Pinnacle West's past problems rather than its current business, financial condition and prospects. Nevertheless, the fact remains that the key to Pinnacle West's and APS' long-term financial condition lies in the legal duty of the ACC to provide APS with an opportunity to earn a just and reasonable return on its prudent investments, a factor noted by, among others, the leading independent rating agencies.[21]

It is also important to stress again the progress that Pinnacle West has made to date. Pinnacle West has a new President, Chief Executive Officer and Chairman of the Board. MeraBank operations have been discontinued pursuant to the MeraBank Settlement, and any obligation Pinnacle West may have had to infuse equity capital into MeraBank has been terminated. Pinnacle West has restructured substantially all of its debt, has repaid approximately $40 million to date and expects to repay another $35 million on or before June 30, 1990. SunCor has recently completed the sale of certain properties for $70 million, and Pinnacle West has an agreement in principle to sell Malapai. Such positive steps toward financial recovery clearly demonstrate that the SEC should best evaluate the merits of Pinnacle West's continued exemption by focusing on its current business, financial condition and prospects and not on its past problems, which largely have been resolved.

For the foregoing reasons, Pinnacle West hereby respectfully requests that the SEC refuse to take any of the actions requested by the ACC in the Complaint and promptly notify

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21. See supra note 6.

Pinnacle West and the ACC of such decision. If the SEC were to take any action sought by the ACC (which would undoubtedly be quite time-consuming and expensive for all parties involved), it would hinder the efforts of Pinnacle West's new management in implementing its program for financial recovery, as well as distract the ACC from the performance of its legal duties. As such, SEC action of this nature would clearly not be in the public interest or in the interest of investors or consumers.

If you have any questions, or if Pinnacle West or the undersigned may be of any further assistance, please feel free to contact the undersigned at (212) 603-2240.

Very truly yours,

REID & PRIEST,
Counsel for Pinnacle West Capital Corporation

By /s/ Richard M. Farmer
Richard M. Farmer

cc: William C. Weeden

Arizona Public Service Company
P.O. BOX 53999 • PHOENIX, ARIZONA 85072-3999

102-01741-WFC/TRB/RJR
June 24, 1990

WILLIAM F. CONWAY
EXECUTIVE VICE PRESIDENT
NUCLEAR

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

References: (1) Letter from J. B. Martin, NRC, to W. F. Conway, ANPP, dated December 24, 1989

(2) Letter from W. F. Conway, APS, to J. B. Martin, NRC, dated January 11, 1990

(3) Letter from W. F. Conway, APS, to J. B. Martin NRC, dated June 19, 1990

(4) Letter from W. F. Conway, APS, to J. B. Martin NRC, dated June 23, 1990

(5) Letter from W. F. Conway, APS, to J. B. Martin NRC, dated June 24, 1990

Dear Sir:

Subject: Palo Verde Nuclear Generating Station (PVNGS) Unit 1 Restart
Docket No. STN 50-528 (License No. NPF-41)
File: 90-056-026

This letter confirms compliance with the agreed upon course of action for the restart of PVNGS Unit 1 as outlined in Reference (1). This submittal also confirms completion of the items contained in the PVNGS Unit 1 Restart List which was provided to you as an attachment to Reference (2). The specific actions taken to address those items have been documented in individual closure packages previously provided to the NRC Senior Resident Inspector.

References (3), (4) and (5) describe the current status of the emergency lighting system.

The Management Review Committee has evaluated the actions identified in the Unit 1 Restart Program, concluded that Unit 1 is ready for restart and so advised me. I have reviewed the status of preparations to restart Unit 1 and have so determined that Unit 1 is ready for restart.

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(2)

Enclosure

PALO VERDE DIAGNOSTIC EVALUATION
REGION V SCHEDULE AND STATUS

1. Action: (Item 1 of 3/14/90 memorandum) Review and evaluate the adequacy of the licensee's response to the DET report giving particular emphasis to their proposed plans and actions to address areas [particularly noted by the DET to need increased licensee attention]. Also, prepare correspondence for signature by the EDO, which replies to the licensee's response to the DET report.

Schedule and status: The licensee's response to the DET report is scheduled to be submitted by the end of July. Within 30 days of the receipt of the submittal, Region V will coordinate the NRC's review and response with NRR and AEOD and submit it for the EDO's signature. [Within 45 days, issue the NRC's response].

2. Action: (Region V identified) Evaluate and issue any enforcement action based on the DET findings in coordination with NRR, AEOD, and OE.

Schedule and status: Region V is evaluating potential enforcement actions and coordinating our actions with the other offices involved. Any enforcement action will be issued by June 30, 1990.

3. Action: (Region V identified) Conduct detailed discussions of the licensee's business plan which addresses the observations of the DET.

Schedule and status: Within 90 days of the date of receipt of the licensee's business plan, Region V will have a discussion of the plan with senior APS management. Further discussions will be held, as needed, as the plan is developed by APS.

4. Action: (Region V identified) Review the implementation of the licensee's corrective actions to the DET findings and conclusions and any resulting enforcement actions.

Schedule and status: Within 180 days of the receipt of the licensee's response to the DET and any enforcement actions, Region V will verify the adequacy and implementation of the licensee's corrective actions.

JUN 1 4 1990 (3)

bcc:
W. Ang, RV
D. Coe, Palo Verde

REGION V			
HWong	SRichards	RZimmerman	JMancin
6/14/90	6/14/90	6/14/90	6/14/90
REQUEST COPY YES / NO	REQUEST COPY YES / NO	REQUEST COPY YES / NO	REQUEST COPY YES / NO

SEND TO PDR
YES / NO

NOT TO PDR

Arizona Public Service Company
P.O. BOX 53999 • PHOENIX, ARIZONA 85072-3999

O. MARK DE MICHELE
PRESIDENT AND CHIEF EXECUTIVE OFFICER

161-03372-ODM/JNB
July 31, 1990

Mr. James M. Taylor
Executive Director for Operations
U. S. Nuclear Regulatory Commission
One White Flint North
11555 Rockville Pike
Rockville, Maryland 20852

Reference (1): Diagnostic Evaluation Team Report for Palo Verde Nuclear Generating Station from James M. Taylor to O. M. DeMichele dated March 16, 1990.

Reference (2): Diagnostic Evaluation Team Report for Palo Verde Nuclear Generating Station from James M. Taylor to O. M. DeMichele dated April 16, 1990.

Dear Mr. Taylor:

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Business Plan
File: 90-056-026

In your March 16, 1990 letter (Reference 1), which transmitted the Diagnostic Evaluation Team Report (DER) for Palo Verde Nuclear Generating Station (PVNGS), you requested that within sixty (60) days Arizona Public Service (APS) provide your office with the summary of an integrated action plan resulting from its review of the DER. On April 11, 1990, NRC Region V and APS senior managers discussed APS' response to the DER and its relationship to the PVNGS Business Plan being developed by the company. Your letter dated April 16, 1990 (Reference 2) revised your request for an integrated action plan and requested instead that APS submit the initial version of the PVNGS Business Plan by the end of July. It also requested that, when submitting the Business Plan, APS indicate in broad outline how the plan addresses the DER observations. In accordance with your request, we have enclosed a copy of the initial version of the PVNGS Business Plan, dated July 1990 (Attachment 1). In subsequent discussions with APS, NRC Region V indicated a matrix correlating management observations in the cover letter and Section 2 of Reference 1 with the Business Plan would be of assistance. Accordingly, Attachment 2 provides such a matrix.

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The Business Plan consists of three tiers:

(1) A five-year plan that presents the PVNGS mission, goals, strategies, and five-year objectives.

(2) A one-year plan that presents a one-year objective for each five-year objective. This plan also includes the initials of specific management personnel assigned and responsible for achieving the goals and one-year objectives.

(3) Detailed task plans that identify specific tasks to achieve one-year objectives. The task plans also identify responsibility for discrete tasks.

This submittal includes the first- and second-tier documents in full and two draft examples of the third-tier, (1) the Motor Operated Valves (MOV) program and (2) Maintenance Improvement Program. Comprehensive, third-tier task plans will be completed over the balance of this year. As we complete this process, we anticipate refinements to the first- and second-tier documents. The Business Plan also reflects the results of a management review of ongoing PVNGS improvement programs and initiatives referenced in the DER. When complete, the Business Plan will integrate and prioritize ongoing and future PVNGS programs and initiatives down to the level of specific implementing tasks. Associated schedules and responsibilities will follow the format of the third-tier examples provided.

The completed Business Plan will be a living document, reviewed and revised at least annually. The annual objectives will be statused quarterly, so the plan will apprise management of progress and areas requiring additional attention. The plan will also guide organizations and employees in carrying out the PVNGS mission.

Some of the goals, strategies, objectives and tasks identified in the Business Plan are directly related to NRC requirements or APS commitments to NRC; others are outside the normal purview of the NRC. Ordinarily, APS would not submit to the NRC a document addressing matters not of regulatory concern. However, APS is submitting this initial version to show how the Business Plan addresses the DER's management observations. As indicated above, Attachment 2 to this letter is a matrix that cross-references management observations from the cover letter and Section 2 of Reference 1 with the PVNGS Business Plan.

We understand that NRC has assigned its Region V office the responsibility for closing DER observations. APS does not plan to use the Business Plan as the means of communicating its detailed actions to NRC on all matters identified in the DER. At PVNGS, APS will maintain files documenting the results of its review of the DER and associated implementing actions. The files will be available for NRC review. In addition, APS intends to use periodic management meetings with the NRC as opportunities to update progress on DER-related management issues.

If you have any questions, please call me or William F. Conway (602-250-3900).

Sincerely,

O. M. DeMichele

O. M. DeMichele

ODM/JNB/jle

Attachments

cc: J. R. Martin
S. R. Peterson
C. M. Trammell
D. H. Coe
A. C. Gehr
A. H. Gutterman

ATTACHMENT 1

PVNGS

FIVE-YEAR BUSINESS PLAN

1991 - 1995

JULY 1990

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TABLE OF CONTENTS

Executive Vice President Approval

Section I

Introduction 1

Section II

Mission, Goals, and Strategies 4

Section III

Objectives 5

Section IV

Equivalent Availability (Capability) Targets 12

Section V

Operations and Maintenance Budget Forecast 13

Section VI

Capital Expenditures Forecast 14

To all PVNGS employees:

My signature below signifies approval of the PVNGS Five-Year Business Plan 1991-1995.

William F. Conway

William F. Conway, Executive Vice President-Nuclear

7/3/90

DATE

SECTION I

Introduction

INTRODUCTION

This initial version of the Five-Year Business Plan presents five-year goals, strategies, and objectives for the operation of Palo Verde Nuclear Generating Station (PVNGS) during the period 1991 through 1995. Although various documents currently reflect this material, it has been reshaped to better reflect PVNGS priorities and integrated into a single business plan to facilitate every employee's understanding of the PVNGS mission and goals and how their individual efforts contribute toward achieving those goals.

The mission of PVNGS is to generate electricity in a safe, reliable, economic, and environmentally sound manner for the benefit of our customers, owners, and employees. Palo Verde is a business enterprise that must operate in a manner that serves the interest of our shareholders and customers.

The Five-Year Business Plan consists of the following major elements:

- Mission and goals to achieve the mission;
- Strategies to accomplish the goals;
- Objectives that measure the success of the strategies;
- Five-Year Equivalent Availability Plan;
- Five-Year Operations and Maintenance (O&M) Budget and;
- Five-Year Capital Expenditure Budget.

The Five-Year Business Plan is supported by a one-year business plan which presents that year's strategies, objectives, and resources and a task plan which identifies activities and accountabilities to achieve yearly objectives. The Five-Year Business Plan, the one-year plan, and the task plan are updated annually to incorporate changes and reflect achievements. Together, these plans comprise the PVNGS Business Plan. All levels of PVNGS management participated in developing appropriate elements of the plan.

The following goals support the PVNGS mission:

1. Safety - Protect the environment and the health and safety of the public and the employees.
2. Professionalism - Maximize individual performance.
3. Production - Maximize electric generation and improve organizational effectiveness.
4. Cost - Reduce overall cost.

The following management priorities support these goals:

1. Emphasize the utmost importance of safety and strict adherence to applicable regulatory requirements.
2. Maintain radiation exposures as low as reasonably achievable through improved compliance with radiation protection requirements and standards and minimization of radiological waste and contamination.
3. Improve the reliability, operability, and maintainability of plant systems.
4. Improve processes for planning, prioritizing, estimating, scheduling, and controlling maintenance activities, outages, and modifications, as well as necessary engineering and technical support.
5. Emphasize timely response to issues identified internally and as appropriate externally.
6. Attract, train, develop, and retain a competent staff with a strong sense of pride and professionalism.
7. Foster attitudes that emphasize quality, attention to detail, and personal accountability in every aspect of our work.
8. Strengthen public understanding of PVNGS in the media, among opinion leaders, and in political forums -- in terms of safety and as a contributor to the conservation of resources, the environment, and the economy.
9. Promote teamwork throughout PVNGS, including a strong sense of cooperation and common mission, with special emphasis on effective internal communication and information management.
10. Strengthen the ability of the PVNGS organization to assess its progress and problems, including improvement of root cause analysis capability.

11. Maintain current and readily accessible plant design information, technical data, equipment status, and related records to support station operations.
12. Improve organizational accountabilities for PVNGS as a business enterprise for which actions must be correct, cost-effective, and timely.

Strategies and objectives presented in this document incorporate these priorities.

NOTE: The absence of a date indicates an ongoing activity or that the due date of an objective is the last day of the year of the plan. Due dates shown are the last day of the period indicated.

SECTION II

Mission, Goals, and Strategies

MISSION GOALS STRATEGIES

PVNGS FIVE-YEAR BUSINESS PLAN

MISSION: The mission of the Palo Verde Nuclear Generating Station is to generate electricity in a safe, reliable, economic, and environmentally sound manner for the benefit of our customers, owners, and employees.

Goal 1: *Safety - Protect the environment and the health and safety of the public and employees.*

Strategies:

A. Provide a safe work environment for all employees.

B. Minimize personnel radiation exposure and the generation of radioactive materials and waste.

C. Meet or exceed regulatory requirements.

D. Maintain safety equipment in a state of readiness to support plant operations and minimize challenges.

E. Minimize use of hazardous materials and production of hazardous waste.

Goal 2: *Professionalism - Maximize individual performance.*

Strategies:

A. Attract, train, develop, and retain a professional, competent staff.

B. Improve individual performance and accountability.

C. Improve communication and teamwork.

Goal 3: *Production - Maximize electric generation and improve organizational effectiveness.*

Strategies:

A. Maximize production efficiency.

B. Improve effectiveness of all organizations.

C. Improve maintenance support for operations.

D. Improve engineering support for operations and maintenance.

E. Improve chemistry support for operations.

F. Improve outage planning, scheduling, and management.

G. Improve work control processes.

H. Improve plant configuration management.

Goal 4: *Cost - Reduce overall cost.*

Strategies:

A. Manage resources in a cost-effective manner.

B. Improve management cost control practices.

SECTION III

Objectives

GOAL 1: SAFETY

Goal 1: *Safety - Protect the environment and the health and safety of the public and employees.*

FIVE-YEAR PERFORMANCE OBJECTIVES

Strategy A. Provide a safe work environment for all employees.

Objectives:

1. Maintain an All Injury Incident Rate of 0.50 or less.
2. Maintain a Lost Work Incident Rate of 0.15 or less.
3. Maintain a Severity Incident Rate of 1.50 or less.

Strategy B. Minimize personnel radiation exposure and the generation of radioactive materials and waste.

Objectives:

1. Do not exceed personnel radiation exposure of: outage = 180 manrem per year and non-outage = 25 manrem per year.
2. Do not exceed contaminated surface area of: outage = 7.5% and non-outage = 1.5%.
3. Do not exceed personnel contamination events of: outage = 110 per year and non-outage = 50 per year.
4. Do not exceed a three-year average low-level waste volume of 160 cubic meters per unit.

Strategy C. Meet or exceed regulatory requirements.

Objectives:

1. Make responsible, coordinated regulatory commitments and meet due dates.
2. Make responsible, coordinated industry (e.g., ANI, NUMARC) commitments and meet due dates.
3. Prioritize, track, and respond in a timely manner to approved recommendations from internal and external assessments.

7-17-90

Goal 1: *Safety - Protect the environment and the health and safety of the public and employees.*

FIVE-YEAR PERFORMANCE OBJECTIVES

Strategy D. Maintain safety equipment in a state of readiness to support plant operations and minimize challenges.

Objectives:

1. Achieve safety system performance availability of at least: 99.0% - high pressure safety injection, 98.5% - auxiliary feedwater, 98.5% - emergency A/C power.
2. Do not exceed one unplanned automatic reactor scram while critical per unit each year.
3. Do not exceed one unplanned safety system actuation per unit each year.

Strategy E. Minimize use of hazardous materials and production of hazardous waste.

Objectives:

1. Limit the production of hazardous waste.
2. Evaluate use of non-hazardous materials versus hazardous materials annually and substitute as practical.

Goal 2: *Professionalism - Maximize individual performance.*

FIVE-YEAR PERFORMANCE OBJECTIVES

Strategy A. **Attract, train, develop, and retain a professional, competent staff.**

Objectives:

1. Select qualified individuals to perform job functions.
2. Develop technical and inter-personal skills through formal and informal training.
3. Improve managerial and supervisory skills.

Strategy B. **Improve individual performance and accountability.**

Objectives:

1. Integrate the PVNGS Business Plan into daily work activities to assure continuity and consistency of managerial direction.
2. Communicate standards and expectations clearly and consistently.
3. Develop and implement results-oriented performance plans and appraisals consistently by 1991.
4. Emphasize quality, attention to detail, and timely actions.
5. Require adherence to procedures in accordance with PVNGS policies.
6. Provide regular performance feedback throughout the organization.

Strategy C. **Improve communication and teamwork.**

Objectives:

1. Use daily activities to improve teamwork and morale throughout the organization.
2. Ensure managers and supervisors seek feedback from personnel.
3. Promote effective, ongoing communication with co-workers and peers.
4. Improve effectiveness of external communications, particularly with PVNGS regulators.

Goal 3: *Production - Maximize electric generation and improve organizational effectiveness.*

FIVE-YEAR PERFORMANCE OBJECTIVES

Strategy A. Maximize production efficiency.

Objectives:

1. Achieve a three-year average site equivalent availability (capability) factor of 75%.
2. Do not exceed a forced outage rate (unplanned capability loss factor) of 5% per unit.
3. Maintain thermal performance of at least 99.5% per unit.

Strategy B. Improve effectiveness of all organizations.

Objectives:

1. Improve ability to conduct critical self-assessments.
2. Improve proactive problem identification and resolution.
3. Evaluate and implement lessons learned from PVNGS and industry experience.
4. Improve root cause and human performance evaluations.
5. Minimize repeat internal, NRC, or INPO findings.
6. Improve management of station backlogs.
7. Achieve SALP ratings of 2 or better in each category by 1992.
8. Achieve INPO rating of 2 or better by 1992.
9. Integrate management information systems by 1994.

Strategy C. Improve maintenance support for operations.

Objectives:

1. Promote personal ownership by initiating problem-solving at the lowest practical level.
2. Complete and implement preventive maintenance program improvements by 1991.
3. Develop and implement standard equipment specifications for corrective maintenance.
4. Improve predictive maintenance program.
5. Improve capability for calibration and control of measuring and test equipment.
6. Improve control of special and previously used tools.
7. Improve electronic work order program.

7/17/90

Goal 3: *Production - Maximize electric generation and improve organizational effectiveness.*

FIVE-YEAR PERFORMANCE OBJECTIVES

Strategy D. Improve engineering support for operations and maintenance.

Objectives:

1. Develop a proactive engineering posture in daily activities to foster ownership of plant systems.
2. Disposition engineering requests for support based on operational priorities and within established time frames by 1992.
3. Meet established schedules and turnaround times for engineering products and commitments.
4. Continue to streamline the design change process.
5. Continue to improve quality of engineering products.
6. Develop a common engineering work management system by 1992.
7. Perform 50% of PVNGS engineering work in-house by 1992.
8. Establish a plant, system, and component performance monitoring program by March 1992.

Strategy E. Improve chemistry support for operations.

Objectives:

1. Do not exceed a chemistry performance index of 0.15.
2. Improve chemistry controls for incoming demineralized water.
3. Improve chemistry controls for closed cooling systems.

Strategy F. Improve outage planning, scheduling, and management.

Objectives:

1. Plan and control outages to meet schedules.
2. Conduct annual analyses of past outages and industry outage experience to identify and correct major contributors to lost time.
3. Reduce in-processing time for outage contractors.
4. Implement plan to ensure adequate summer capacity.

Goal 3: *Production - Maximize electric generation and improve organizational effectiveness.*

FIVE-YEAR PERFORMANCE OBJECTIVES

Strategy G. Improve work control processes.

Objectives:

1. Reduce work order rejection rate by 10% each year.
2. Complete development of model work orders by 1992.
3. Complete the training and qualification of work planners and schedulers by 1992.
4. Complete simplification of work control processes by 1992.

Strategy H. Improve plant configuration management.

Objectives:

1. Improve the configuration management program by 1992.
2. Complete critical, safety-related plant design basis documentation.
3. Complete development of operational basis information.
4. Limit design changes.
5. Achieve simulator certification by May 1991.
6. Achieve necessary and desirable unit consistency.

GOAL 4: COST

Goal 4: *Cost - Reduce overall cost.*

FIVE-YEAR PERFORMANCE OBJECTIVES

Strategy A. Manage resources in a cost-effective manner.

Objectives:

1. Achieve an average operations and maintenance cost per kilowatt hour, including fuel expense, within the top twenty domestic nuclear plants.
2. Meet and maintain five-year operations and maintenance budgets at the 1991 level.
3. Reduce APS fuel expense to $7 per megawatt hour by 1993.
4. Maintain average capital improvement costs below $100 million per year.
5. Maintain average warehouse inventory value below $140 million.

Strategy B. Improve management cost control practices.

Objectives:

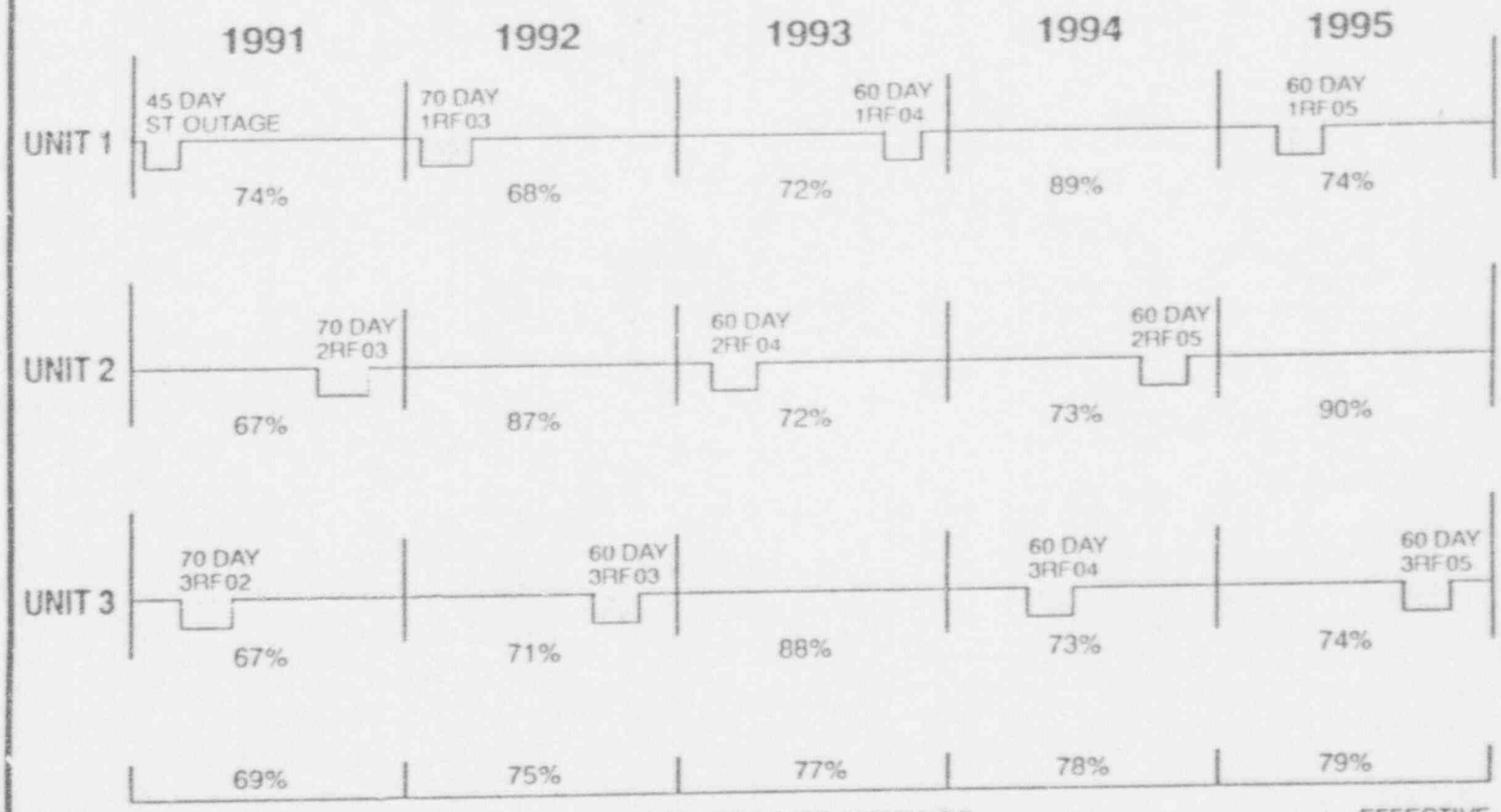
1. Justify and control expenditure of funds.
2. Minimize overtime within budget.
3. Maintain staff, including long-term contractors, no greater than 3211.
4. Improve cost and budget reporting.

SECTION IV

Equivalent Availability (Capability) Targets

TABLE 1

PALO VERDE NUCLEAR GENERATING STATION
FIVE-YEAR EQUIVALENT AVAILABILITY (CAPABILITY) TARGETS



YEARLY SITE AVERAGE

(FIVE-YEAR AVERAGE = 75%)

	FORCED OUTAGE RATE	EFFECTIVE FORCED OUTAGE RATE
1991	9%	14%
1992	8%	13%
1993	7%	12%
1994	6%	11%
1995	5%	10%

SECTION V

Operations and Maintenance Budget Forecast

TABLE 2

PALO VERDE NUCLEAR GENERATING STATION

Operations & Maintenance Budget Forecast
($ in Millions)

	1991	1992	1993	1994	1995
Total O&M	$		LATER		

SECTION VI

Capital Expenditures Forecast

TABLE 3

PALO VERDE NUCLEAR GENERATING STATION

Capital Expenditures Forecast
($ in Millions)

	1991	1992	1993	1994	1995
Capital Improvements	$				
			LATER		
Nuclear Fuel					
Total Capital	$				

NRC FORM 356
(11-81)
NRCM 0270

U.S. NUCLEAR REGULATORY COMMISSION

FACSIMILE TRANSMITTAL REQUEST

REQUESTER'S MAILING ADDRESS

STREET: 1450 MARIA LANE, SUITE 210

CITY: WALNUT CREEK

STATE: CA

DATE: 8/1/90

RETURN ORIGINAL TO SENDER: [X] YES [ ] NO

MESSAGE TO

NAME AND ORGANIZATION: DOUG. C. E

CITY: PALO VERDE

STATE:

FACSIMILE PHONE NUMBER:

VERIFICATION PHONE NUMBER: ?

AUTOMATIC: [X] YES [ ] NO

NUMBER OF PAGES (INCLUDING TRANSMITTAL INSTRUCTIONS): 12

MESSAGE FROM

NAME: L. WUNG

TELEPHONE NO.: 463-3737

ORG: REGION V

MAIL STOP:

FACSIMILE PHONE NUMBER

HIGH-SPEED (up to 3 min.): FTS 463-3755

AUTOMATIC: [X] YES [ ] NO

LOW-SPEED (one min.): FTS 463-3755

AUTOMATIC: [X] YES [ ] NO

VERIFICATION TELEPHONE NUMBER:

PRECEDENCE

[ ] OVERNIGHT [ ] FOUR HOURS [ ] TWO HOURS [ ] ONE HOUR [ ] IMMEDIATE

SPECIAL INSTRUCTIONS

DOUG - RE PV DET ENF. OPEN ITEMS & HOW #'S WERE DEVELOPED

HOWARD

TIME/DATE (Zulu)

RECEIVED

TRANSMITTED

8/19
22.

OUTSTANDING ITEMS INPUT/FOLLOWUP

Docket Number: 50-528

Facility Name: PALO VERDE #1

Submitted by: H. WONG

Item Number	Type	Followup Resp.	Followup Report	Status (O = Open, C = Closed)	Action (MMYY)
89-56-02	E	R	-	O	

Descriptive Title: ALL UNITS - DOCUMENT 13-J-22I-004 IN APPROPRIATE FORM CONTROL OF SETPOINTS (PARA. 3.3.6.2 / 3.3.8.1)

Item Number	Type	Followup Resp.	Followup Report	Status (O = Open, C = Closed)	Action (MMYY)
89-56-03	E	R	-	O	

Descriptive Title: ALL UNITS - # OF OVERTHRUST CYCLES NOT TRACKED FOR MOVS (PARA. 3.6.15.2)

Item Number	Type	Followup Resp.	Followup Report	Status (O = Open, C = Closed)	Action (MMYY)
89-56-04	E	R	-	O	

Descriptive Title: ALL UNITS - NOTES 14 & 15 OF 13-J-22I-004 UNCLEAR ON LIMITER PLATE REMOVAL AFTER MOVATS (PARA. 3.6.15.2)

OI Type Codes

F - Inspection Report (Followup Item)
E - Inspection Report (Enforcement Item)
U - Inspection Report (Unresolved Item)
D - Inspection Report (Deviation)
B - IE Bulletin
N - IE Information Notice
O - 10 CFR 50.55(e) Report
R - LER or Other Licensee Report
T - Temporary Instruction (TI)
S - Special (or Other)

Followup Responsibility

O - Operations Projects
R - Operations Resident
C - Construction Projects
F - Construction Resident
E - Engineering
H - Radiological Safety
S - Safeguards/Physical Security
P - Emergency Preparedness

ADP Entry by _____ on __/__/__

RV Form 109 (4/84)

OUTSTANDING ITEMS INPUT/FOLLOWUP

Docket Number: 50-528

Facility Name: Palo Verde #1

Submitted by: H. Wong

Item Number: 89-56-10 | Type: E | Followup Resp.: R | Followup Report: - | Status: O (O = Open, C = Closed) | Action (MMYY):

Descriptive Title: ALL UNITS - INADEQUATE COMPLIANCE WITH TIONS FOR PARTIAL INSERVICE MOTOR TECHNICAL MANUAL (PARA. 3.3.8.5)

Item Number: 89-56-11 | Type: E | Followup Resp.: R | Followup Report: - | Status: O (O = Open, C = Closed) | Action (MMYY):

Descriptive Title: ALL UNITS - OPENINGS IN SEISMIC GRADE AREA BTWN D/G BLDG AND GUY WIRE (PARA. 3.6.7.9)

Item Number: 89-56-08 | Type: E | Followup Resp.: R | Followup Report: - | Status: O (O = Open, C = Closed) | Action (MMYY):

Descriptive Title: UNITS 1 & 3 - 5/6 WERE NOT PROVIDED WITH OVERPRESSURE OR REGULATOR SAMPLING AND LINES DONE (PARA. 3.6.4.2)

OI Type Codes

F - Inspection Report (Followup Item)
E - Inspection Report (Enforcement Item)
U - Inspection Report (Unresolved Item)
D - Inspection Report (Deviation)
B - IE Bulletin
N - IE Information Notice
O - 10 CFR 50.55(e) Report
R - LER or Other Licensee Report
T - Temporary Instruction (TI)
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Followup Responsibility

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R - Operations Resident
C - Construction Projects
F - Construction Resident
E - Engineering
M - Radiological Safety
S - Safeguards/Physical Security
P - Emergency Preparedness

ADP Entry by _____ on __/__/__

RV Form 109 (4/84)

(2)

OUTSTANDING ITEMS INPUT/FOLLOWUP

Docket Number: 50-529

Facility Name: Palo Verde #2

Submitted by: H. Wang

Item Number	Type	Followup Resp.	Followup Report	Status (O = Open, C = Closed)	Action (MMYY)
89-56-07	E	R	-	C	

Descriptive Title: DG ~~Aux~~ CYCLINDER INDICATOR COCK DEV AFTER WORK ORDER COMPLETED (PARA. 3.3.10)

Item Number	Type	Followup Resp.	Followup Report	Status (O = Open, C = Closed)	Action (MMYY)
- -			-		

Descriptive Title:

Item Number	Type	Followup Resp.	Followup Report	Status (O = Open, C = Closed)	Action (MMYY)
- -			-		

Descriptive Title:

OI Type Codes

F - Inspection Report (Followup Item)
E - Inspection Report (Enforcement Item)
U - Inspection Report (Unresolved Item)
D - Inspection Report (Deviation)
B - IE Bulletin
N - IE Information Notice
O - 10 CFR 50.55(e) Report
R - LER or Other Licensee Report
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S - Special (or Other)

Followup Responsibility

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R - Operations Resident
C - Construction Projects
F - Construction Resident
E - Engineering
H - Radiological Safety
S - Safeguards/Physical Security
P - Emergency Preparedness

ADP Entry by _____ on __/__/__

RV Form 109 (4/84)

(3)

OUTSTANDING ITEMS INPUT/FOLLOWUP

Docket Number: 50-528

Facility Name: Palo Verde #3

Submitted by: H. Wong

Item Number	Type	Followup Resp.	Followup Report	Status (O = Open, C = Closed)	Action (MMYY)
89-56-01	E	R	-	O	

Descriptive Title: FAILURE TO CLOSE SPRAY CHEM ADDITION NON PUMP SUCTION VALVE AFTER TESTING (PARA 3.2.3.6)

Item Number	Type	Followup Resp.	Followup Report	Status (O = Open, C = Closed)	Action (MMYY)
89-56-05	E	R	-	O	

Descriptive Title: INCORRECT PACKING RINGS INSTALLED IN ADV-178 (PARA. 3.3.10)

Item Number	Type	Followup Resp.	Followup Report	Status (O = Open, C = Closed)	Action (MMYY)
89-56-06	E	R	-	O	

Descriptive Title: PARTS FROM CONT PURGE EXHAUST VALVE INSTALLED IN CONT PURGE SUPPLY VA (PARA 3.3.10)

OI Type Codes

F - Inspection Report (Followup Item)
E - Inspection Report (Enforcement Item)
U - Inspection Report (Unresolved Item)
D - Inspection Report (Deviation)
B - IE Bulletin
N - IE Information Notice
O - 10 CFR 50.55(e) Report
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Followup Responsibility

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C - Construction Projects
F - Construction Resident
E - Engineering
M - Radiological Safety
S - Safeguards/Physical Security
P - Emergency Preparedness

ADP Entry by _____ on __/__/__

RV Form 109 (4/84)

(4)

OUTSTANDING ITEMS INPUT/FOLLOWUP

Docket Number: 50-530

Facility Name: PALO VERDE #3

Submitted by: H. WONG

Item Number	Type	Followup Resp.	Followup Report	Status (O = Open, C = Closed)	Action (MMYY)
89-56-09	E	R	-	O	

Descriptive Title: REPLACEMENT AFW CONTROL VALVE SYSTEM ~~BEWT~~ ALSO BENT (PARA. 3.3.4.1 & 3.6.4.5)

Item Number	Type	Followup Resp.	Followup Report	Status (O = Open, C = Closed)	Action (MMYY)
- -			-		

Descriptive Title:

Item Number	Type	Followup Resp.	Followup Report	Status (O = Open, C = Closed)	Action (MMYY)
- -			-		

Descriptive Title:

OI Type Codes

F - Inspection Report (Followup Item)
E - Inspection Report (Enforcement Item)
U - Inspection Report (Unresolved Item)
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E - Engineering
M - Radiological Safety
S - Safeguards/Physical Security
P - Emergency Preparedness

ADP Entry by _____ on __/__/__

RV Form 109 (4/84)

5

H. WONG

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

July 17, 1990

Docket Numbers 50-528, 50-529, and 50-530

DET REPORT IS # 50-528, 529, 530/89-56

Arizona Public Service Company
P. O. Box 53999, Sta. 9012
Phoenix, Arizona 85072-2034

Attention: Mr. W. F. Conway
Executive Vice President, Nuclear

Gentlemen:

SUBJECT: DIAGNOSTIC EVALUATION TEAM REPORT FOR PALO VERDE NUCLEAR GENERATING STATION - NOTICE OF VIOLATION

The Diagnostic Evaluation Team (DET) Report for the Palo Verde Nuclear Generating Station was forwarded to the Arizona Public Service Company (APS) in a letter dated March 16, 1990. The preliminary findings were discussed with APS managers on January 24, 1990. In addition, discussions were held on April 10, 1990 regarding the proposed response to the DET Report and the submittal of an APS "business plan" which would address APS' management perspectives of the DET Report findings. As discussed in the April 16, 1990 letter from J. Taylor, we understand that an initial version of a "business plan" will be provided by the end of July 1990. We anticipate discussing the details of the "business plan" in future meetings.

Based on the findings presented in the DET Report, it appears that several of your activities were not conducted in full compliance with NRC requirements as set forth in the Notice of Violation, enclosed herewith as Appendix A. These apparent violations are in two areas: (1) examples of failure to follow procedures or to have adequate procedures and (2) examples of failure to correct deficiencies or take appropriate corrective actions to preclude repetition.

The DET findings related to the program for motor operated valves (MOVs) highlight both the areas of procedural weaknesses and ineffective corrective actions. The DET identified that the MOV data base document used by APS was inadequate to control MOV setpoints in that: the numerous design changes associated with it made it difficult to use in the field; the setpoints were not technically supported; an as-built document for the setpoints does not exist; and the setpoints could not be easily compared to MOVATS data. The DET also found that procedures did not exist to track the number of valve operator overthrust cycles, for valve operators known to be in an overthrust condition, to limit the number of cycles below the maximum number recommended by the vendor. In addition, the DET identified that complete disassembly and reassembly procedures for MOVs did not exist. Further, the DET found that Part 21 notifications and Limitorque technical manuals had not been updated for three years. These findings reemphasize the need to ensure that procedures are adequate to properly control plant activities and are followed, and that effective corrective actions are implemented to resolve and correct problems with safety significant plant equipment, such as MOVs.

9007240438

Your response to this Notice is to be submitted in accordance with the provisions of 10 CFR Part 2.201 as stated in Appendix A, Notice of Violation.

In addition to responding to the Notice of Violation enclosed, you should as a minimum also review and take appropriate actions for those safety significant issues raised in the DET Report. While no response to the NRC for these issues is required, we will review your actions, in future inspections, to assure appropriate corrective actions have been taken.

In accordance with 10 CFR Part 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room.

The response directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96-511.

Should you have any questions concerning this letter, we will be pleased to discuss them with you.

Sincerely,

For

R. P. Zimmerman, Director
Division of Reactor Safety
and Projects

Enclosure:
Appendix A - Notice of Violation

cc w/enclosure:
Mr. Jack N. Bailey, APS
Mr. Blaine E. Ballard, APS
Mr. Thomas R. Bradish, APS
Mr. O. Mark DeMichele, APS
Mr. James M. Levine, APS
Mr. Robert W. Page, APS
Mr. E. C. Simpson, APS
Mr. Arthur C. Gehr, Esq., Snell & Wilmer
Mr. Al Gutterman, Newman & Holtziner P.C.
Mr. Charles R. Kocher, Esq., Assistant Council, SCE Company
Mr. James A. Boeletto, Esq.
Mr. Charles B. Brinkman, Combustion Engineering, Inc.
Mr. Charles Tedford, Director, Arizona Radiation Regulatory Agency
Chairman, Maricopa County Board of Supervisors
Mr. John W. Norman, Chief, Arizona Corporation Commission

APPENDIX A

NOTICE OF VIOLATION

Arizona Public Service Company
Palo Verde Units 1, 2, and 3

Docket Numbers 50-528, 50-529, and 50-530
License Numbers NPF-41, NPF-51, and NPF-74

During an NRC evaluation conducted over the period November 6-17 and December 4-8, 1989, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1990), the violations are listed below (with reference to the applicable DET Report paragraphs):

I. Failure to Follow Procedures or to Have Adequate Procedures

10 CFR Part 50, Appendix B, Criterion V, states in part that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings.

OPEN ITEM

A. Surveillance Testing

Surveillance Test Procedure 43ST-3SI06, Revision 1, "Iodine Removal System - S.C.A.P. Discharge Flow and Pressure Test," Step 8.2.12, states for the "A" Train Spray Chemical Addition Pump suction valve, a safety related valve, "close SIA-UV-603 using handswitch SIA-HS-603."

89-56 -01

Contrary to the above, on December 5, 1989, during the performance of procedure 43ST-3SI06, a Unit 3 licensed control room operator failed to close SIA-UV-603 at step 8.2.12, and mistakenly documented that SIA-UV-603 had been closed.

(DET Report Paragraph 3.2.3.6)

B. Motor Operated Valves

1. Contrary to the above, as of the DET evaluation, Document No. 13-J-ZZI-004, Revision 5, (the licensee's motor operated valve (MOV) data base document) was inappropriate for the control of MOV setpoints in that:

(a) On November 13, 1989, qualified technicians were observed by QA personnel to select incorrect limit switch settings while working on a safety-related valve, 2JAFBHV0030. Document No. 13-J-ZZI-004, Revision 5, had 34 Drawing Change Notices (DCNs) which had not been incorporated and caused confusion for personnel using it.

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89-56

(b) The MOV setpoints specified in Document No. 13-J-ZZI-004 were not supported by reviewed and approved setpoint calculations. -02

2. Limitorque allows an operator to exceed the published rated output thrust by 10 percent as long as the operator is limited to 100 lifetime cycles. Contrary to the above, as of the DET evaluation, instructions appropriate to the circumstances had not been established to track the number of cycles an overthrust condition occurred on such a valve so that the recommended number of cycles would not be exceeded. -03

3. Contrary to the above, as of the DET evaluation, instructions appropriate to the circumstances had not been established in that Notes 14 and 15 of Document No. 13-J-ZZI-004 were contradictory in whether torque switch limiter plates were to be left in place or removed after MOVATS testing. -04

(3.3.8.1, 3.3.6.2, 3.6.15.2, 3.3.8.3)

C. Maintenance

1. Contrary to the above, on October 23, 1989, Atmospheric Dump Valve 3J-SGB-HV0178 was repacked using Maintenance Procedure 31MT-9SG04; however, packing rings of an incorrect thickness were installed due in part to an inadequate valve packing procedure. -05

2. Contrary to the above, on November 9, 1989, procedures were not followed in that maintenance personnel mistakenly installed parts from the Containment Purge Exhaust Valve 3J-CPA-UV02B on the Containment Purge Supply Valve 3J-CPB-UV03A and QC personnel also mistakenly signed off hold points not in accordance with the directions specified on Work Order 389094 for this work. -06

3. Contrary to the above, on October 28, 1989, instructions were not followed in that Diesel Generator A for Unit 2 was found with a cylinder indicator cock open. Work Order 380644, completed on October 28, 1989, specified that the cylinder indicator cock be closed after completion of the work. -07

(3.3.10)

D. Steam Generator Chemistry Control

Procedure 74AC-9CY04 requires for steam generators in long term layup (greater than four days) a nitrogen overpressure of greater than 5 psig and that sampling and analysis be performed three times per week.

Contrary to the above, from May 1989 through November 1, 1989, while the steam generators in Units 1 and 3 were in long term wet layup, the nitrogen overpressure in the steam generators had not been maintained. In addition, from September 25, 1989, through -08

89-56

November 1, 1989, the Unit 1 steam generators had not been sampled.

(3.6.4.2)

These items (I.A, I.B.1-3, I.C.1-3, and D) each constitute a Severity Level IV violation (Supplement I) applicable to Units 1, 2, and 3.

II. Failure to Take Appropriate Corrective Actions

10 CFR Part 50, Appendix B, Criterion XVI, states in part that measures shall be established to assure that conditions adverse to quality are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective actions taken to preclude repetition.

A. Contrary to the above, as of the DET evaluation, during the replacement of a bent valve stem for Auxiliary Feedwater Control valve 3AFBHV030, a significant condition adverse to quality, corrective actions to preclude repetition were inadequate in that the replacement valve stem was also bent. (3.3.4.1, 3.6.4.5) -09

B. Contrary to the above, as of the DET evaluation, the licensee failed to take adequate actions to correct conditions adverse to quality as follows:

1. The licensee's response to a Part 21 notification from Limitorque regarding degraded insulation in type SMB actuators with direct current motors, issued in November 1988, was closed concluding that no motor operators were affected. However, on October 28, 1989, it was found that some actuators (type SB) were similar to and used the same style motor as noted in the Part 21 notification. -10

2. The licensee's response to Information Notice 85-22 was closed on July 5, 1985 concluding that Limitorque technical manuals would be updated to provide necessary information such as proper motor pinion position; however, as of the time of the DET evaluation updated manuals had not been approved.

(3.3.8.5)

C. Licensee Event Report (LER) 85-096, issued on January 27, 1986, described that the seismic gap area between the Diesel Generator Building and the Control Building of each unit at Palo Verde had not been properly analyzed in the Fire Hazards Analysis. Contrary to the above, this significant condition adverse to quality was not precluded from repetition in that on October 23, 1989, the licensee identified four additional openings in the same wall. -11

(3.6.7.9)

These items (II.A, B, and C) each constitute a Severity Level IV violation (Supplement I) applicable to Units 1, 2, and 3.

Pursuant to the provisions of 10 CFR Part 2.201, Arizona Public Service company is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555, with a copy to the Regional Administrator, Region V, and a copy to the NRC Resident Inspection office at the Palo Verde Nuclear Generating Station, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation; (2) the corrective steps that have been taken and the results achieved; (3) the corrective steps that will be taken to avoid further violations; and (4) the date when full compliance will be achieved. If an adequate reply is not received within the time specified in this Notice, an order may be issued to show cause why the license should not be modified, suspended or revoked or why such other action as may be proper should not be taken. Consideration may be given to extending your response time for good cause shown.

FOR THE NUCLEAR REGULATORY COMMISSION

FOR

R. P. Zimmerman, Director
Division of Reactor Safety
and Projects

Dated at Walnut Creek, California
this 17TH day of July 1990

Arizona Public Service Company
P.O. BOX 53999 • PHOENIX, ARIZONA 85072-3999

WILLIAM F. CONWAY
EXECUTIVE VICE PRESIDENT
NUCLEAR

102-01825-WFC-TRB/JJN
August 31, 1990

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Mail Station P1-37
Washington, DC 20555

Reference: 1) Letter from R. P. Zimmerman, Director Division of Reactor Safety and Projects NRC to W. F. Conway, Executive Vice President Nuclear, Arizona Public Service (APS), dated July 17, 1990

2) Telephone conversation between H. J. Wong, Section II Chief, NRC Region V and T. R. Bradish, Manager, Compliance, APS on August 16 and August 27, 1990.

3) Letter from O. M. DeMichele, President and Chief Executive Officer, APS to J. N. Taylor, Executive Director for Operations, NRC dated July 31, 1990.

Dear Sirs:

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Docket No. STN 50-528 (License No. NPF-41)
50-529 (License No. NPF-51)
50-530 (License No. NPF-74)
Reply to Notice of Violations
50-528/89-56-01 through 89-056-11
File: 90-070-026

This is in response to your letter of July 17, 1990 (Reference 1) transmitting a Notice of Violation (NOV) identifying certain activities not conducted in accordance with NRC requirements which were identified in the report of the Diagnostic Evaluation Team (DET) for the Palo Verde Nuclear Generating Station (PVNGS). Due to the number of apparent violations noted, an extension of response time was requested and received in Reference 2.

As your letter notes, the apparent violations are in two areas: (1) examples of failure to follow procedures or to have adequate procedures and (2) examples of failure to take appropriate corrective actions. The former are characterized as illustrations of a violation of 10 C.F.R. Part 50, Appendix B, Criterion V; the latter are grouped as illustrations of a violation of Criterion XVI of Appendix B.

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B/20

Although, for reasons set forth in Attachment 1, we do not agree that all of the cited examples are valid illustrations of violations, APS has nevertheless responded to the concerns which underlie the apparent violations as they are reflected in the sections of the DET report which are referenced in each part of the NOV. Accordingly, corrective actions include programmatic changes to improve procedures, procedural adherence and adequacy of corrective actions. In addition, Attachment 2 is devoted exclusively to addressing these programmatic concerns with special reference to the APS "Business Plan" (Reference 3) which, as noted in your letter, addresses APS' management perspective on the DET report findings.

We believe that this form of response demonstrates APS' understanding of the fundamental observations in the DET report and our determination to address them in a comprehensive manner.

Very truly yours,

WFC/TRB/JJN/dmn

cc: J. B. Martin
D. H. Coe
C. M. Trammel
J. R. Newman
A. C. Gehr

APPENDIX A

NOTICE OF VIOLATION

Arizona Nuclear Power Project
Palo Verde Units 1, 2, and 3

Docket Numbers 50-528, 50-529, and 50-530
License Numbers NPF-41, NPF-51, and NPF-74

During an NRC evaluation conducted over the period November 6-17 and December 4-8, 1989, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1990), the violations are listed below (with reference to the applicable DET Report paragraphs):

I. Failure to Follow Procedures or to Have Adequate Procedures

10 CFR Part 50, Appendix B, Criterion V, states in part that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings.

A. Surveillance Testing

Surveillance Test Procedure 43ST-3SI06, Revision 1, "Iodine Removal System - S.C.A.P. Discharge Flow and Pressure Test," Step 8.2.12, states for the "A" Train Spray Chemical Addition Pump suction valve, a safety related valve, "close SIA-UV-603 using handswitch SIA-HS-603."

Contrary to the above, on December 5, 1989, during the performance of procedure 43ST-3SI06, a Unit 3 licensed control room operator failed to close SIA-UV-603 at step 8.2.12, and mistakenly documented that SIA-UV-603 had been closed.

(DET Report Paragraph 3.2.3.6)

B. Motor Operated Valves

1. Contrary to the above, as of the DET evaluation, Document No. 13-J-ZZI-004, revision 5, (the licensee's motor operated valve (MOV) data base document) was inappropriate for the control of MOV setpoints in that:

   (a) On November 13, 1989, qualified technicians were observed by QA personnel to select incorrect switch settings while working on a safety-related valve, 2JAFBHV0030. Document No. 13-J-ZZI-004, Revision 5, had 34 Drawing Change Notices (DCNs) which had not been incorporated and caused confusion for personnel using it.

   (b) The MOV setpoints specified in Document No. 13-J-ZZI-004 were not supported by reviewed and approved setpoint calculations.

2. Limitorque allows an operator to exceed the published rated output thrust by 10 percent as long as the operator is limited to 100 lifetime cycles. Contrary to the above, as of the DET evaluation, instructions appropriate to the circumstances had not been established to track the number of cycles an overthrust condition occurred on such a valve so that the recommended number of cycles would not be exceeded.

3. Contrary to the above, as of the DET evaluation, instructions appropriate to the circumstances had not been established in that Notes 14 and 15 of Document No. 13-J-ZZI-004 were contradictory in whether torque switch limiter plates were to be left in place or removed after MOVATS testing.

(3.3.8.1, 3.3.6.2, 3.6.15.2, 3.3.8.3)

C. Maintenance

1. Contrary to the above, on October 23, 1989, Atmospheric Dump Valve 3J-SGB-HV0178 was repacked using Maintenance Procedure 31MT-9SG04; however, packing rings of an incorrect thickness were installed due in part to an inadequate valve packing procedure.

2. Contrary to the above, on November 9, 1989, procedures were not followed in that maintenance personnel mistakenly installed parts from the Containment Purge Exhaust Valve 3J-CPA-UV02B on the Containment Purge supply Valve 3J-CPB-UV03A and QC personnel also mistakenly signed off hold points not in accordance with the instructions with directions specified on Work Order 389094 for this work.

3. Contrary to the above, on October 28, 1989, instructions were not followed in that Diesel Generator A for Unit 2 was found with a cylinder indicator cock open. Work Order 380644, completed on October 28, 1989, specified that the cylinder indicator cock be closed after completion of the work.

(3.3.10)

D. Steam Generator Chemistry Control

Procedure 74AC-9CY04 requires for steam generators in long term layup (greater than four days) a nitrogen overpressure of greater than 5 psig and that sampling and analysis be performed three times per week.

Contrary to the above, from May 1989 through November 1, 1989, while the steam generators in Units 1 and 3 were in long term wet layup, the nitrogen overpressure in the steam generators had not been maintained. In addition, from September 25, 1989, through November 1, 1989, the Unit 1 steam generators had not been sampled.

(3.6.4.2)

These items (I.A, I.B.1-3, I.C.1-3, and D) each constitute a Severity Level IV violation (Supplement I) applicable to Units 1, 2, and 3.

II. Failure to Take Appropriate Corrective Actions

10 CFR Part 50, Appendix B, Criterion XVI, states in part that measures shall be established to assure that conditions adverse to quality are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition.

A. Contrary to the above, as of the DET evaluation, during the replacement of a bent valve stem for Auxiliary Feedwater Control valve 3AFBHV030, a significant condition adverse to quality, corrective actions to preclude repetition were inadequate in that the replacement valve stem was also bent. (3.3.4.1, 3.6.4.5)

B. Contrary to the above, as of the DET evaluation, the licensee failed to take adequate actions to correct conditions adverse to quality as follows:

1. The licensee's response to a Part 21 notification from Limitorque regarding degraded insulation in type SMB actuators with direct current motors, issued in November 1988, was closed concluding that no motors were affected. However, on October 28, 1989, it was found that some actuators (type SB) were similar to and used the same style motor as noted in the Part 21 notification.

2. The licensee's response to Information Notice 85-22 was closed on July 5, 1985 concluding that Limitorque technical manuals would be updated to provide necessary information such as proper motor pinion position; however, as of the time of the DET evaluation updated manuals had not been approved.

(3.3.8.5)

C. Licensee Event Report (LER) 85-096, issued on January 27, 1986, described that the seismic gap area between the Diesel Generator Building and the Control Building of each unit at Palo Verde had not been properly analyzed in the Fire Hazards Analysis. Contrary to the above, this significant condition adverse to quality was not precluded from repetition in that on October 23, 1989, the licensee identified four additional openings in the same wall.

(3.6.7.9)

These items (II.A, B, and C) each constitute a Severity Level IV violation (Supplement I) applicable to Units 1, 2, and 3.

ATTACHMENT 1

REPLY TO NOTICE OF VIOLATION I.A

I.A.I REASON FOR THE VIOLATION (528/89-56-01)

The cause of the event was a personnel error in that the operator failed to close the "A" Train Spray Chemical Addition Pump suction valve SIA-UV-603. During the performance of the "Iodine Removal System - SCAP Discharge Flow and Pressure Test", (43ST-3SI06), the operator inadvertently omitted step 8.2.12 (i.e., did not close SIA-UV-603). The operator completed the performance of the surveillance test and transcribed the results of the surveillance test from a rough copy to the final copy. During a review of the final copy, the operator identified that the step was not signed off. The operator initialed the step as having been complete without verifying that the valve was in fact closed.

The operator also did not ensure the valve realignments were independently verified in accordance with "Independent Verification of Valves, Breakers, and Components", (02AC-0ZZ01). This procedure had been recently implemented and the operator was unsure of the applicability of the independent verification requirements of this situation. Although no specific independent verification signoff was included in the procedure, the valve

realignment met the criteria for independent verification as set forth in 02AC-0ZZ01.

I.A.II CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

The "A" Train Spray Chemical Addition Pump suction valve SIA-UV-603 was closed on December 5, 1989 after it was determined to be in the incorrect position.

Plant management removed the operator from shift temporarily to discuss the event with the operator to ensure proper understanding of management's expectation with regard to attention to detail and his responsibilities associated with surveillance test performance and independent verification.

A Unit 3 night order was issued which summarized the event and described the errors as "indefensible". Attached to the night order were pertinent sections of the independent verification procedure and instructions to contact the supervisor if uncertain about the applicability of the independent verification requirements.

The Surveillance Test Procedure (43ST-3SI06) was revised to include an Independent Verification signoff.

I.A.III CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID VIOLATIONS

In addition to the administrative control procedural requirement of "Independent Verification of Valve, Breakers, and Components", 02AC-0ZZ01, APS will be revising applicable Operations procedures to include signoff steps to document independent verification. This action will help eliminate the need for interpretation of independent verification requirements. Due to the number of procedures, these revisions are expected to be completed by September 2, 1991. Pending completion of these revisions, APS will provide training on identifying the need for, and conduct of independent verification. On-shift training for independent verification is scheduled to commence in the third quarter of 1990 and be completed by December 31, 1990. The training will emphasize the importance and requirement of true independence in the verification process.

SHOULD REVIEW WITNESS

Attachment 2 discusses, in detail, certain aspects of the APS Business Plan that are directed toward improving procedural adherence and procedural adequacy.

I.A.IV DATE WHEN FULL COMPLIANCE WAS ACHIEVED

Full compliance for the specific example cited was achieved on December 5, 1989, when the "A" Train Spray Chemical Addition Pump suction valve SIA-UV-603 was closed. Other measures identified above address programmatic concerns and improvements associated with this event.

REPLY TO NOTICE OF VIOLATION I.B.1

I.B.1.I REASON FOR THE VIOLATION (528/89-56-02)

APS has reviewed the circumstances surrounding the two examples cited as a basis for concluding that 13-J-ZZI-004 was inappropriate for the control of motor operated valve (MOV) setpoints and provides the following clarifications.

Example (a)

Prior to performing work on the auxiliary feedwater valve, 2JAFBHV0030, the foreman had verified that no DCNs were applicable to the setpoint determination for the valve and instructed the electricians to use the values specified in the main body of document 13-J-ZZI-004 (the MOV database document). The foreman is responsible for verifying that the appropriate and current revision of an applicable document is being used prior to issuing the work package to the field. The electricians proceeded to perform corrective maintenance on a motor operator for the valve in accordance with an approved work order WO-392054. After selecting the correct setpoints from the main body of document 13-J-ZZI-004, QA personnel questioned the electricians as to why one of the DCNs was not applicable. Work was stopped until QA

personnel received an acceptable answer (i.e., the DCN in question was, in fact, not applicable to the work being performed).

APS has reviewed 13-J-ZZI-004 and determined that the document was accurate. However, APS recognizes that an excessive number of outstanding DCNs may cause confusion in the conduct of maintenance and other activities. As noted in the DET report, the potential for errors during the planning and performance of maintenance activities is increased. Corrective action has been taken to reduce the potential for this type of error as discussed in I.B.1.II

Example (b)

The calculations to support the setpoints (stem thrust/torque switch) for MOVs do exist and have been reviewed and approved by appropriate personnel in accordance with applicable procedures. APS believes that some confusion regarding the present status of calculations occurred when nuclear engineering personnel discussed APS' program to reconstitute all MOV design basis setpoints with NRC Diagnostic Team personnel.

I.B.1.II CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

Specific as-built prints for each unit have been developed from the design print document No. 13-J-ZZI-004. This action has reduced the number of DCNs to be reviewed prior to use.

APS has implemented administrative controls which require the revision of non-key drawings with five or more DCNs or DCNs outstanding longer than six months. (Key-drawings require update within 24 working hours after as-built verification).

I.B.1.III CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID VIOLATIONS

As discussed in the DET report, APS is currently reconstituting the MOV design basis setpoints and developing thrust calculations and formal documentation as part of the response to Generic Letter 89-10. As part of this effort, original IE Bulletin 85-03 valves will also be included.

This action is part of the larger scope MOV program which was provided to the NRC in Reference (3). The MOV program, currently being implemented, should resolve the specific concerns noted in the DET report and this Notice of Violation.

APS believes the actions taken as described above in conjunction with the actions described in Attachment 2, are adequate to prevent recurrence.

I.B.1.a.IV DATE WHEN FULL COMPLIANCE WAS ACHIEVED

The specific examples cited do not involve instances of non-compliance. The procedure change limiting the number of and length of time DCNs are issued against non-key drawings was effective June 15, 1990 and addresses the programmatic issue presented by example (a).

REPLY TO NOTICE OF VIOLATION I.B.2

APS disagrees with the violation

— CHRIS M. TO ADVISE

I.B.2.I REASON FOR THE DENIAL (528-89-56-03)

APS's response to IEB 85-03 note 5 stated: "Due to conservative construction Limitorque allows actuator output thrust values to exceed published rated value by 10%". Based on interpretation of this statement in the DET report, some clarification of this statement appears appropriate.

Limitorque conservatively designed its actuator such that when the torque switch setpoints were set at 100 percent of the rated thrust, ten percent margin was available to compensate for the final thrust that results after the torque switch has tripped, starter contacts have opened, and the unit has come to rest. Therefore, the design limit is the final thrust that occurs after the torque switch contacts open and is 110 percent of the published rating.

APS at one time had set the torque switch trip setpoints above 100 percent. However, as established by MOVATS testing and APS

engineering evaluation, the final thrusts for these valves did not exceeded 110 percent of the published rating.[1]

Limitorque recommends the replacement of the actuator after one hundred cycles when the torque switch setpoints are set at 110 percent of the rated thrust. In this condition, the final thrust is expected to be less than or equal to 120 percent of the rated thrust. However, APS does not set the torque switch setpoints such that the final thrust would exceed 110 percent of the rated thrust. Therefore, APS is not required to track the number of the actuator cycles.

1.B.2.II CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

Although not specific to this cited example, APS is taking extensive action to address the larger scope MOV program. More detailed descriptions of these actions were provided to the NRC in Reference (3).

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[1]Several discrepancies were noted during a review of APS's response to IEB 85-03. These discrepancies involved as-found and as-left torque switch trip thrust equivalencies and will be corrected and submitted in APS response to Generic Letter 89-10.

I.B.2.III CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID VIOLATIONS

APS believes that the MOV program, currently being implemented, should resolve the specific concerns noted in the DET report and this Notice of Violation.

I.B.2.IV DATE WHEN FULL COMPLIANCE WAS ACHIEVED

Full compliance was maintained at all times for the specific example cited.

REPLY TO NOTICE OF VIOLATION I.B.3

APS disagrees with the example cited.

I.B.3.I REASON FOR THE DENIAL (528/89-56-04)

APS has reviewed Notes 14 and 15 on document 13-J-ZZI-004 and disagrees that the notes are contradictory on whether torque switch limiter plates were to be left in place or removed after MOVATS testing. Note 14 recommends the installation of torque switch limiter plates for valves which have not been MOVATS tested, whereas, note 15 permits the removal of the torque switch limiter plates for valves which have been MOVATS tested.

Note 14 states in part:

> "All Limitorque Motor Operators which have not been MOVATS tested should contain a calibration punch tag and torque switch limiter plate. ...When as the result of testing the range of torque switch adjustment exceeds the limiter plate, the limiter plate should be modified and left in place where possible instead of removing the limiter plate completely."

Note 15 states in part:

> "Torque switch limiter plates and calibration stickers/punch tags need not be installed for those valves which have been MOVATS tested and torque switch thrust setpoints exist in the Controlled Motor Operator Data Base (CMODB)."

Regardless of the above, the DET report expresses a concern that Note 15 appears to be less conservative than Note 14 in that, if the torque switch set screws were to become loose, the limiter plate may prevent the valve/operator from exceeding its design limits.

APS has reviewed this issue and has concluded that the limiter plate does not act as a locking device to prevent an inadvertent change in torque switch settings from a bump, vibration, or other such inadvertent action. Limitorque installed the limiter plate at the factory in order to ensure that the maximum design torque switch settings would not be exceeded following installation at APS. Limitorque initially installed the limiter plate at the factory to control the maximum torque switch settings. APS is now performing MOVATS testing to determine the minimum and maximum torque switch settings for certain motor operated valves (MOVs). Since the limiter plate is not adjustable, it is removed during

MOVATS testing when necessary to increase the maximum switch setting above the initial setting. APS administrative procedures thereafter adequately control the minimum and maximum torque switch settings. In addition, Surveillance Testing, ASME Section XI testing, Integrated and Local Leak Rate Testing, and post maintenance testing verify valve operability.

I.B.3.II CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

No corrective steps are required.

I.B.3.III CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID VIOLATIONS

As discussed in the DET report and above, APS is taking actions to enhance the MOV program such as revising the thrust calculations and reconstituting the MOV design-basis setpoints. Specific Task Plans were provided in the "Business Plan" (Reference 3). Also, Attachment 2 discusses actions being taken with regard to procedural adherence and adequacy that should ensure that issues, such as discussed in this example, are properly controlled.

I.B.3.IV DATE WHEN FULL COMPLIANCE WAS ACHIEVED

Compliance for the specific example was maintained at all times.

REPLY TO NOTICE OF VIOLATION I.C.1

I.C.1.I. REASON FOR THE VIOLATION (528/89-56-05)

The event was a result of an improperly prepared work order in that the valve packing specified was inappropriate for the particular valve involved. While developing the work order to repack the valve, the planner could not locate the packing prescribed in procedure 31MT-9SG04. The foreman and supervisor decided to use standard packing instead of specified packing. "Standard packing" was incorrectly believed to be an appropriate alternative for the packing specified in the procedure 31MT-9SG04 based on the fact that "standard packing" can be used in almost all valves. However, the use of "standard packing" was not verified with an approved engineering document which is a requirement for the deviation from the specification.

I.C.1.II. CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

APS conducted a human performance evaluation (HPES) of the event to identify the causes and establish the appropriate corrective action. The HPES determined that the process for determining the acceptability of alternative packing was complex and difficult to follow.

In order to enhance the overall performance of valve packing activities, APS has developed an extensive valve packing program to maintain pertinent valve packing maintenance data and configuration control and to provide a standardized method of valve packing maintenance. This program is administratively controlled by procedure "PVNGS Valve Packing Program" (73FR-9ZZ05). As different types of valves are being repacked, the physical characteristics (critical dimensions, etc.) are ascertained and packing specifications are developed. The valve data and packing requirements are then recorded in a readily retrievable format (i.e., controlled drawing).

I.C.1.III. CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID VIOLATIONS

APS believes the actions taken as described above in conjunction with the actions to improve procedural adherence and adequacy as described in Attachment 2 are adequate to prevent recurrence. Additionally, as transmitted in Reference (3), task plans for the Maintenance Improvement Program have been developed to identify specific tasks for improving APS's maintenance process.

I.C.1.IV. DATE WHEN FULL COMPLIANCE WAS ACHIEVED

On November 11, 1989, the valve packing was removed from 3J-SGB-HV0178 and replaced with correct packing.

REPLY TO NOTICE OF VIOLATION I.C.2

I.C.2.I REASON FOR THE VIOLATION (528/89-56-06)

The reason for the violation was a failure by the Unit 3 maintenance personnel to properly verify the correct equipment (e.g., by equipment tags) as required by procedure prior to commencement of work. In addition, QC personnel also failed to verify the correct equipment was being worked prior to signing off work steps that verified completion.

I.C.2.II CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

The individuals involved were counseled concerning the proper method of verifying equipment prior to performing work.

An HPES of this event was conducted. It determined that a contributing factor to this event was the fact that the Containment Purge Supply Valve (3J-CPB-UV03A) and the Containment Purge Exhaust Valve (3J-CPA-UV02B) are physically adjacent and were in a similar state of disassembly. This situation heightened the necessity for proper equipment verification prior to performing work. A copy of the HPES report was transmitted to Unit 3 Maintenance, Operations, and Radiation Protection, and QC

so that personnel could review the lessons learned from this event.

"Effective Work Practices" training was provided to appropriate site personnel which included verification techniques such as checking equipment tags.

The QC "Plant Inspection Report" document was revised to require the inspector to independently verify component identification. QC personnel were briefed regarding this event and the new form.

I.C.2.III CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID VIOLATIONS

APS believes the actions taken as described above are adequate to prevent recurrence.

I.C.2.IV DATE WHEN FULL COMPLIANCE WAS ACHIEVED

Full compliance for the specific example cited was achieved on November 9, 1989, when the parts installed on 3J-CPB-UV03A were removed. As discussed above, "Effective Work Practices" training was provided to appropriate site personnel. The verification techniques which were taught are effective standards of

performance and are expected to minimize the occurrence of component identification and manipulation errors.

REPLY TO NOTICE OF VIOLATION I.C.3

APS disagrees with the cited example.

I.C.3.I REASON FOR THE DENIAL (528/89-56-07)

APS performed an initial Human Performance Evaluation on November 15, 1989. Based on the results of the evaluation, APS has concluded that the valve was closed following maintenance but may have opened slightly as a result of the engine cooldown or vibration. On October 27, 1989, Diesel Generator (DG) A was operated to support an engine analysis. During this test, a pressure instrument is connected to a sensing line on each cylinder head. The petcock valve is opened to measure the pressure and then closed. The instrument is then removed and reconnected to the next cylinder. If the valve had been left open, this condition would have been readily apparent by the intense sound and visible flames and exhaust that would have emanated from the cylinder.

Following the DG shutdown and cooldown, extension pieces from the petcock valves are removed. APS does not believe the valve was inadvertently opened at this time because of the design of the petcock valve. The valve stem does not have a handle and requires

a special tool for operation. In addition, the valve is recessed between the cylinder head covers and is not readily accessible.

During the performance of the next surveillance test on November 15, 1989, the operator noted an abnormal noise. Operations management inspected the DG and ordered the operator to shutdown the DG and inspect the petcock valves. The 6R petcock valve was found slightly open.

For the reasons discussed above, APS believes that the valve was shut following the engine analysis as required on October 27, 1989. The slight valve opening may have been due to engine vibration or the change from operating temperatures to ambient room temperatures; however, a specific cause could not be determined.

Although it is APS's view that the valve was not left open, APS has taken action to address the possibility as discussed below.

I.C.3.II <u>CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED</u>

Instruction Change Request 17602 was initiated to revise the engine analysis procedure to require independent verification of valve closure.

I.C.3.III CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID VIOLATIONS

As discussed in the reply to Notice of Violation I.A, APS will be revising Operations procedures to include independent verification sign off steps as applicable.

No further corrective action is planned for the petcock valves based on this one time occurrence which did not adversely affect the operability of the DG.

I.C.3.IV DATE WHEN FULL COMPLIANCE WAS ACHIEVED

APS believes compliance was maintained at all times for the cited example.

REPLY TO NOTICE OF VIOLATION I.D

I.D.I REASON FOR THE VIOLATION (528-89-56-08)

Unit 1

The reason for the violation was that Unit 1 Chemistry Management did not recognize that the inability to sample the Unit 1 Steam Generator and to comply with the procedure was a potential nonconformance. As a result, Unit 1 Chemistry Management did not initiate the appropriate documentation to: 1) deviate from the sampling requirements for SG chemistry in accordance with procedures, and 2) permit variance from SG chemistry sampling requirements, in a timely manner.

Contributing to this error was the lack of provisions within the chemistry sampling procedure to address the inability to perform a sample. As stated above, Chemistry Management did not initiate the appropriate documentation to address this issue.

Insofar as the NOV addresses the lack of nitrogen overpressure in the Unit 1 SGs, a Chemical Control Instruction 89-158 was in place in accordance with APS procedures to permit variance from the nitrogen overpressure specification.

Unit 3

The cause of the lack of nitrogen overpressure in the Unit 3 Steam Generators (SGs) for greater than seven days was an oversight by Unit 3 Chemistry personnel in not initiating the appropriate documentation to: 1) evaluate the effects of not having the nitrogen overpressure in the SG for greater than seven days, and 2) permit variance from the nitrogen overpressurization specification in a timely manner. Originally, an assessment was performed and variance granted for the absence of nitrogen overpressure for one week to support outage activities. However, emergent work postponed the restoration of nitrogen overpressure.

I.D.II CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

APS has taken steps which address each of the broad programmatic and management concerns identified on page 94 of the DET report. The report noted five concerns with respect to an environment that could have permitted the SGs to be neglected for so long a period of time. These concerns related to procedural adherence, responsibility for (or "ownership" of) plant systems, timely corrective action, planning for foreseeable contingencies, and the adequacy of involvement of key organizations in support of plant operations.

As discussed in Attachment 2, APS is addressing procedural adherence, responsibility for/ownership of plant systems, and taking of timely corrective action within the framework of the PVNGS Business Plan. In order to identify and ensure proper planning for foreseeable contingencies, such as the lack of nitrogen overpressure, APS has implemented the Twelve Week Work Schedule. The Unit Chemistry Managers or their representatives and Material Control representatives are members of the work planning group which formulates the Twelve Week Work Schedule. A Chemistry Technical Services representative is also involved in the development of system layup requirements and activities for each outage in accordance with procedure 74AC-9CY09. Discipline management, or their representatives, are involved in outage planning with the outage management department. In this manner, the adequacy of assistance from key organizations is ensured from the earliest planning stages i the support of plant operations

APS has taken corrective steps to address the specific steam generator problems identified in violation I.D. Quality Assurance had identified these problems to APS management on November 1, 1989 prior to the DET inspection. On November 4, 1989, nitrogen overpressure was restored to Unit 3 Steam Generators. Recirculation and sampling capabilities were restored to the Unit

1 Steam Generators #1 and #2 on November 17 and 19, 1989 respectively.

Combustion Engineering subsequently conducted an evaluation of the effects of operating without the nitrogen overpressure. The evaluation determined that no adverse safety effects resulted from operating without the nitrogen overpressure.

The procedure for "Chemistry Control Instructions" (74AC-9CY03) and "Layup Activity Control" (74AC-9CY09) has been revised to include provisions for appropriately waiving sampling requirements.

I.D.III CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID VIOLATIONS

APS believes that the corrective steps described above in conjunction with those management actions taken as described in Attachment 2 are adequate to prevent further violations.

I.D.IV DATE WHEN FULL COMPLIANCE WAS ACHIEVED

Full compliance for the cited example was achieved on November 4, 1989 when nitrogen overpressure was restored to Unit 3 Steam Generators and on November 19, 1989 when recirculation and

sampling capabilities were restored to the Unit 1 Steam Generators.

REPLY TO NOTICE OF VIOLATION II.A

CHAIS M. 7 10/6

APS disagrees with the example cited in the violation.

II.A.I REASON FOR THE DENIAL (528-89-56-08)

As noted in the DET report, bent stems from a Unit 3 Auxiliary Feedwater (AFW) valve and a Unit 1 AFW valve were discovered. In accordance with procedures, a Material Nonconformance Report (MNCR) was issued to document the bent stem conditions.

While the cause of the bent stems was still under investigation, a replacement stem was installed in the Unit 3 AFW valve to restore it to the original design configuration. The valve was reassembled and stroked in order to set the position limit switches (not to be confused with torque limit switches). The valve could not be declared operable until the MNCR was satisfactorily dispositioned.

During the reassembly and stroking process, the replacement stem bent as a result of torque limit switch setpoints drifting from the nominal position. APS's investigation determined that this was caused when the closing torque adjustment set screw was not tightly secured. The evaluation of the bent stems pursuant to the

MNCR discussed above concluded that the bent stems in the Unit 1 and 3 AFW valves were caused by insufficient material strength of the valve stem. Therefore, even if the corrective action for this problem had been taken prior to stroking the Unit 3 replacement valve, it would not have precluded the second event to the extent that it was caused by loose set screws.

The DET report section 3.3.4.1 states: "After stem replacement on a Unit 3 AFW flow regulating valve, the valve was stroked and again damaged because of the problems with the torque switch setting". To the extent this statement is intended to imply that the stem was originally bent due to problems with the torque switch setting, APS disagrees. APS's investigation found that the stem was originally bent as a result of insufficient material strength; there is no evidence that a torque switch setting was the cause of the problem.

II.A.II CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

APS has replaced 5 of the 12 stems in the Auxiliary Feedwater Control Valves with stems of higher strength material.

II.A.III CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID VIOLATIONS

APS will replace the remaining stems during the respective unit's next scheduled refueling outages.

II.A.IV DATE WHEN FULL COMPLIANCE WAS ACHIEVED

APS believes that it was in compliance at all times.

REPLY TO NOTICE OF VIOLATION II.B.1 and 2

II.B.I REASON FOR THE VIOLATION (528-89-56-10)

Example (1)

The statements in the Notice of Violation are correct but no violation of regulatory requirements occurred. The first sentence in the Notice of Violation II.B.1 states, in part, "The licensees response ... was closed concluding that no motor operators were affected". This is a correct statement. The NOV, however, is apparently based on the premise that closure was made on June 4, 1989 (see DET report) prior to APS having completed its review of the applicability of the notification to all potentially involved actuators. This is not accurate. The notification was closed on November 18, 1989 after APS completed its determination of the applicability of the notice to both of the potentially involved actuator types (SMB and SB).

The evaluation of the Part 21 notification was not closed based on an Engineering Action Request (EAR) as indicated in the DET report. An EAR is a management tool for tracking manhours expended, etc, but is not an engineering document for the disposition of engineering calculations or determinations. The evaluation of Part 21 applicability was performed under a

Engineering Evaluation Request 88-XE-015. During the evaluation process, APS system engineers pursued the issue directly with the vendor and learned that the Part 21 notification may not have identified the complete scope of affected equipment (i.e., SB operators). The applicability of the Part 21 notification to the type SB operators was considered in the evaluation prior to the document closure on November 18, 1989. The condition identified in the Part 21 notification had no effect at PVNGS since the equipment (SMB or SB actuators) was not operating in environments in which the defect would have any significance.

Example (2)

The reason the J605-162 manual was not updated is that technical manuals are indexed by the valve manufacturer and not the valve operator manufacturer. This particular valve technical manual was not identified as having the type operator applicable to IN 85-22 and was overlooked during the update process. This was the only manual not updated.

II.B.II CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

APS has created a separate technical manual for Limitorque operators. This manual includes the pertinent information from IN 85-22.

II.B.III CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID VIOLATIONS

APS is establishing a Vendor Technical Manual (VTM) improvement project to ensure vendor technical information for plant equipment is complete, current, and controlled for the life of the plant. This project is anticipated to include:

1) Development of procedures for the consolidation and control of VTMs,
2) Development and maintenance of a computer database for tracking and control of vendor and related information,
3) Elimination of redundancy and consolidation of VTM's,
4) Establishment of VTM applicability to plant equipment identification number and model number,
5) Obtaining initial and periodic vendor certification that the information is correct, current , and complete,
6) Incorporation of plant modification information,
7) Development of a cross reference index between old and new VTMs,
8) Training of station personnel on the new VTM index,
9) Issuance and maintenance of VTMs.

Milestone dates have been established for this project with an overall completion date of December 31, 1993.

Additional actions related to t ing timely corrective action are discussed in Attachment 2.

II.B.IV DATE WHEN FULL COMPLIANCE WAS ACHIEVED

Full compliance for example II.B.1 was maintained at all times. Full compliance for example II.B.2 was achieved on January 12, 1990 when the technical manual (J605-162) was revised.

REPLY TO NOTICE OF VIOLATION II.C

II.C.I REASON FOR THE VIOLATION (528-89-56-11)

The cause of this event was the failure of engineering personnel to identify all the penetrations in 1986 when the fire rating was upgraded to a 3-hour rating. A significant contributor to the failure to identify the penetrations was the fact that the location of the penetrations were not readily visible due to the existence of floor grating over the pipe trenches. The grating allows only a vertical view of the trench, thereby making observation of the wall difficult. In addition, this portion of the wall was not shown on the fire barrier drawings or penetration location drawings. In 1986, when the wall was upgraded to a 3-hour rating, the grates were apparently not removed and, therefore, the north wall below the 100 foot elevation was not thoroughly inspected.

Also contributing to the failure to identify the unsealed penetrations below the 100 foot elevation was the fact that penetrations above the 100 foot elevation were sealed during original construction with 3-hour rated seals. The resultant partially sealed wall was apparently the result of poor communication between the original civil and mechanical architect

that did not include the fire barriers below the 100 foot elevation in the diesel generator building.

II.C.II CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

This condition was identified by APS on October 23, 1989 and promptly reported to the NRC (LER 528/89-17).

Fire watches were established in Units 1, 2, and 3 for the areas with improperly sealed penetrations to the seismic gap area until the penetrations were properly sealed.

A Plant Change Request was written to initiate a design change to seal the four pipe trench penetrations and the modification has subsequently been issued and implemented. The fire seals will protect redundant safe shutdown cables in the seismic gap area in order to prevent possible fire exposure to both safe shutdown trains.

Drawing changes have been initiated to incorporate the sealed penetrations below the 100 foot elevation on the penetration location and penetration layout drawings.

An engineering evaluation and inspection of the seismic gap area

ATTACHMENT 2

APS ACTIONS TO IMPROVE PROCEDURAL ADHERENCE, PROCEDURAL ADEQUACY AND CORRECTION OF DEFICIENCIES

I. INTRODUCTION

By agreement between APS and the NRC, APS is addressing observations from the Diagnostic Evaluation Report ("DER") within the framework of the Business Plan. The Business Plan consists of three tiers:

(1) A five-year plan for 1991 that presents the PVNGS mission, goals, strategies and five-year objectives;

(2) A one-year plan for 1991 that presents one-year objectives for each five-year objective and identifies the specific managers with overall responsibility for achieving each goal and one-year objective; and

(3) Detailed task plans, identifying specific tasks for accomplishing the one-year objectives and the individuals with overall responsibility for accomplishing each discrete task identified.[1]

The Business Plan establishes a framework for achieving improvements in, among other areas, procedural adherence, procedural adequacy, personal ownership and accountability, and timely and appropriate corrective action. These are the programmatic areas which underlie the violations in the July 17, 1990 Notice of Violation ("NOV"). APS is confident that its business planning

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[1] On July 31, 1990, APS forwarded to NRC a copy of the initial version of the PVNGS Business Plan (July 1990 version)(Reference 3). The initial version of the Business Plan included the first and second tier plans in full and two draft examples of the third tier Task plan (for the MOV Program and the Maintenance Improvement Program). The third tier plan will be completed over the balance of this year.

process provides an effective means for achieving the programmatic improvements in each of the areas identified in the DER, including those that were the subject of the July 17, 1990 NOV.[2]

II. APS ACTIONS TO IMPROVE PROCEDURAL ADHERENCE AND PROCEDURAL ADEQUACY

The PVNGS Business Plan has been structured to:

- foster attitudes that emphasize the utmost importance of safety and strict adherence to applicable regulatory requirements;
- emphasize quality, attention to detail and personal accountability by every APS employee;
- develop a staff with a strong sense of professionalism; and,
- improve processes for the conduct of PVNGS operations in critical functional areas.

Each of these management priorities is being built into appropriate sections of the Business Plan. For example, the Business Plan requires compliance with the PVNGS policy on procedural adherence and weighs adherence to procedures as a factor in performance appraisals. Management and supervisors must also reinforce the importance of quality, attention to detail and timely corrective action in one-on-one sessions and staff meetings. Personal ownership and accountability are being demanded of everyone, including the responsibility for identifying and resolving problems encountered at the lowest practicable level of the PVNGS organization.

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[2] Attachment 2 to the July 31, 1990 APS letter transmitting the initial version of the PVNGS Business Plan provides a matrix correlating DER observations with the Business Plan. Additionally, APS will be developing files at the PVNGS site for NRC review documenting the results of APS' review of the DER and associated implementing mechanisms and will use periodic management meetings to keep NRC updated on progress of DER-related issues.

The Business Plan effectively puts everyone at PVNGS on notice that questions about the applicability or meaning of a procedure must be resolved before proceeding; that no procedure may be ignored; and that all procedures must be followed with appropriate attention to detail. Where procedures are inadequate, the Business Plan framework requires corrective measures to prevent any compromise of the PVNGS mission. For example, a major focus of the Business Plan is improvement in work control processes and procedures. In this connection, heavy emphasis is placed on improvements in the quality of procedures, as reflected in the Maintenance Improvement Program Task Plan, submitted to NRC as one of the two draft "third tier" task actions in the initial version of the Business Plan. Likewise, the MOV Program Task Plan, submitted as the second Task Plan example, (which is directly related on the July 17, 1990 NOV) also emphasizes procedural improvements. Additionally, efforts in yet another area of the Business Plan -- improvement of plant configuration management -- can be expected to lead to improvements in the quality of procedures, as well as the drawings and other documents referenced in those procedures Thus, in addition to the specific remedial actions identified in Attachment 1 and taken or being taken to correct the problems identified in Section I of the July 17, 1990 NOV, broad programmatic action is being taken within the framework of the Business Plan to improve the quality of procedures and facilitate adherence to them. This effort has a high priority -- any of the broad programmatic actions identified in Attachment 1 not completed in 1990 will be brought within the scope of the 1991 Business Plan and associated Task Plan.

III. APS ACTIONS TO IMPROVE CORRECTION OF DEFICIENCIES

The PVNGS Business Plan has also been structured to:

- strengthen the ability of the PVNGS organization to assess its progress and problems, including improvement of root cause analysis capability; and,
- emphasize timely response to issues identified internally and, as appropriate, externally.

These management priorities permeate each tier of the Business Plan.

A key strategy of the Five Year Plan, improving the effectiveness of all PVNGS organizations, is directed, among other things, at improving the ability to:

- conduct critical self-assessments;
- identify and resolve problems;
- evaluate and implement lessons learned from PVNGS and industry experience; and,
- improve root cause and human performance evaluations.

Each PVNGS department will be held accountable and its performance will be measured against these objectives. Each department must analyze its activities and identify appropriate performance indicators to facilitate the early identification of problems which require corrective action. In addition, attendance at formal training on a quarterly basis will be required of applicable employees to ensure adequate dissemination of lessons learned from PVNGS and industry experience. The effectiveness of corrective action will also be enhanced by Business Plan requirements to conduct effective ongoing communication with co-workers and peer personnel at other PVNGS units and other plants and programs to promote necessary and desirable consistency among the three PVNGS units. The Business Plan's emphasis on personal and organizational accountability is also intended to foster improvements in corrective action

programs. In addition, both the MOV Program and the Maintenance Improvement Program Task Plans mentioned above illustrate the emphasis which the Business Plan places on timely problem identification and corrective action.

Other programmatic activities directed at timely and adequate corrective action have already resulted in substantial improvements; e.g., the Material Nonconformance Program (MNCR) and those related to root cause evaluations. As with present broad programmatic actions directed at procedural adequacy and adherence and personal ownership and accountability, the broad programmatic corrective actions identified in Attachment 1 which are not scheduled for completion this year will be brought within the scope of the 1991 Business Plan and associated Task Plan.

IV. CONCLUSION

In sum, APS has responded to the July 17, 1990 Notice of Violation with specific corrective actions to address identified problems in procedural adherence and adequacy, personal ownership and accountability, and timely and effective corrective action as well as broad programmatic actions within the framework of the PVNGS Business Plan to address the underlying causes.

212-00CA Rev 7-85 A190-900121 (BX/500)

APS
Arizona Public Service Company
COMPANY CORRESPONDENCE

RECEIVED
SEP 0 6 1990
J. N. BAILEY

ID #
DATE 03916
September 6, 1990

TO Distribution
Sta #
Ext

FROM John Richardson
Sta # 1938
Ext 82-4001

FILE 90-014-201
SUBJECT Task Plan Preparation

Attached is a copy of the latest schedule for developing task plans and completing the Business Plan. The schedule also provides the status for activities which have been completed or are underway. However, a word of caution is necessary. The status with regard to task plan development for individual objectives is only for priority 1 objectives. No attempt has been made to reflect progress on other priority objectives even though work may have begun or substantial action plans already exist for completion of priority 2 and 3 task plans. In addition, the status for priority 1 objectives does not factor in the extent of existing action plans which can be utilized to prepare the task plan(s). Therefore, some of the task plans may actually be further along than is reflected in the schedule.

Distribution:
J. N. Bailey, 1966
B. E. Ballard, 6128
W. F. Conway, 9012
J. M. Levine, 6125
R. W. Page, 1938
E. C. Simpson, 1962

Attachment

13/21
25.

Project description

Report: Gantt Chart	Date: 9-05-90	Time: 20:07
Title: PVNGS BUS PLAN SCHEDULE	Project ID:	Version: R1
Manager: JOHN RICHARDSON	Project filename: PVBSPLR1	Dept:
Project start: 8-13-90	Project end:	Budget:

Description: Schedule for completion of PVNGS 5 year and 1991 plans, and detailed task plans

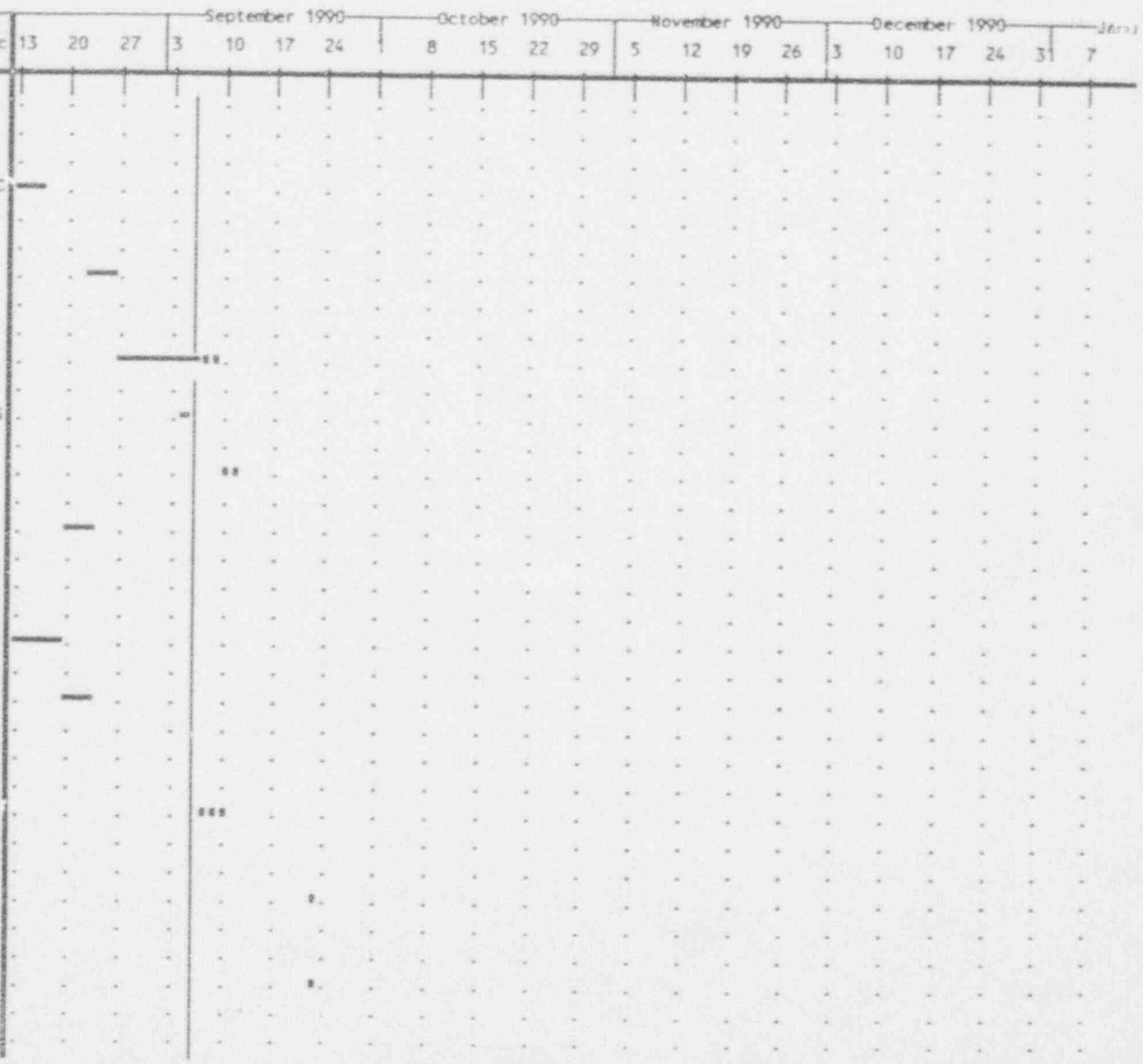
Legend

•••••	Activity	L•••••	Locked activity
C••••	Activity on critical path	▲	Original planned start date
▬•••	Partially completed activity	▼	Original planned end date
▬▬▬	Completed activity	.....	Discontinuous activity

SEP 05 90 GANTT CHART PAGE 1

PVNGS BUS PLAN SCHEDULE

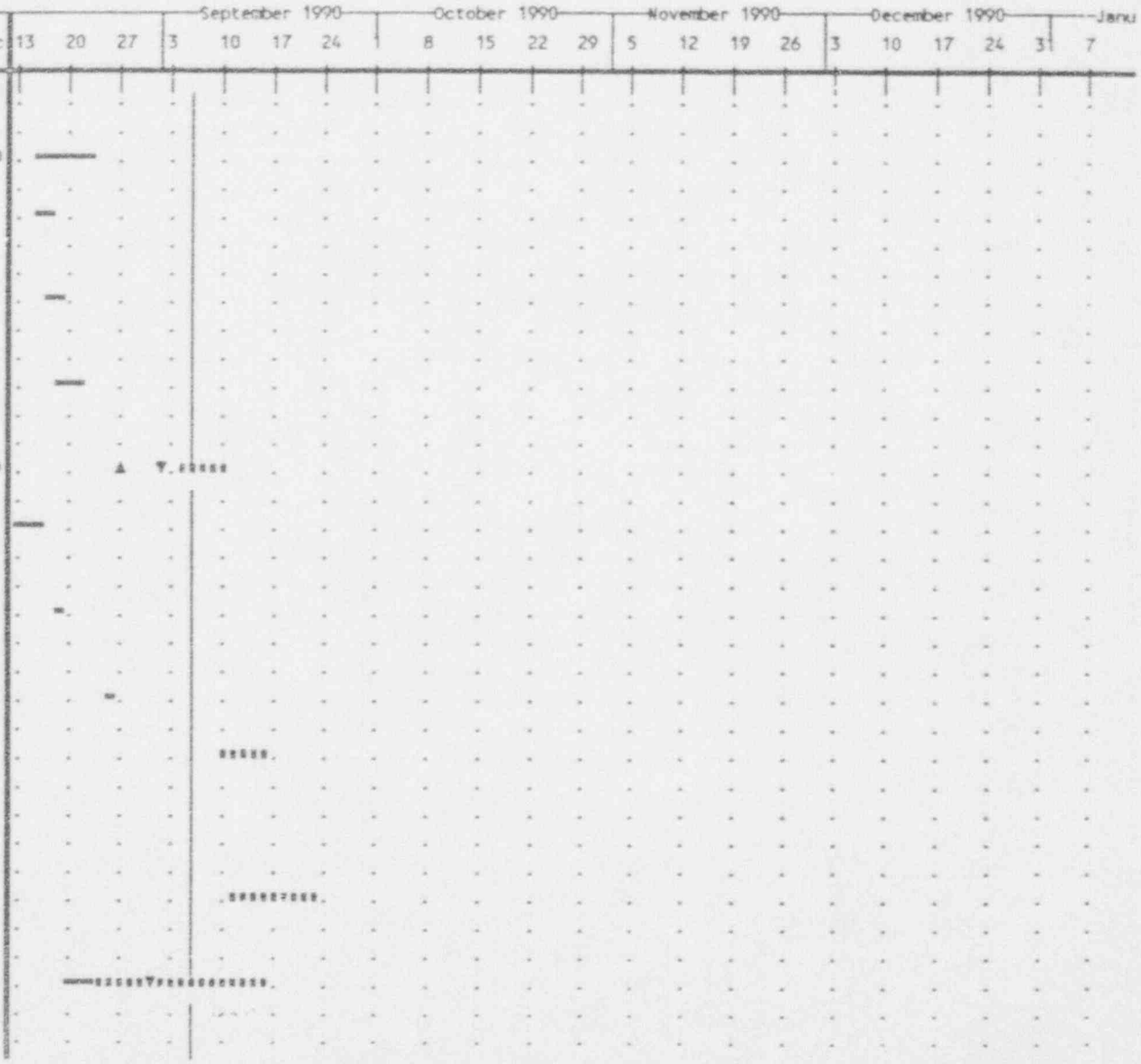
PVNGS BUS PLAN SCHEDULE	Day	Resrc
1.0 DISTRIBUTE AND COMMUNICATE PLAN INTERNALLY		
-Coordinate with printing to issue Business Plan	0	FS AC
-Prepare outline and format for Bus Plan portion of Mgr/Sup meetings	0	PD
-Prepare material for Mgr/Sup meetings	10	PD
-Conduct Mgr/Sup meeting Dry-run	0	PD WG
-Conduct Mgr/Sup meetings	2	PD
-Prepare NEW ERA article for Sent issue	0	PD
2.0 DEFINE NUMBER OF TASK PLANS		
-Prepare list of candidate programs	0	FS
-Review list of objectives deleted from Bus Plan and prepare list of candidates for Task Plans	0	PD
-Prepare memo to mgrs regarding Task Plans for deleted objectives	1	PD
-Finalize criteria and proposed list of Task Plans	1	FS
-Review criteria and initial list of Task Plans	0	VP DI



SEP 05 90 GANTT CHART PAGE 2

PVNGS BUS PLAN SCHEDULE

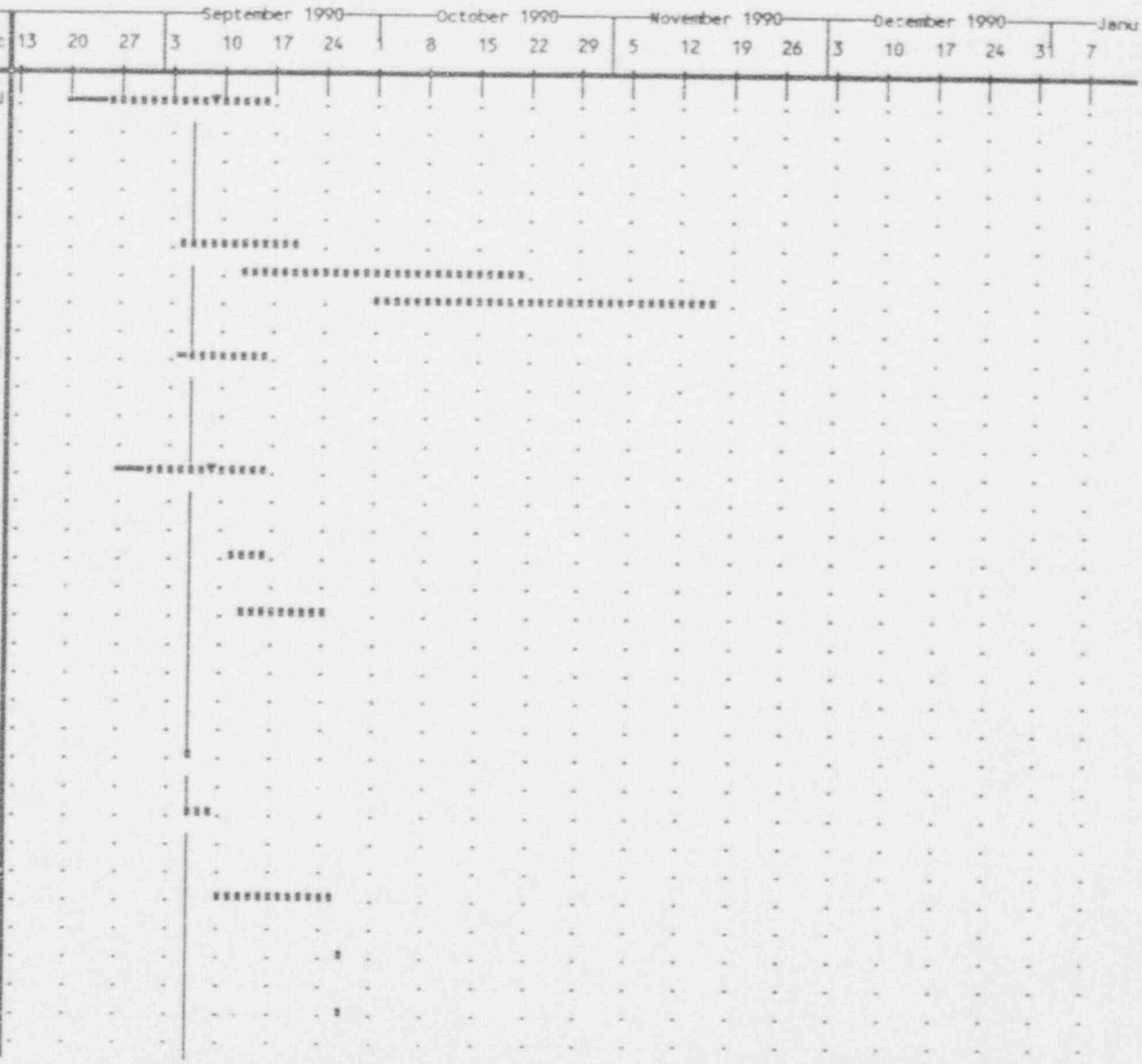
PVNGS BUS PLAN SCHEDULE	Day	Resrc
3.0 DEFINE TASK PLAN PREPARATION PROCESS		
-Determine order of Task Plan Preparation	0	WG JD
-Outline process for Task Plan preparatio & define responsibilities	0	FS
-Finalize Task Plan preparation -instruction	0	FS
-Review/revise Task Plan preparation instruction	0	WG
-Assign WG responsibility for Task Plans	2	WG JD
-Prepare lead/responsible pers hierarchy and identify resource overload	0	ACR
-Outline training session for Task Plan leads/responsible persons	0	FS
-Review process, approach, and training	0	VP DI
-Define VP/Dir/Mgmt review & approval process for TP-maximize involvement	1	PD
4.0 BUSINESS PLAN ADMINISTRATION		
-Outline process for change review & approval	1	PD
-Define tracking system and develop procedures	3	FS



SEP 05 90 GANTT CHART PAGE 3

PVNGS BUS PLAN SCHEDULE

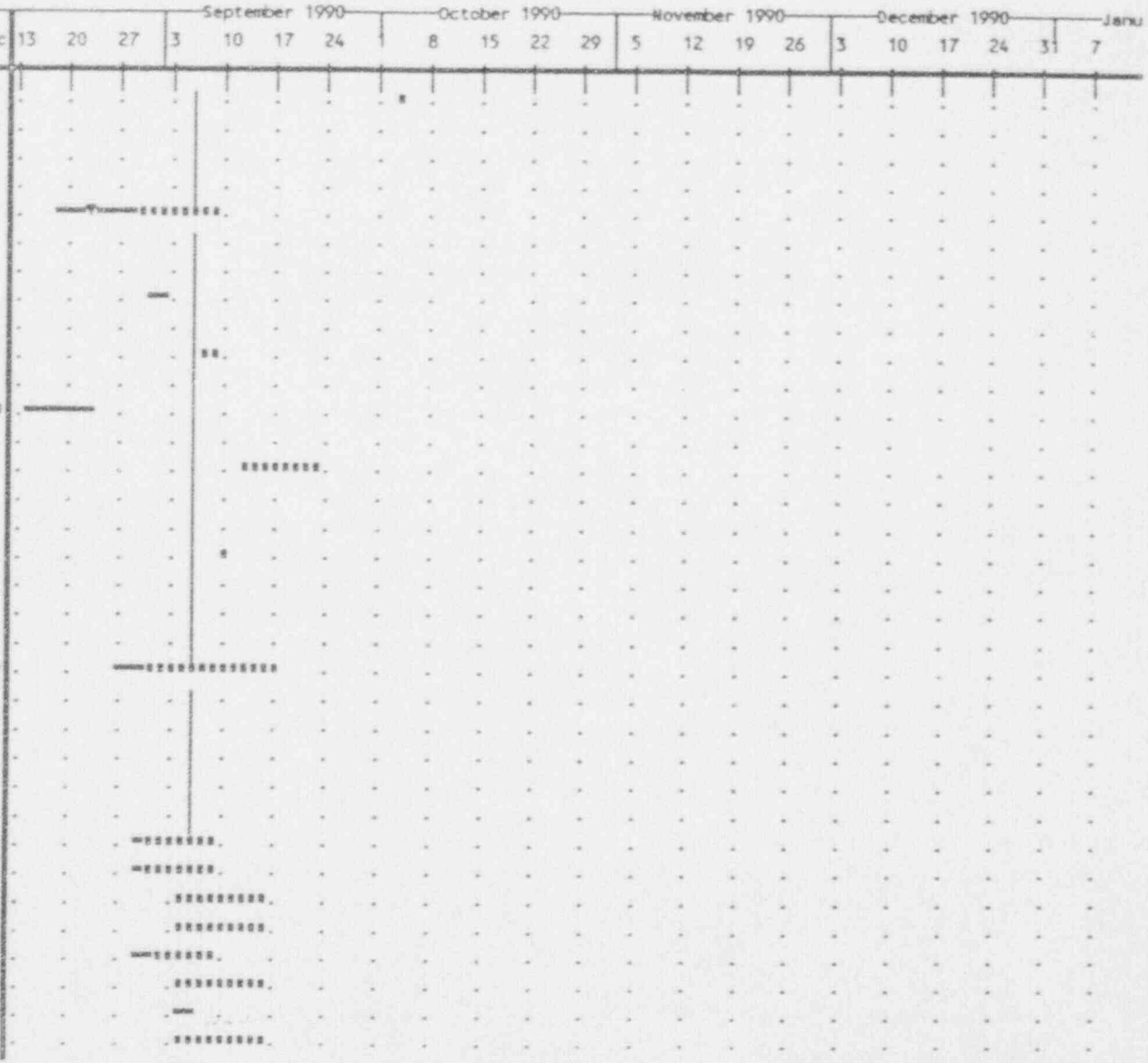
PVNGS BUS PLAN SCHEDULE	Day	Resrc
-Identify potential performance measures for evaluating real improvement(BP&DER)	15	ACR J
-Define final proposed perf meas based upon Task Plans:		
PRIORITY 1	0	LDI
PRIORITY 2	0	LDI
PRIORITY 3	0	LDI
-Develop format for display of performanc measures & status of TP implementation (BP/DER)	6	ACR J
-Develop overall process for performance monitoring, feedback, plan changes	3	ACR J
-Define formulas and basis for PI & targe	3	ACR
-Define process for future plan preparation and revision	3	PD
5.0 NRC MEETING PREPARATION		
-Finalize meeting format	1	ACR
-Prepare agenda and outline meeting scope and content	2	ACR
-Prepare material for NRC meeting	5	ACR
-Conduct NRC preparation review meeting	3	ACR W
-Conduct informal NRC meeting	3	ACR W



SEP 05 90 GANTT CHART PAGE 4

PVNGS BUS PLAN SCHEDULE

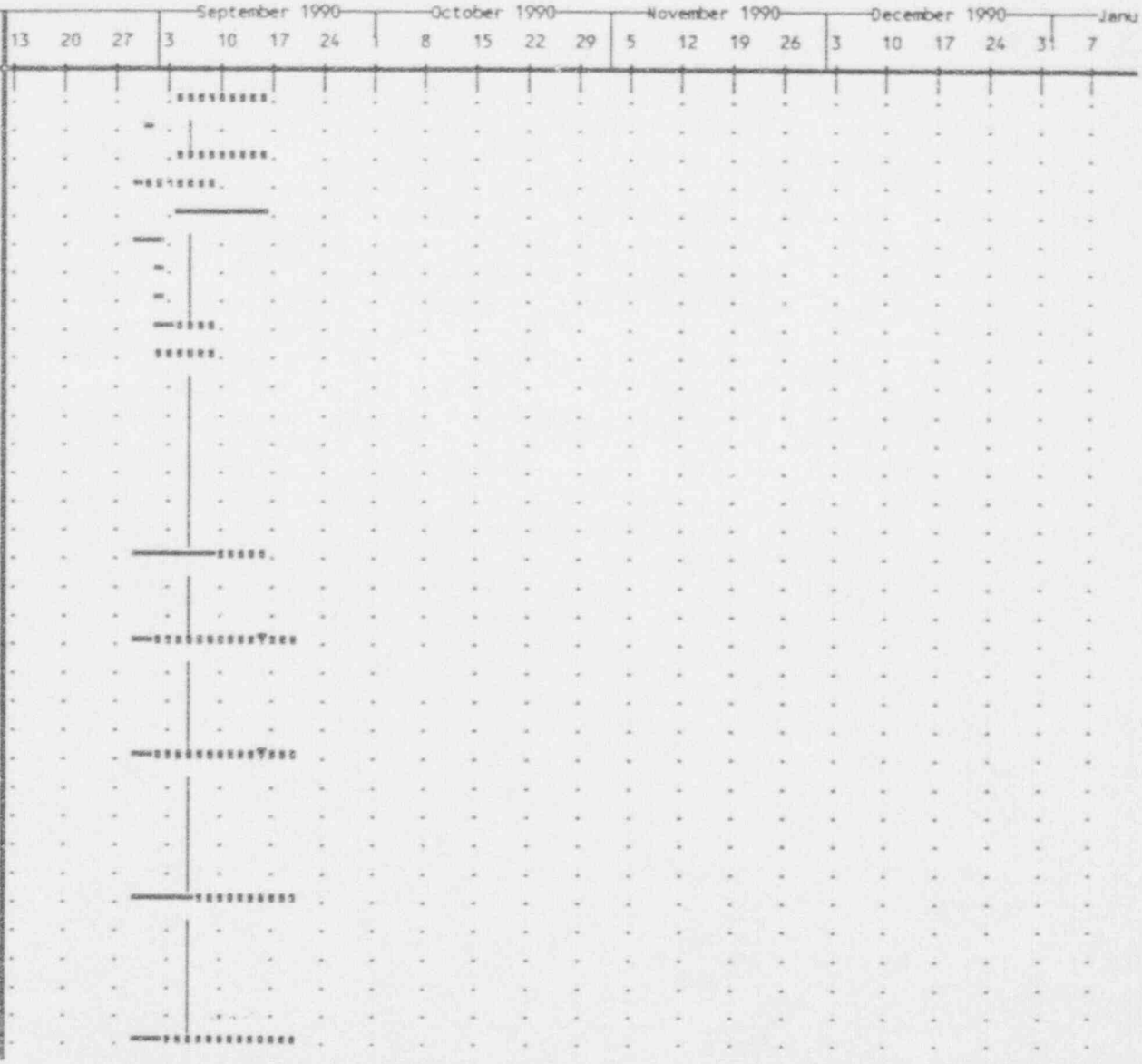
PVNGS BUS PLAN SCHEDULE	Day	Resrc
-NRC Management Meeting	1	WG
6.0 TASK PLAN PREPARATION		
-Set up schedule for Task Plan preparation training	5	FS
-Issue memo on TP process & schedule	1	FS
-Prepare matrix of required vs complete training	1	FS
-Prepare Task Plan preparation schedule	0	WG JD
-Revise Bus Plan Objectives/Tasks based budget and approved changes	4	PD
-Issue memo on PROGRAMS relationship to OBJECTIVES and responsibilities including support organizations	1	FS
-Resolve questions from TP preparation kickoff meetings	4	FS JD
-Conduct Task Plan preparation Training		
ORGANIZATION:		
PLT OPS	0	WG
MAINTENANCE	0	WG
PLT SUPPORT	0	WG
SITE SERV	0	WG
TECH SUPPORT	0	WG
RAD PROT	0	WG
CHEMISTRY	0	WG
NUC TRAIN	0	WG



SEP 05 90 GANTT CHART PAGE 5

PVNGS BUS PLAN SCHEDULE

PVNGS BUS PLAN SCHEDULE	Day	Resrc
SIMUL SUP	0	WG
QUAL ASSUR	0	WG
NUC FUEL MGMT	0	WG
NUC ENGR & SUP SVCS	0	WG
SITE ENGR & CONST	0	WG
NUC SAF & LIC	0	WG
MGMNT SERV	0	WG
BUD AND CST CONT	0	WG
HUM RESC	0	WG
COMMUNICATIONS	0	WG
-Prepare Task Plans		
OBJECTIVES:		
PRIORITY 1		
1.C.1* MOV Program (Tech Support) (Nuclear Safety & Licensing)	13	RWP
2.B.1 Integrate Business Plan into daily work (Management Services)	13	RWP
2.B.2 Develop and communicate management and department standards and expectations (Management Services)	13	RWP
2.B.3 Develop and implement results-oriented performance plans and appraisals. (Human Resources)	13	KDD
2.B.5 Adhere to PVNGS policy on	13	FCB



PVNGS BUS PLAN SCHEDULE

PVNGS BUS PLAN SCHEDULE	Day	Resrc	13	20	27	3	10	17	24	1	8	15	22	29	5	12	19	26	3	10	17	24	31	7
						September 1990				October 1990					November 1990				December 1990					Janu
procedure adherence and PVNGS standards to expectations. Factor into performance plans and appraisals. (Plant Operations)																								
3.B.1 Analyze department activities and identify appropriate performance indicators. Trend at least quarterly (Quality Assurance)	13	GTS																						
3.B.2 Promote personal ownership by initiating problem solving at the lowest level. (Nuclear Safety & Licensing)	13	WFG																						
3.B.4 Critically assess the effectiveness of the root cause and human performance evaluation programs (Tech Support)	13	GRO																						
3.C.2/3.C.3/3.C.6/3.G.2/3.G.4 Maintenance Improvement Programs (Maint/Tech/Maint/Maint/Maint) - Complete & implement PM Program Improvements - Develop & implement nine standard equipment specifications for CM - Implement electronic control and tracking of tools - Complete 300 model work orders - Complete simplifications of work control processes	13	RAJ G																						
3.C.7 Improve electronic work order	13	RAJ																						

PVNGS BUS PLAN SCHEDULE

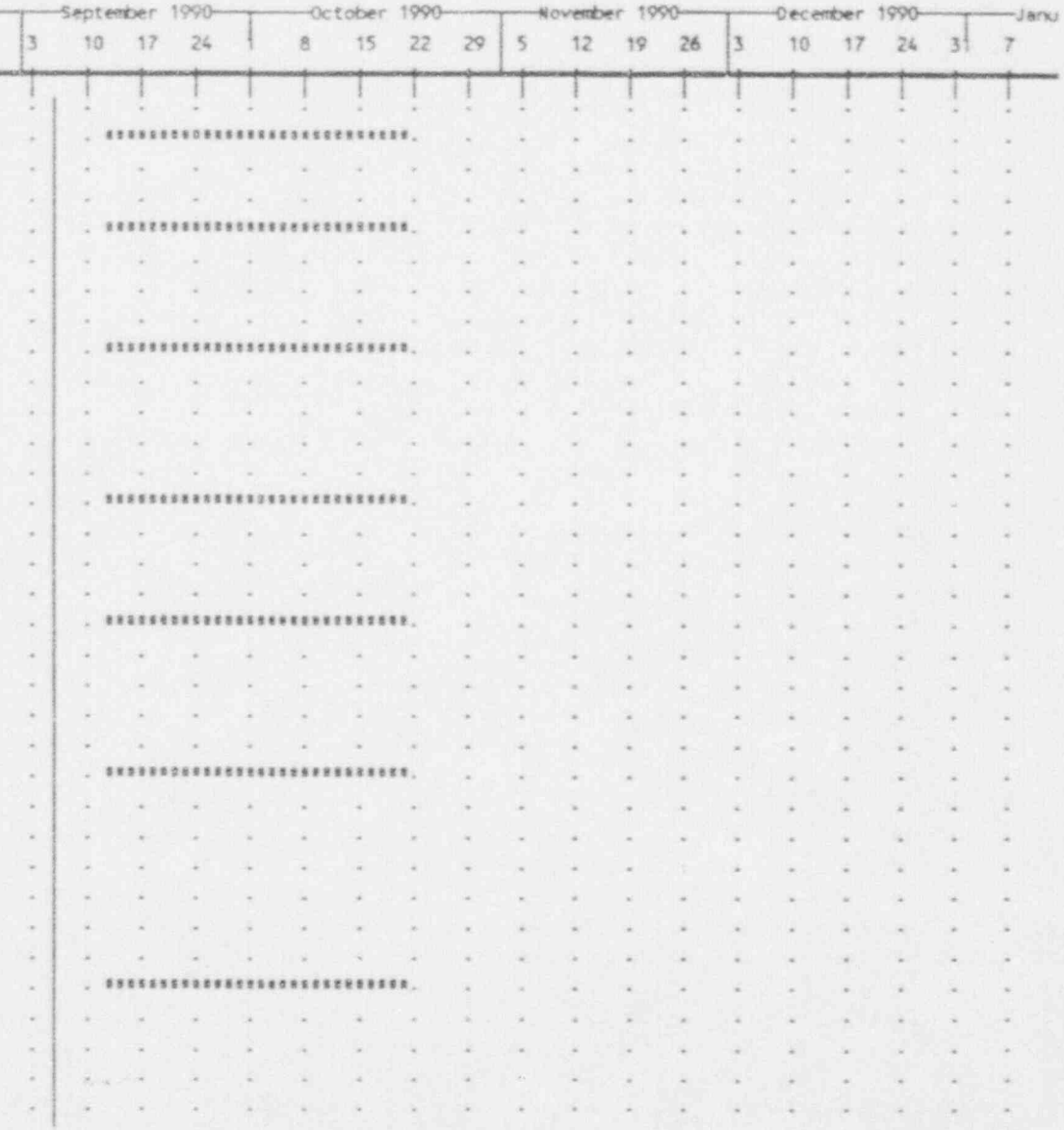
PVNGS BUS PLAN SCHEDULE	Day	Resrc
program		
(Maintenance)		
3.D.2 Identify and evaluate engineering requests and establish realistic resolution timme frames (Tech Support)	13	GRO
3.D.3 Determine present schedule performance for engineering commitments and output documents. Establish action plan with performance improvement goals (Nuclear Engineering & Support Svs)	13	JEA
3.E.1 Achieve a chemistry performance index below 0.18 (Chemistry)	13	JAS
3.H.1* Vendor Technical Manual (Site Nuclear Engineering and Construction) (Nuclear Engineering & Support Svs)	13	JEA
* The Task Plans for these programs have been assigned to these objectives, but the Task Plans do not necessarily represent all of the Task Plans required to accomplish the objective		
PRIORITY 2		
PLANT OPERATIONS		

September 1990: 13, 20, 27, 3, 10, 17, 24
October 1990: 1, 8, 15, 22, 29
November 1990: 5, 12, 19, 26
December 1990: 3, 10, 17, 24, 31
Janu: 7

SEP 05 90 GANTT CHART PAGE 8

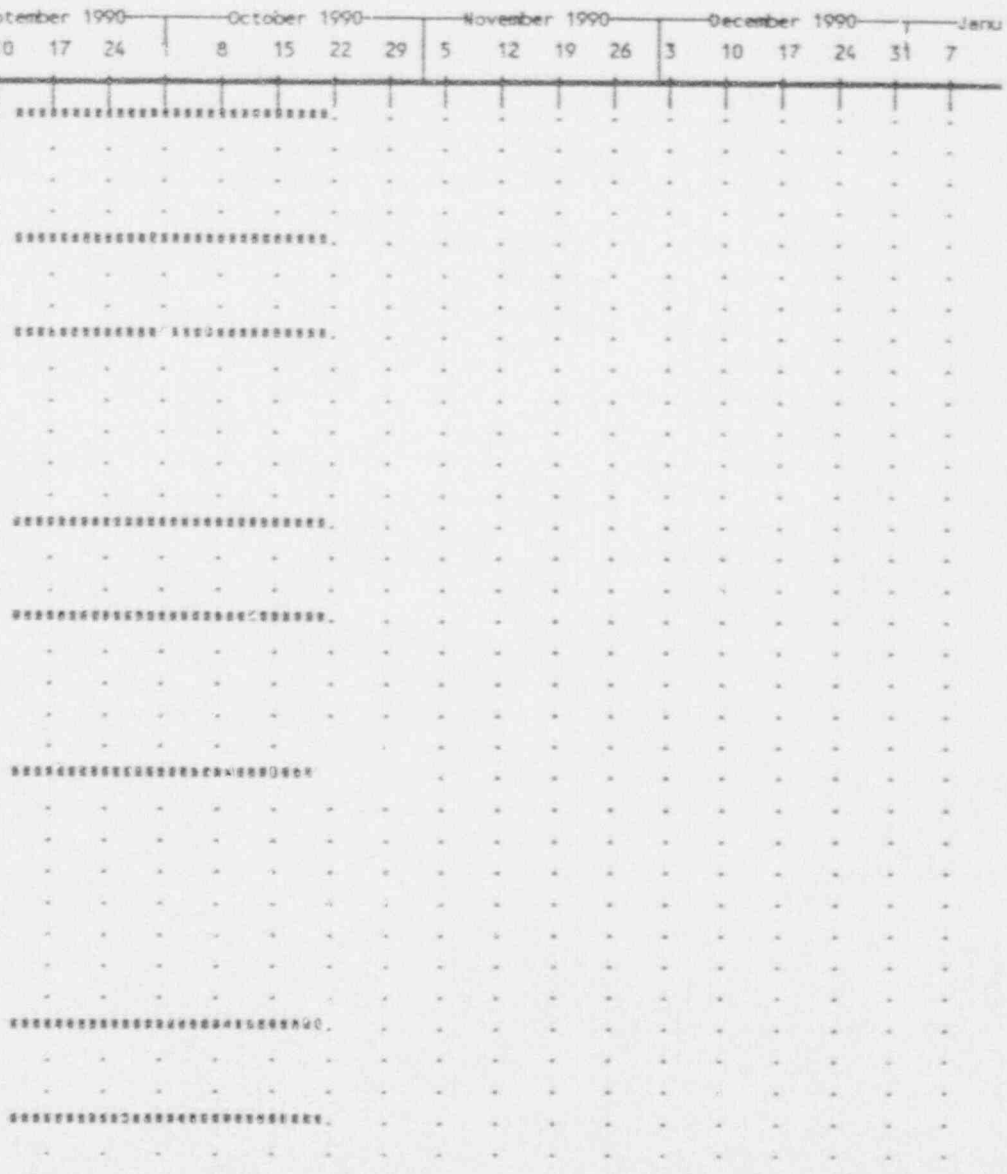
PVNGS BUS PLAN SCHEDULE

PVNGS BUS PLAN SCHEDULE	Day	Resrc
1.D.1 Achieve safety system performance availability targets	28	POM
1.D.2 Do not exceed one unplanned automatic reactor scram while contained per unit	28	PM
3.A.1 Achieve site equivalent availability factor target	28	PM
MAINTENANCE		
3.C.1 Promote personal ownership by initiating problem solving at the lowest practical level	28	RAJ
3.G.1 Reduce work order rejection rate by 25%	28	RAJ
PLANT SUPPORT		
3.E.2 Evaluate monitoring of demin water at WRF. Use INPO 88-021 in evaluation; address recommendations in 1991	28	DEB
SITE SERVICES		
3.B.6 Develop/confirm meaningful measures of station backlogs have been developed and reduce by % in Task Plan	28	RG



PVNGS BUS PLAN SCHEDULE

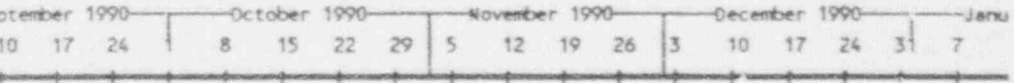
PVNGS BUS PLAN SCHEDULE	Day	Resrc
3.B.9 Continue MIS integration planning and initiate implementation of enhancements	28	TFQ
3.F.1 Plan and control outages to meet schedules	28	CDM
3.H.4 Limit design modification work	28	RG
TECHNICAL SUPPORT		
3.C.4 Establish predictive maintenance program	28	GRO
3.D.1 Evaluate RV Engineering Manager Forum guidelines on proactive engineering and integrate into function of engineering organization	28	GRO
3.D.8 Define the requirements and scope of the performance monitoring program and develop plan to achieve the 1992 date	28	GRO
RADIATION PROTECTION		
1.B.1 Do not exceed personnel radiation exposure targets	28	JMS
1.B.3 Do not exceed personnel contamination event targets	28	JMS



SEP 05 90 GANTT CHART PAGE 10

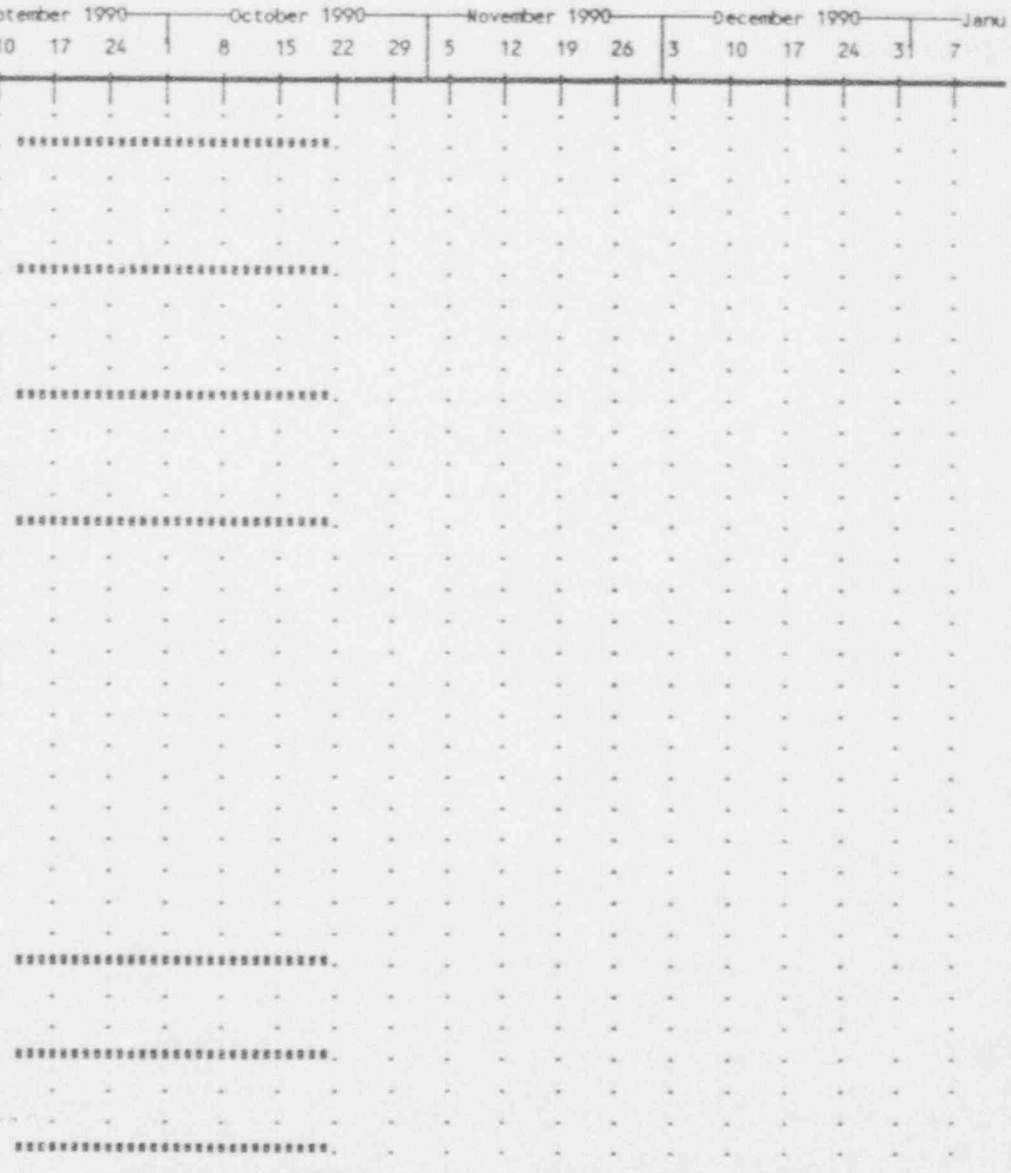
PVNGS BUS PLAN SCHEDULE

PVNGS BUS PLAN SCHEDULE	Day	Resrc
CHEMISTRY		
op and implement a corrosion mon program by February	28	JAS
NUCLEAR TRAINING		
2.A.2 Identify training needs and requirements of each non-engineering PVNGs employee. Prepare training plan	28	EGF
SIMULATOR SUPPORT		
3.H.5 Submit simulator certification documents by March and maintain certification	28	DCB
QUALITY ASSURANCE		
NONE		
NUCLEAR FUEL MANAGEMENT		
4.A.3 Reduce APS' fuel expense to $7.50 per megawatt hour	28	PFC
NUCLEAR ENGINEERING & SUPPORT SVS		



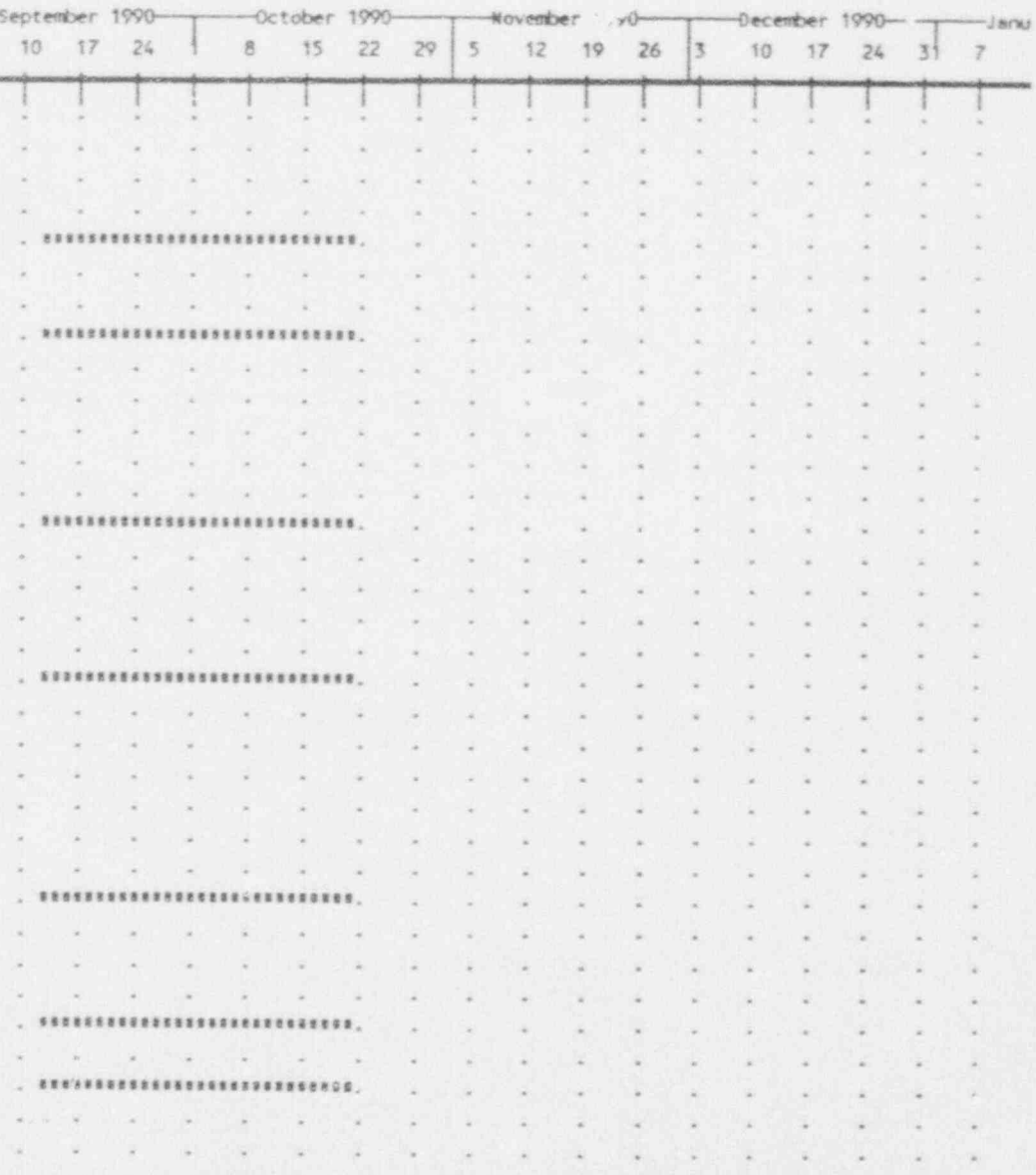
PVNGS BUS PLAN SCHEDULE

PVNGS BUS PLAN SCHEDULE	Day	Resrc
3.D.4 Work with design process users to identify areas or methods to streamline design change process	28	JEA
3.D.5 Continue to develop and implement a process to measure the quality of selected engineering products	28	FCP
3.D.6 Develop a common engineering work mgmnt system. Identify & evaluate various work management systems.	28	JEA
3.H.1 Evaluate existing CM Programs and processes to identify areas needing improvement. Implement required changes identified in the evaluation	28	JEA
SITE ENGINEERING AND CONSTRUCTION		
None		
NUCLEAR SAFETY AND LICENSING		
1.C.1 Make responsible, coordinated regulatory commitments & meet due dates	28	WFQ
1.C.2 Make responsible, coordinated industry commitment and meet due dates	28	ACR
1.C.3 Prioritize, track & respond in a	28	DNS



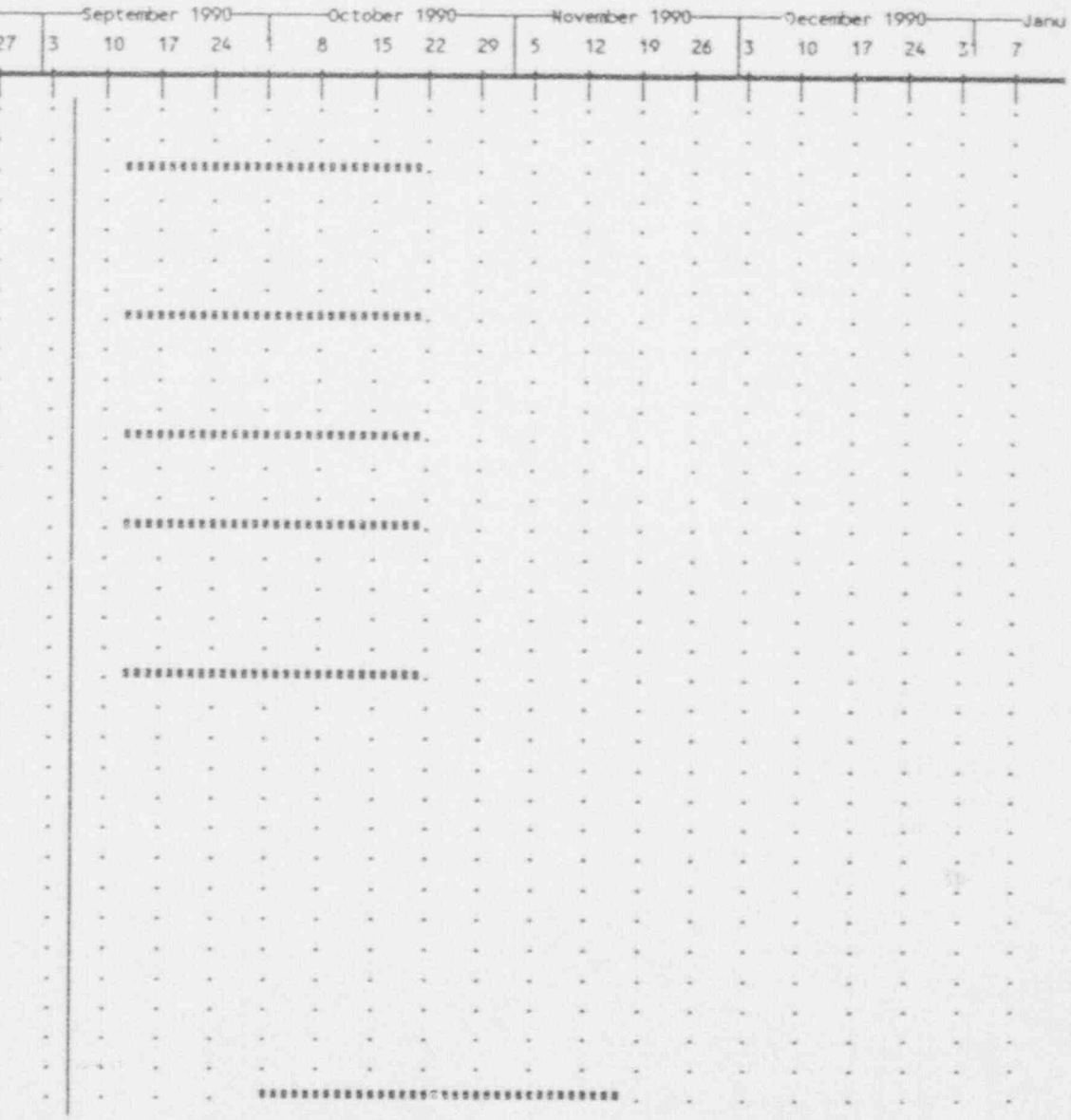
PVNGS BUS PLAN SCHEDULE

PVNGS BUS PLAN SCHEDULE	Day	Resrc
timely manner to approved recommendations from internal and external assessments		
2.C.4 Improve effectiveness of external communication (especially regulators)	28	WFQ
3.B.5 Minimize repeat internal, NRC or INPO findings	28	WFQ
MANAGEMENT SERVICES		
2.C.1 Use daily activities to improve teamwork and morale throughout the organization - develop plan to assess teamwork and morale	28	RWP
2.C.3 Conduct effective ongoing communication with co-workers and personnel at other PVNGS units and other plants	28	RWP
BUDGET AND COST CONTROL		
4.A.2 Meet or underrun budget. Establish 1992 budget at or below the 1991 level	28	KJ
4.A.4 Meet or underrun capital budget	28	JAF
4.B.2 Meet or underrun overtime budget	28	MJG



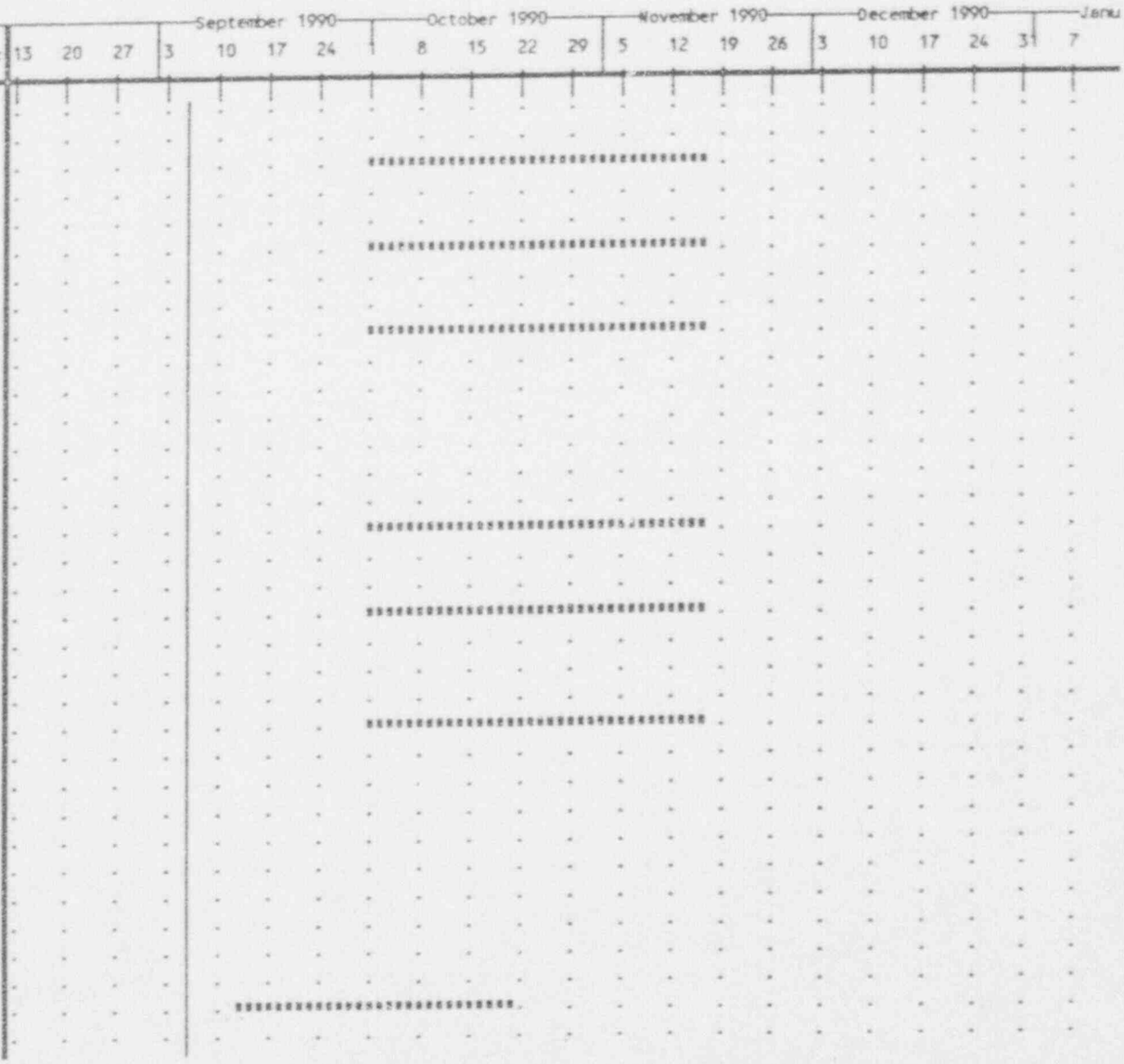
PVNGS BUS PLAN SCHEDULE

PVNGS BUS PLAN SCHEDULE	Day	Resrc
HUMAN RESOURCES		
2.A.1 Select qualified individuals to perform job funcitons - define and document required skills and select job candidates accordingly	28	KDD
2.A.3 Improve managerial & supervisory skills - identify training needs and requirements of managers & supervisors	28	KDD
2.B.4 Emphasize quality, attention to detail, and timely actions	28	KDD
2.C.1 Use daily activities to improve teamwork and morale throughout the organization - develop plan to assess teamwork and morale	28	RWP
2.C.2 Require managers/supervisors to maintain daily presence in the work area to assure knowledge of performance	28	KDD
COMMUNICATIONS		
None		
PRIORITY 3		
PLANT OPERATIONS		
1.D.3 Do not exceed one unplanned	34	PM



PVNGS BUS PLAN SCHEDULE

PVNGS BUS PLAN SCHEDULE	Day	Resrc
safety system actuation per unit		
3.A.2 Do not exceed a forced outage rate of 9% per unit	34	PM
3.A.3 Maintain thermal performance of at least 99.5% per unit	34	PM
3.H.6 Prioritize changes to achieve necessary and desirable unit consistency	34	FCB
MAINTENANCE		
1.B.2 Do not exceed contaminated surface area targets	34	PMM
3.C.5 Establish a calibration shop for contaminated tools & implement an electronic tracking and control program	34	RAJ
3.G.3 Develop and implement an annual technical training program	34	RAJ
PLANT SUPPORT		
None		
SITE SERVICES		
4.A.5 Maintain warehouse inventory value below $140 Million	28	LBS



PVNGS BUS PLAN SCHEDULE

PVNGS BUS PLAN SCHEDULE	Day	Resrc	13	20	27	3	10	17	24	1	8	15	22	29	5	12	19	26	3	10	17	24	31	7
						September 1990				October 1990					November 1990				December 1990					Janu
3.F.2 Analyze 1990 PVNGS and industry outages by June to identify and correct major contributors to lost time	34	CDM																						
3.F.3 Reduce in-processing time for outage of contractors by 10%	34	WPR																						
3.F.4 Develop a standard operating cycle and ensure adequate capacity during the summer	34	RAB																						
4.B.3 Meet or underrun authorized manpower budget	34	PJC																						
TECHNICAL SUPPORT																								
3.H.3 Develop a plan to create operational basis information documents	34	GRO																						
RADIATION PROTECTION																								
1.B.4 Do not exceed low level waste volume targets	34	TPH																						
CHEMISTRY																								
None																								

SEP 05 90 GANTT CHART PAGE 16

PVNGS BUS PLAN SCHEDULE

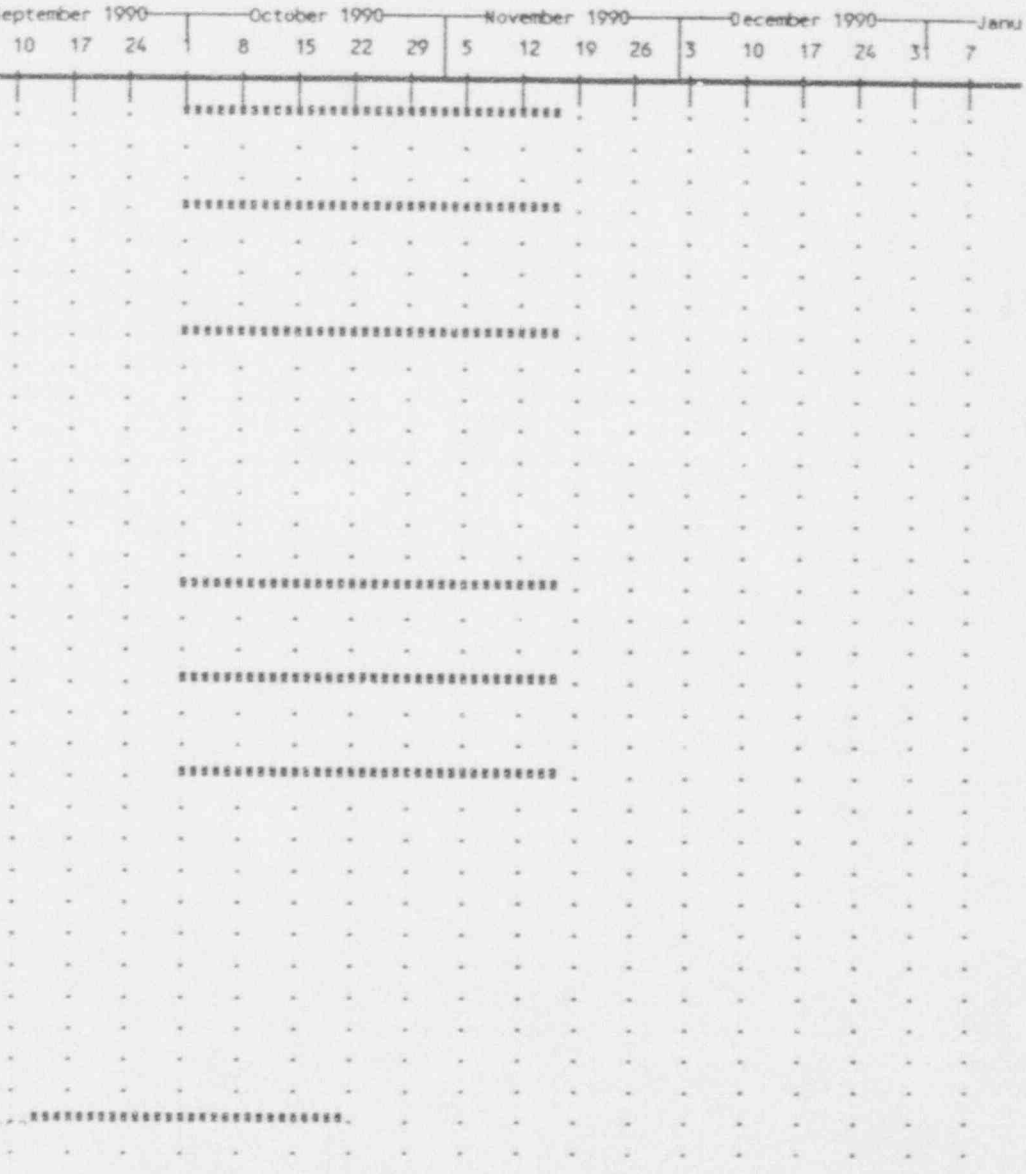
PVNGS BUS PLAN SCHEDULE	Day	Resrc	September 1990				October 1990				November 1990				December 1990					Janu
			13	20	27	3	10	17	24	1	8	15	22	29	5	12	19	26	3	10	17	24	31	7
NUCLEAR TRAINING																								
None																								
SIMULATOR SUPPORT																								
None																								
QUALITY ASSURANCE																								
None																								
NUCLEAR FUEL MANAGEMENT																								
None																								
NUCLEAR ENGINEERING & SUPPORT SVS																								
3.D.7 Define engineering work performed by PVNGS and outside firms. Determine existing percentages and develop plan to achieve 50% by 1992	34	JEA																						
3.H.2 Meet design basis reconstitution program commitments	34	FCP																						
SITE ENGINEERING AND CONSTRUCTION																								
None																								

PVNGS BUS PLAN SCHEDULE

PVNGS BUS PLAN SCHEDULE	Day	Resrc	13	20	27	3	10	17	24	1	8	15	22	29	5	12	19	26	3	10	17	24	31	7
						September 1990				October 1990					November 1990				December 1990					Janu
NUCLEAR SAFETY AND LICENSING																								
1.E.1 Evaluate production of hazardous waste and determine five year and one year targets	34	MC								**********	**********	**********	**********	**********	**********	**********								
1.E.2 Complete evaluations of use of non-hazardous materials verses hazardous material by February and substitute by June	34	MC								**********	**********	**********	**********	**********	**********	**********								
3.B.3 Evaluate to implement lessons learned from PVNGS and industry operational experience	34	BSE								**********	**********	**********	**********	**********	**********	**********								
3.B.7 Contribute to achieving SALP ratings of 2 or better. Cause no SL I, II, III violations and fewer SL, IV, V violations. Minimize reportable events	34	TRB								**********	**********	**********	**********	**********	**********	**********								
3.B.8 Contribute to achieving INPO rating of 2 or better by 1992	34	WFQ								**********	**********	**********	**********	**********	**********	**********								
MANAGEMENT SERVICES																								
None																								
BUDGET AND COST CONTROL																								

PVNGS BUS PLAN SCHEDULE

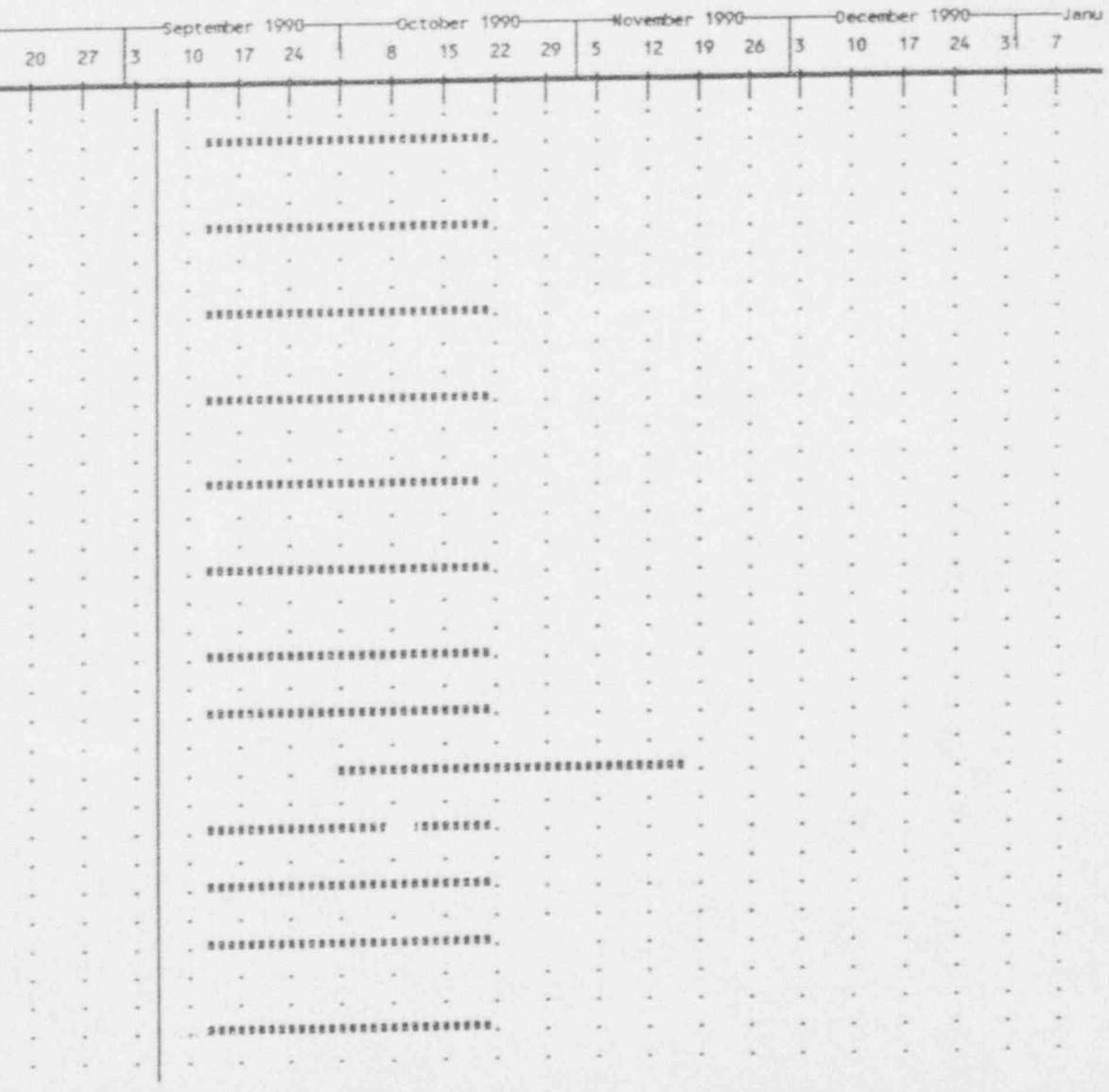
PVNGS BUS PLAN SCHEDULE	Day	Resrc
4.A.1 Achieve an average O&M cost/ kwhr of 25 mils	34	JAF
4.B.1 Adhere to budget and cost control procedure. Make changes to procedures as necessary	34	MJG
4.B.4 Establish budget and cost reports, assumptions and definitions for inclusion in budget preparation package	34	BAR
HUMAN RESOURCES		
1.A.1 Maintain an All Injury Accident Rate of 0.50 or less	34	JRB
1.A.2 Maintain a Lost Work Incident Rate of 0.19 or less	34	JRB
1.A.3 Maintain a Severity Incident Rate of 0.19 or less	34	JRB
COMMUNICATIONS		
None		
PROGRAMS		
1. Emergency Operating Procedure Upgrade (285)	0	JWD



SEP 05 90 GANTT CHART PAGE 19

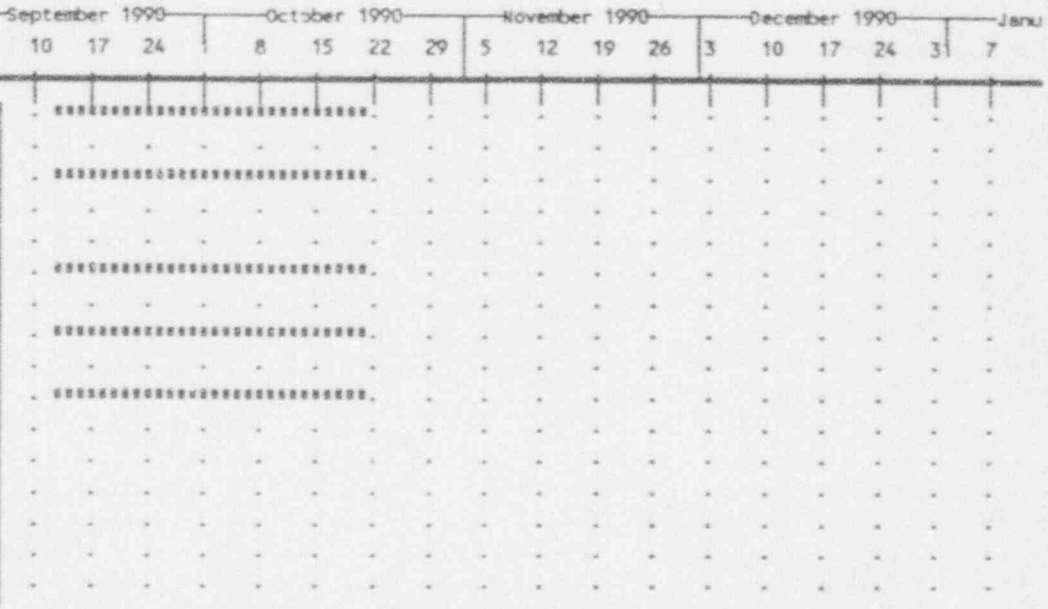
PVNGS BUS PLAN SCHEDULE

PVNGS BUS PLAN SCHEDULE	Day	Resrc
2. Abormal Operating Procedure Upgrade (285)	0	JWD
3. Normal Operating Procedure Upgrade (late 1991) (285)	0	JWD
4. Preventive Maintenance Upgrade (3C2)	0	RAJ
5. Predictive Maintenance Program (3C4)	0	WEW
6. System, Component Performance Monit Program (3C4)	0	WEW
7. Operational Basis Information Program (3H3)	0	WEW
8. Corrective Maintenance (3C3)	0	WEW
9. Configuration Management (3H1)	0	FCP
10. Design Basis Reconstitution (3H2)	34	FCP
11. Vendor Technical Manual (3H1)	0	SJG
12. Design Process Enhancement (3D4)	0	FCP
13. Management Information Systems Integration (389)	0	TFQ
14. Simulator Upgrade (3H5)	0	DCB



PVNGS BUS PLAN SCHEDULE

PVNGS BUS PLAN SCHEDULE	Day	Resrc
15. SIMS Upgrade (3C7, 3G4)	0	TFQ
16. Work Control Process Improvement (3G1 through 3G4)	0	RAJ T
17. PRIDE in Excellence (3F1, 4A5)	0	JNT
18. Tool Control Progam (3C5, 3C6)	0	RAJ
19. Training Action Plan	0	EGF



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

NOV 27 1990

Docket Nos. 50-528, 50-529, 50-530

Arizona Public Service Company
P. O. Box 52034
Phoenix, Arizona 85072-2034

Attention: Mr. William F. Conway
Executive Vice President, Nuclear

Gentlemen:

SUBJECT: REPORT OF MEETING WITH APS MANAGEMENT

This refers to two meetings held with you and members of your staff at the NRC Region V Office in Walnut Creek, California on October 3 and November 5, 1990. The subjects discussed are summarized in Meeting Report Nos. 50-528/90-48, 50-529/90-48, and 50-530/90-48, enclosed herewith. A copy of the slides used during your presentations is also enclosed.

During the meetings, we discussed the APS Five Year Business Plan as a response to the NRC Diagnostic Evaluation Team (DET) observations, the associated business plan for 1991, and the overall status of your programs at Palo Verde. During these discussions several issues were highlighted:

- There was agreement that for the results of the DET to be long lasting, the actions taken must become part of the daily activities at Palo Verde, as integrated by the APS Business Plan;
- Your intention was to include Palo Verde performance improvement initiatives that are not yet complete into the Business Plan; we are particularly interested in their continuation;
- You agreed that there was a need to perform a periodic review of the Business Plan which would include not only the status of task completion, but also an assessment of the accomplishment of goals and objectives; and
- The NRC would be periodically reviewing corrective actions on a sampling basis and discussing progress with APS personnel.

We look forward to future discussions with you regarding your appraisal of the effectiveness of the Business Plan and any significant changes that you may consider necessary.

In accordance with 10 CFR 2.790(a), a copy of this letter and the enclosures will be placed in the NRC Public Document Room.

Should you have any questions concerning our minutes of the meeting, documented in the enclosed meeting report, we will be pleased to discuss them with you.

Sincerely,

K. L. Perkins for

R. P. Zimmerman, Director
Division of Reactor Safety
and Projects

Enclosures:
1. Report Nos. 50-528/90-48, 50-529/90-48, 50-530/50-48
2. APS Slide Presentation Package

cc w/enclosures:
Mr. O. Mark DeMichele, APS
Mr. James M. Levine, APS
Mr. Jack N. Bailey, APS
Mr. E. C. Simpson, APS
Mr. Blaine E. Ballard, APS
Mr. Thomas R. Bradish, APS
Mr. Robert W. Page, APS
Mr. Arthur C. Gehr, Esq., Snell & Wilmer
Mr. Al Gutterman, Newman & Holtzinger P. C.
Mr. Charles R. Kocher, Esq., Assistant Council, SCE
Mr. James A. Boeletto, Esq., (same address as Mr. Kocher)
Mr. Charles B. Brinkman, Combustion Engineering, Inc.
Mr. Charles Tedford, Director, Arizona Radiation Regulatory Agency
Chairman, Maricopa County Board of Supervisors
Mr. John W. Norman, Chief, Arizona Corporation Commission

REGION V/dot				
WAng	HWong	SRichards	KPerkins	RZimmerman
11/20/90	11/20/90	11/23/90	11/27/90	11/27/90
REQUEST COPY YES / NO	REQUEST COPY YES / NO	REQUEST COPY YES / NO	REQUEST COPY YES / NO	REQUEST COPY YES / NO

SEND TO PDR
YES / NO

bcc w/enclosures:
Project Inspector
Resident Inspector
docket file
G. Cook
B. Faulkenberry
J. Martin
M. Smith
N. Western
J. Zollicoffer
E. Jordan, AEOD
S. Rubin, AEOD
T. Staker, AEOD
M. Slosson, OEDO
J. Dyer, NRR
C. Trammell, NRR

U.S. NUCLEAR REGULATORY COMMISSION

REGION V

Report Nos. 50-528/90-48, 50-529/90-48, 50-530/90-48

Docket Nos. 50-528, 50-529, 50-530

License Nos. NPF-41, NPF-51 and NPF-74

Licensee: Arizona Public Service Company
P. O. Box 53999
Phoenix, Arizona 85072-3999

Facility Name: Palo Verde Nuclear Generating Station Units 1, 2, and 3

Meeting Location: NRC Region V Office
Walnut Creek, California

Meetings Conducted: October 3 and November 5, 1990

Prepared by: W. P. Ang, Project Inspector
H. J. Wong, Chief, Reactor Projects Branch, Section II

Approved By: Edward J. Wong 11/20/90
H. Wong, Chief Date Signed
Reactor Projects Branch, Section II

Summary:

Management meetings were held on October 3 and November 5, 1990 at the NRC Region V Office to discuss the APS PVNGS Business Plan, the APS response to the Diagnostic Evaluation Team report, overall licensee activities, and current issues.

DETAILS

1. Meeting Attendees for October 3, 1990

Arizona Public Service Company (APS)

W. Conway, Executive Vice President, Nuclear*
J. Levine, Vice President, Nuclear Production*
E. Simpson, Vice President, Engineering and Construction
J. Bailey, Vice President, Nuclear Safety and Licensing*
B. Ballard, Director, Quality Assurance*
G. Overbeck, Director, Technical Support
W. Marsh, Director, Operations and Maintenance*
P. Caudill, Director, Site Services*
S. Guthrie, Deputy Director, QA/QC*
R. Joyce, Manager, Site Maintenance
T. Bradish, Manager, Compliance*
J. Minnicks, Manager, Unit 3 Maintenance*
M. Fuller, Senior Media Representative*
M. Friedlander, Manager, Operations Engineering*
J. Albers, Manager, RP Operations*
J. Scott, General Manager, Site Chemistry*
M. Burns, Manager, Operations Computer Systems*
A. Cordova, (PNM) Nuclear Services Engineer*
T. Cogburn, Technical Assistant to VP Nuclear Production*

Nuclear Regulatory Commission

J. Martin, Regional Administrator*
R. Zimmerman, Director, Division of Reactor Safety and Projects (DRSP)
R. Scarano, Director, Division of Radiation Safety and Safeguards (DRSS)
K. Perkins, Deputy Director, DRSP
F. Wenslawski, Deputy Director, DRSS
S. Richards, Chief, Reactor Projects Branch*
D. Kirsch, Chief, Reactor Safety Branch*
G. Yuhas, Chief, Reactor Radiological Protection Branch*
R. Pate, Chief, Nuclear Materials and Fuel Fabrication Branch*
H. Wong, Chief, Reactor Projects, Section II*
R. Huey, Chief, Engineering Section
S. Peterson, NRR Project Manager
D. Coe, Senior Resident Inspector*
W. Ang, Project Inspector
G. Cook, Regional Public Affairs Officer
F. Ringwald, Resident Inspector
J. Sloan, Resident Inspector*
M. Cillis, Senior Radiation Specialist*
L. Norderhaug, Principle Security Inspector*
D. Solorio, Reactor Engineer, NRR*

Other members of the APS staff were also in attendance.

* Attended November 5, 1990 meeting

2. APS Response to the NRC Diagnostic Evaluation Team (DET) and the APS Business Plan

Mr. Martin started the meeting by stating that the NRC and APS periodically meet to discuss concerns and issues of mutual interest. He stated that the purpose of this meeting was to follow-up on the results of APS's response to the DET, namely the APS Business Plan. He further stated that the NRC intends to look at the Plan periodically, and to discuss aspects of it during regular management meetings. Mr. Martin also stated the expectation that, for the DET to have meaningful and long lasting effects, the DET findings had to be fully integrated into APS activities. The APS Business Plan appeared to be an appropriate mechanism for this. Mr. Conway acknowledged it was the intended purpose and responded that he welcomed the opportunity to go through the Business Plan with the NRC.

Mr. Bailey then discussed the preparation, scheduling, assignment, coordination, accountability, reporting and status aspects of the Business Plan. Mr. Bailey stated that the APS Senior Management Team had met, decided how Palo Verde desired to conduct its business and established a 5 year Business Plan with 4 goals and 18 strategies for achieving those goals. Each goal was assigned to an APS senior manager. Corresponding one year objectives and strategies were developed for 1991. Approximately 81 tasks were identified to fulfill the 1991 objectives. Individual tasks were assigned to a manager with lead responsibility and task plans were scheduled to be completed by December 15, 1990. The Senior Management Team also established the relative priorities for the objectives. The priorities for the individual tasks depended on the priority for the objective being accomplished by the task.

Mr. Bailey discussed how a matrix was developed to assure that the major DET report observations were being addressed by the Business Plan. Mr. Bailey stated that the DET report observations (approximately 175 identified by APS) would be entered in the Palo Verde Regulatory Commitment Tracking System (RCTS) to assure that they would all be addressed, tracked and closed. Mr. Zimmerman stated that should APS conclude at a later date that it no longer considered it beneficial or appropriate to track or act upon specific NRC issues, licensee representatives should consider raising these item(s) to NRC's attention. Mr. Wong inquired how the various Palo Verde initiatives previously in effect were being integrated into the Business Plan. Mr. Bailey responded that all initiatives were being reviewed and statused. Those that were still not completed would be included in the Business Plan. Mr. Martin inquired about future periodic effectiveness reviews of the Business Plan and asked if there were any plans for a review committee to periodically determine effectiveness of the plan. Mr. Conway acknowledged that there was a need for a "living look" at the plan by an annual reappraisal of the goals and stated that he had planned on the performance of those reappraisals.

Mr. Overbeck continued the APS presentation by discussing a comprehensive task plan for Palo Verde motor operated valves (MOVs). Mr. Overbeck noted that there were 277 MOVs per unit, of which 112 were either safety-

related or important-to-safety. The task plan provides for all MOVs at Palo Verde. Mr. Overbeck discussed the major MOV issues identified and the development and implementations of various tasks to resolve the issues. Mr. Overbeck provided status of the tasks and future actions planned. Similarly, Mr. Joyce discussed another task plan for the preventative maintenance program and Mr. Simpson discussed a task plan for vendor technical manuals. Slides used during the presentation are attached to this meeting report.

3. Review of Licensee Activities

A. Staffing

Mr. Levine continued the discussions by providing licensee estimated projections of staffing levels for the Palo Verde Nuclear Generating Station (PVNGS). Mr. Levine stated that PVNGS staffing was being increased from January 1990 (2571 APS employees and 643 contractors) to the projected January 1991 level (2853 APS employees and 701 contractors). Mr. Levine further stated that current intentions were to reduce the total staff level to 2910 APS employees and 428 contractors by December 1991. Slides used for the presentation were clarified by the licensee subsequent to the meeting by addition of notes stating that the slides provided "approximate numbers - contingent on final staffing analysis." The Licensee clarified slides are attached to this meeting report.

B. Engineering

Mr. Simpson discussed the performance of the Nuclear Engineering Organization, its accomplishments, organizational changes and initiatives. Mr. Simpson described the organizational realignment of the Engineering and Construction organization, the establishment of the Site Nuclear Engineering organization and the planned consolidation of all PVNGS engineering groups under Mr. Simpson, the Vice President of Engineering and Construction, effective October 15, 1990.

Mr. Simpson stated that the Engineering Excellence Program was being continued and was planned to be incorporated into the Business Plan. He acknowledged the need for further reviews to measure the effectiveness of the Engineering Excellence Program initiatives. Mr. Simpson discussed a report on the Nuclear Engineering backlog reduction effort. The total engineering items closed as of August 31, 1990 was 5345 but this was offset by the increase of the number of the total backlog items from 7575 to 8392 since the fall of 1989.

Mr. Martin inquired about preparations for future outages and the availability of parts for those outages. Mr. Simpson and Mr. Levine responded that most parts are ordered approximately one year ahead of scheduled outages and that most field design packages are issued approximately six months before the scheduled outage. They further added that PVNGS was prepared for future scheduled outages and that they should not have a problem with parts for those outages.

C. Site Technical Support

Mr. Overbeck discussed the performance of the Site Technical Support organization, its accomplishments, and future challenges. Mr. Overbeck discussed the functional organization and professional development of the organization. He stated that one of the more significant challenges for his organization was the prompt identification and accurate resolution of technical issues.

Mr. Overbeck noted that recent performance in this area, such as the proactive involvement in the resolution of Feedwater Isolation Valve four-way valve failures and the Auxiliary Feedwater Pump turbine overspeed conditions, demonstrated improvement by the organization. He also noted that some performance, such as the emergency lighting issue and the pressurizer instrument root valve, RC-207, packing gland stud problem, were not as successful. Mr. Overbeck concluded by reviewing the future challenges for the Technical Support organization. He stated that these challenges included system engineering workload reduction, backlog reduction, and improved outage and maintenance support.

[The October 3, 1990 meeting was adjourned at this point due to other meeting commitments of APS managers. On November 5, 1990 the meeting was resumed in the Region V Office.]

D. Emergency Preparedness and Security

Mr. Caudill discussed the performance of the emergency preparedness and security organizations. In the area of emergency preparedness, Mr. Caudill emphasized the degree of management support and involvement in emergency response which were reflected in individual employee commitment to emergency preparedness. Mr. Caudill described the success of various drills and exercises conducted at Palo Verde and the enhancements made to various facilities and plant equipment. One of the plant equipment enhancements was the approval of the purchase of a second simulator. The licensee has formally commited to this purchase and is making plans for its acquisition. Mr. Caudill also described the changes made to event classification procedures to bring the APS procedures more in line with the classification scheme described in NUREG-0654.

In the area of security, Mr. Caudill discussed the closer ties between the security and maintenance groups which has increased the availability of security equipment. Dedicated maintenance personnel were established to support the security organization. Mr. Caudill also described actions taken by APS management to support the security organization, including doing their own background checks, performing unannounced security challenges, and providing technical and equipment enhancements.

E. Radiation Protection

Mr. Albers described the performance of the radiation protection organization, organizational changes which had occurred and the increase in management involvement in radiation protection issues. This management involvement was reflected in unit managers bringing up radiation protection issues, higher levels of management involvement in the ALARA committee, reviews being performed by the radiation protection group prior to the implementation of Design Change Packages, and the overall reduction in the amount of radiation exposure at Palo Verde. Mr. Albers noted the reduction in man-Rem exposure in the recent Unit 2 outage. Also, he described the components of the radiation protection improvement plan. Mr. Yuhas acknowledged the overall improving trend in the area of exposures at Palo Verde; however, he also noted the better performance of Unit 3 in this area tended to bias the overall results and that the performance of Units 1 and 2 was noticeably weaker.

Mr. Scott discussed the planned organizational structure to support the radiation monitoring system, which included a dedicated maintenance organization under the site engineering department. Mr. Scott indicated that the availability of the radiation monitoring system has improved from 80% in February 1990 to approximately 95 - 100% in October 1990. Mr. Martin noted the historical difficulties with the radiation monitoring system and the fact that the vendor who supplied the system to Palo Verde has gone out of business. It was also noted that the radiation monitoring system was to be included in the design bases reconstitution effort, which had not yet been performed.

Mr. Martin commented that while licensee accomplishments should be brought to the NRC's attention, the NRC focus is on those areas which are in need of improvement and encouraged the licensee to focus on those areas also.

F. Maintenance

Mr. Minnicks described the performance of the maintenance organization and the initiatives in the maintenance area. Several of these, i.e. work control task group, model work orders, and maintenance standards, were discussed in the October 3, 1990 meeting. Mr. Minnicks described the performance indicators used by his organization to measure program status and highlighted the overall improving trends. He also described the improved availability of parts to support maintenance and the intent to pre-stage materials to more quickly accomplish planned maintenance activities. Mr. Richards noted that the APS Business Plan placed a budget restriction on the inventory in the warehouse and questioned whether this placed a burden on maintenance. APS managers responded that this budget restriction was not viewed as being limiting, but rather provided impetus to more carefully monitor the status of parts in the warehouse and plan maintenance activities to assure the availability of parts.

Mr. Martin commented that some maintenance issues were actually engineering (design) or component issues and encouraged a close tie between engineering and maintenance. One example was the relaxation of springpacks in Limitorque motor operators. In this case, another Region V licensee believed that the identified springpack relaxation issue was maintenance related and not an engineering issue, thereby missing an opportunity to gain an understanding of the mechanism which caused the relaxation. Mr. Conway agreed on the need to integrate engineering with maintenance, particularly in problem identification and resolution.

G. Operations

Mr. Marsh discussed the performance of APS in the operations area. He noted the management involvement in operations, including the management observation program, management rotation between units, and the planned addition of licensed operators. He also described improvements in: (1) critical assessments and evaluations; (2) the formality and conduct of operations, (3) communications, and (4) training of operators. Mr. Richards noted the APS Business Plan goal of no more than one trip per reactor per year. APS managers believed it was an achievable goal.

H. Safety Assessment

Mr. Bailey described the accomplishments of APS in the area of safety assessments and highlighted the various groups involved in this program, including the Nuclear Safety Group, the Independent Safety Engineering Group, the Plant Review Board, the PVNGS Self-Assessment Group, the Off-site Safety Review Committee, and the Corporate Assessment Group. Mr. Bailey emphasized the intent to perform critical and aggressive reviews and to identify problems before they become self-evident.

I. Quality Assurance

Mr. Ballard described the performance of the Quality Assurance organization and noted the technical and operational experience added to his organization. Mr. Ballard noted the increased management utilization of QA in monitoring plant activities and in the deficiency reporting system. Mr. Martin commented on the continued need for QA involvement in engineering work activities.

3. Current Operational Issues

A. Decision to restart Unit 3 - Mr. Levine stated that the process to authorize the restart of Unit 3 after the opening of seven steam bypass control valves was appropriate; however, he noted the need to provide additional expertise in the area of accident analyses. Mr. Levine summarized the basis of the restart decision and noted that the acceptability of the decision to restart after this event was somewhat swayed by the fact that a similar event had occurred in 1986 and subsequent evaluation of that event found that the accident analyses bounded the event.

Mr. Levine also noted that APS and CE were continuing their review of the implications of the event as related to the FSAR accident analyses. Mr. Richards re-emphasized the necessity to make conservative restart decisions which reflect a thorough understanding of the plant response and its design basis. It was noted that the basis of the Plant Review Board's conclusion that the event did not create an "unreviewed safety question" would be provided in writing for NRC review.

B. Core Operating Limit Supervisory System (COLSS) - Mr. Richards summarized several of the recent data errors which had occurred in the COLSS. While individually these errors were not significant safety issues, in the aggregate they reflected a potential programmatic problem. Mr. Levine acknowledged the comments and stated that the COLSS data had been reverified in all units to assure the accuracy of the current information. He also stated that the COLSS data input process is not as rigorous as that for the core protection calculator (CPC). Mr. Levine indicated that an incident investigation is being performed related to these recent events and that actions will follow the completion of the review.

4. Meeting Conclusion

Mr. Conway expressed his appreciation for the opportunity to discuss the subjects noted above. Mr. Martin responded by stating that he too appreciated having the discussions. He concluded that the Business Plan appeared to be a useful tool for managing the PVNGS organization and that he would be interested to see how it progresses in the future.

OBJECTIVE 3.C.2
PREVENTIVE MAINTENANCE PROGRAM

PREVENTIVE MAINTENANCE PROGRAM

MAJOR ISSUES

- CONSISTENT APPRCACH TO DEVELOPING P.M'S
- BASIS FOR THE PROGRAM
- PROGRAM REQUIREMENTS FOR "PREDICTIVE MAINTENANCE"
- MANAGEMENT REVIEW AND INVOLVEMENT IN P.M. PERFORMANCE
- THE P.M. DATA BASE
- FEEDBACK PROCESS KEEPING THE PROGRAM CURRENT (A LIVING PROGRAM). PERIODIC REVIEW FOR PROGRAM EFFECTIVENESS

PREVENTIVE MAINTENANCE PROGRAM
(CONTINUED)

CONSISTENT APPROACH TO DEVELOPING P.M'S

REQUIRED ACTION

- ESTABLISH THE P.M. TASK FORCE (OBJECTIVE 3.C.2 TASK 1 - 3)

STATUS

- THE TASK FORCE IS IN PLACE AND THE EVALUATION PROCESS IS BEING UTILIZED

NOTED IMPROVEMENTS

- CONSISTENCY IS BEING ACHIEVED IN DEVELOPING P.M'S

PREVENTIVE MAINTENANCE PROGRAM
(CONTINUED)

BASIS FOR THE PROGRAM

REQUIRED ACTION

- DEVELOP P.M. BASES IN PARALLEL WITH SYSTEM EVALUATIONS

STATUS

- ESTABLISHED PROGRAM BASES AND JUSTIFICATION (OBJECTIVE 3.C.2 TASK 2 & 3)
- EVALUATION PROCESS REQUIRES DOCUMENTING P.M. BASES

ANTICIPATED IMPROVEMENTS

- PROGRAM EFFECTIVENESS WILL BE IMPROVED UPON IMPLEMENTATION

PREVENTIVE MAINTENANCE PROGRAM
(CONTINUED)

PROGRAM REQUIREMENTS FOR "PREDICTIVE MAINTENANCE"

REQUIRED ACTION

- EXPAND THE USE OF "PREDICTIVE MAINTENANCE" IN THE EVALUATION PROCESS (OBJECTIVE 3.C.2 TASK 2 - 6)

STATUS

- THE PROGRAM INCLUDES REQUIREMENTS FOR UTILIZING "PREDICTIVE MAINTENANCE"

ANTICIPATED IMPROVEMENTS

- IMPROVE "PREDICTIVE MAINTENANCE" TECHNIQUES

PREVENTIVE MAINTENANCE PROGRAM
(CONTINUED)

MANAGEMENT REVIEW AND INVOLVEMENT IN P.M. PERFORMANCE

REQUIRED ACTION

- INCREASE MANAGEMENT ATTENTION TO P.M. PERFORMANCE (OBJECTIVE 3.C.2 TASK 1)

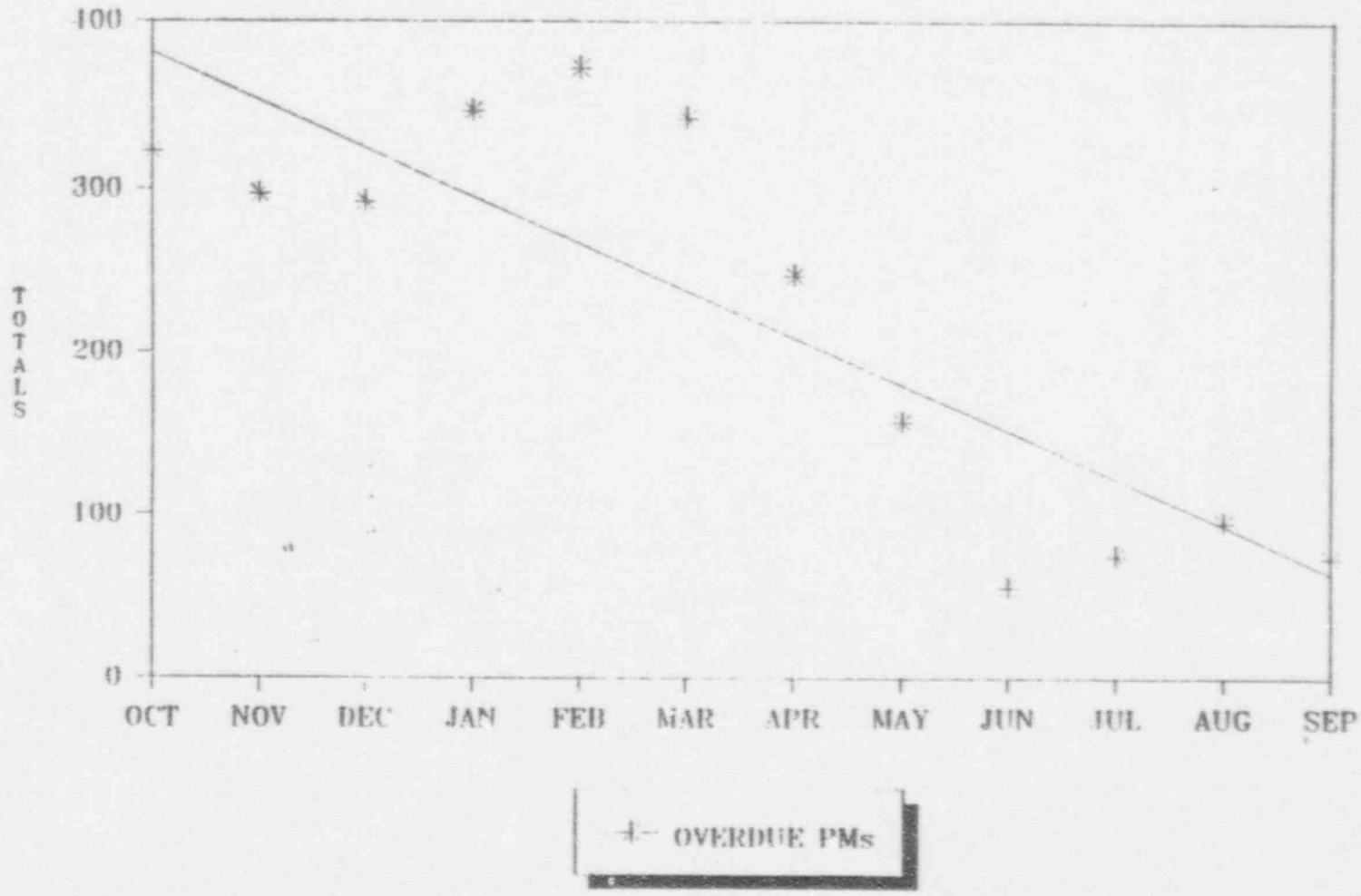
STATUS

- STATION PROCEDURES REVISED TO ENSURE MANAGEMENT MONITORING OF PERFORMANCE

NOTED IMPROVEMENT

- SIGNIFICANT REDUCTION IN OVERDUE P.M'S

OVERDUE PREVENTIVE MAINTENANCE
(ALL UNITS)



PREVENTIVE MAINTENANCE PROGRAM
(CONTINUED)

P.M. DATA BASE

REQUIRED ACTION

- PERFORM AN EVALUATION OF THE EXISTING ADMINISTRATIVE PROGRAM (OBJECTIVE 3.C.2 TASKS 7 - 10)

STATUS

- PROJECT TEAM FORMED AND INITIAL CHANGES IDENTIFIED
- AN ACTION PLAN FOR IMPLEMENTATION IS BEING FINALIZED

ANTICIPATED IMPROVEMENT

- MORE EFFICIENT UTILIZATION OF PM DATA BASE

PREVENTIVE MAINTENANCE PROGRAM
(CONTINUED)

FEEDBACK PROCESS KEEPING THE PROGRAM CURRENT (A LIVING PROGRAM). PERIODIC REVIEWS FOR PROGRAM EFFECTIVENESS

REQUIRED ACTION

- EVALUATE AND IMPROVE THE PROCESS
- PROVIDE FOR PERIODIC MANAGEMENT REVIEW OF PROGRAM EFFECTIVENESS (OBJECTIVE 3.C.2 TASKS 1 & 10)

STATUS

- ACTION PLAN DEVELOPED
- SPECIFIC ACTIONS INCLUDING MANAGEMENT REVIEW WILL BE IMPLEMENTED UPON COMPLETION

ANTICIPATED IMPROVEMENT

- BETTER MANAGEMENT CONTROL OF PM PROGRAM

PALO VERDE NUCLEAR GENERATING STATION

1991 TASK PLAN

Organization

...e Maintenance

Goal 3: *Production - Maximize electric generation and improve organizational effectiveness.*

Strategy C: *Improve maintenance support for operations.*

5-Year PVNGS Objective 2: *Complete and Implement preventive maintenance program improvements by 1991.*

1991 Objective: *Complete and implement preventive maintenance program improvements and monitoring mechanisms.*

Responsibility - *R. Younger*

Objective	Task	Description	Responsibility	Interface Org.	Due Date	Status	Reference	Budget
3.C.2	01	Establish PM task force.	Maintenance Standards (MS) R. Younger		04/90	Complete		
3.C.2	02	Establish evaluation logic for determination of required PMs.	MS - J. Anderson		06/90	Complete		
3.C.2	03	Establish plant review group for review/approval of PM changes.	MS - R. Younger	Maintenance Operations NED	07/90	Complete		
3.C.2	04	Complete evaluation for one system (EW).	MS - J. Anderson		07/90	Complete		

Revision A

1991 TASK PLAN (CONTINUED)

Goal 3
Strategy C
5-Year Objective 2
1991 Objective: *Complete and implement preventive maintenance program improvements and monitoring mechanisms.*

Organization - Maintenance

Objective	Task	Description	Responsibility	Interface Org.	Due Date	Status	Reference	Budget
3.C.2	05	Complete review/approval of one system (EW).	MS - J. Anderson	Maintenance Operations NED System Engineering	09/90	Ongoing		
3.C.2	06	Complete evaluations on all systems per schedule.	MS - J. Anderson	Maintenance Operations NED System Engineering	12/91	Ongoing		
3.C.2	07	Define required changes to SIMS for program administration.	MS - J. Anderson	Maintenance	07/90	Complete		
3.C.2	08	Complete preliminary system design for changes.	MS - J. Anderson		11/90	Ongoing		
3.C.2	09	Complete detailed system design for changes.	MS - J. Anderson	Computer Services Department	01/91	Not started		

1991 TASK PLAN (CONTINUED)

Goal 3
Strategy C
5-Year Objective 2
1991 Objective: *Complete and implement preventive maintenance program improvements and monitoring mechanisms.*

Organization - Maintenance

Objective	Task	Description	Responsibility	Interface Org.	Due Date	Status	Reference	Budget
3.C.2	10	Install changes.	MS - J. Anderson	Nuclear Service Department Computer Services Department	06/91	Not started		

Revision A

DIAGNOSTIC EVALUATION TEAM
REPORT RESPONSE &
RELATION TO BUSINESS PLAN

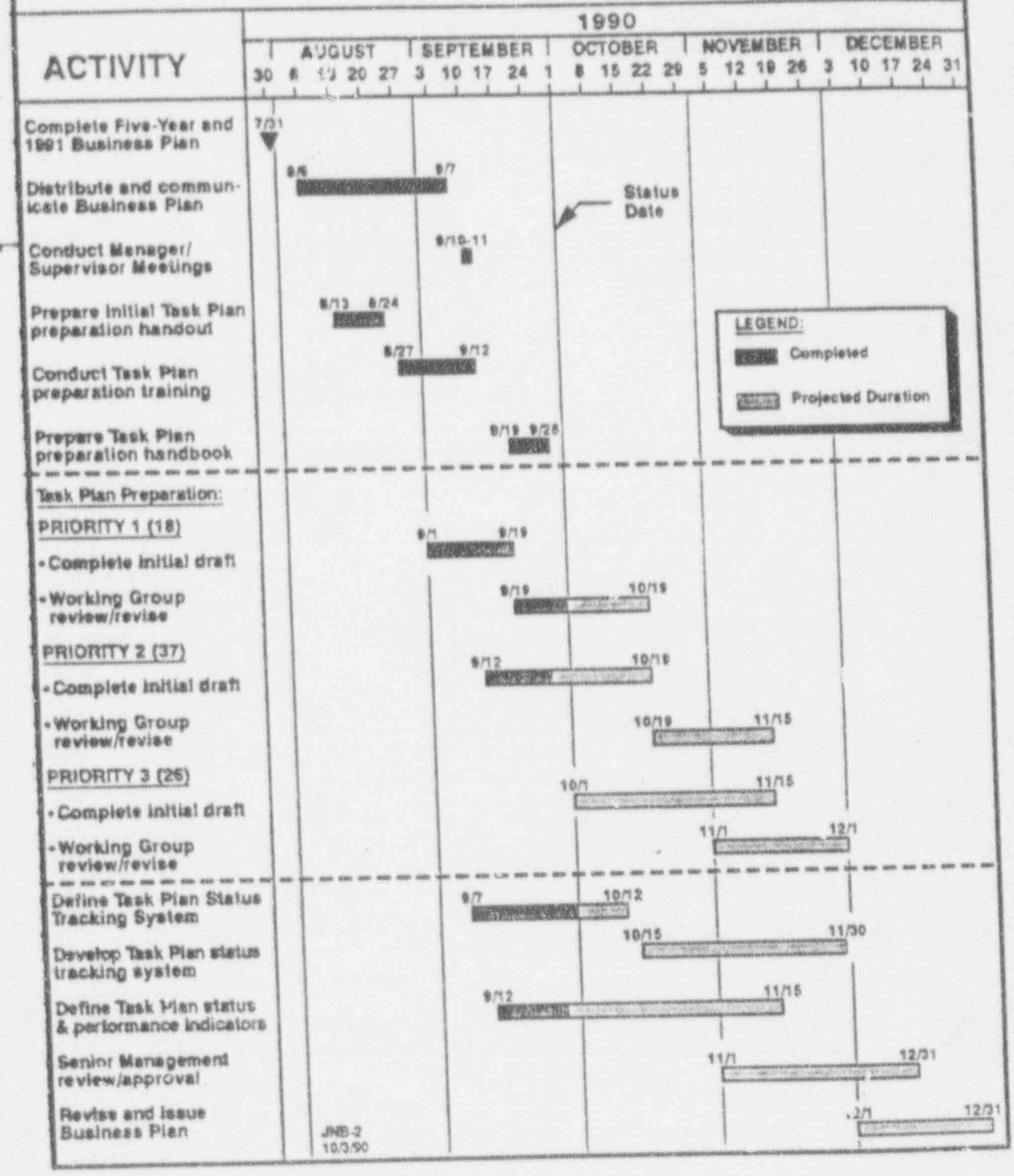
J. N. BAILEY

BUSINESS PLAN PREPARATION

- RELATIONSHIP TO DET REPORT
- BUSINESS PLAN STRUCTURE
- TASK PLAN DEVELOPMENT
  - PROCESS AS IMPORTANT AS PRODUCT
    - TEAMWORK
    - COMMUNICATION
  - HANDBOOK DEVELOPED
    - ASSURES CONSIDERATION OF PROCESS
    - ASSURES CONSIDERATION OF DET REPORT
    - ASSURES CONSISTENT FORMAT
    - DEFINES REVIEW AND APPROVAL CYCLE
  - TASK PLAN DEVELOPMENT SCHEDULE
    - TOTAL = 81 OR MORE
    - INITIAL DRAFT COMPLETED = 18
    - REMAINDER SCHEDULED COMPLETE - DECEMBER 15, 1990

Business Plan Task Plan Schedule Summary

(Status as of October 1, 1990)



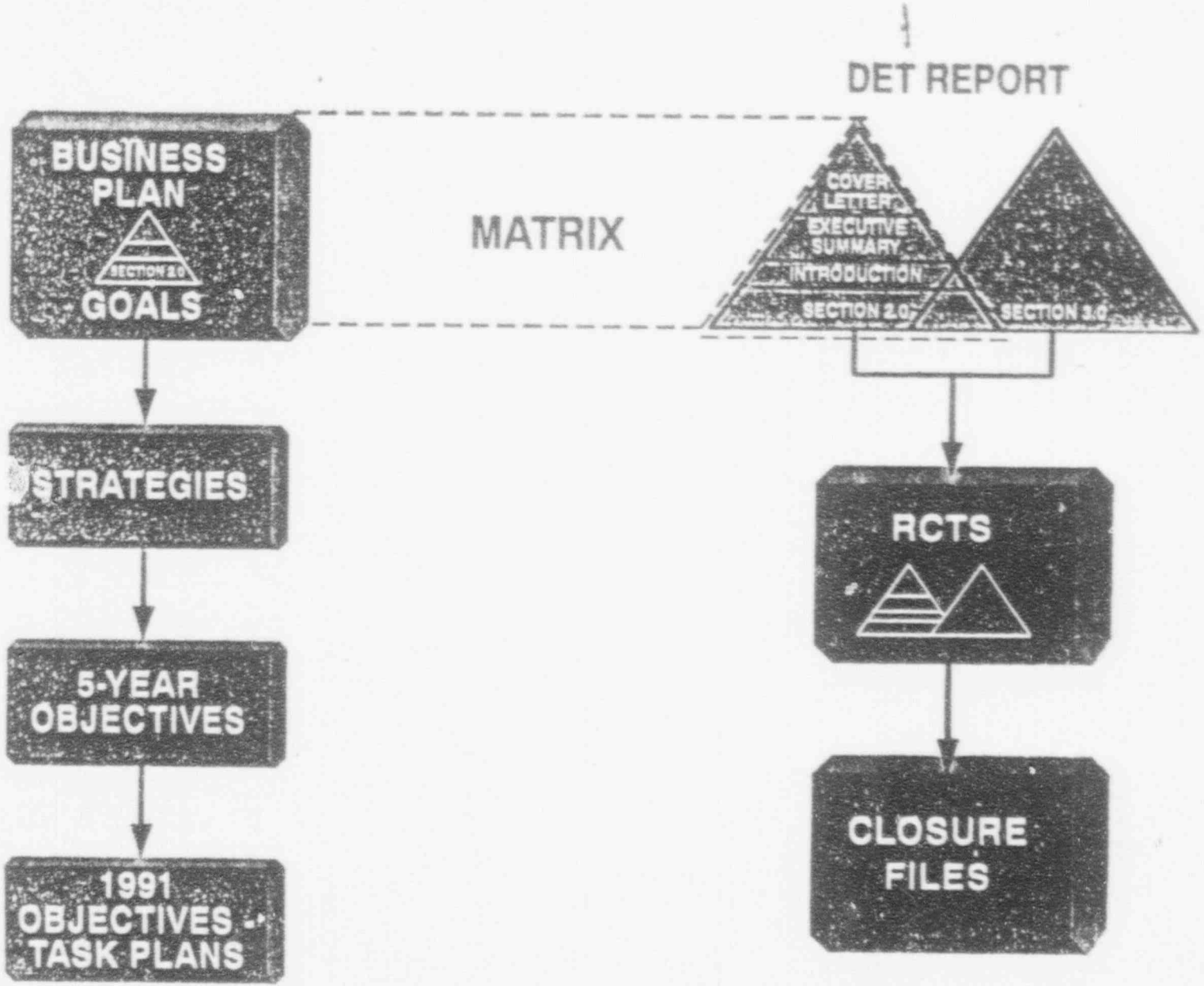
DET REPORT

- TWO CATEGORIES OF OBSERVATIONS:
  - LETTER OF JULY 30, 1990

MATRIX
- COVER LETTER - EXECUTIVE SUMMARY - INTRODUCTION (1.0) - EVALUATION RESULTS (2.0)

SECTION 3.0

- ALL OBSERVATIONS WILL BE ENTERED INTO RCTS
  - MECHANISM TO ASSURE ALL OBSERVATIONS ADDRESSED/CLOSED
  - RESPONSIBILITY IDENTIFIED
  - SCHEDULED DUE DATE
  - PERIODIC UPDATES
- CLOSURE PACKAGES


DET REPORT
BUSINESS PLAN
SECTION 2.0
GOALS
MATRIX
COVER LETTER
EXECUTIVE SUMMARY
INTRODUCTION
SECTION 2.0
SECTION 3.0
STRATEGIES
5-YEAR OBJECTIVES
1991 OBJECTIVES - TASK PLANS
RCTS
CLOSURE FILES

JNB-4
10/3/90

DET REPORT
STATUS AND TRACKING

- SEVERAL LEVELS OF REPORTING AND TRACKING

- BUSINESS PLAN RELATED DET ISSUES
  - BUSINESS PLAN TRACKING SYSTEM
    - TRACKS STATUS OF EACH TASK

- DET REPORT PERFORMANCE MONITORING REPORT
  - TASK PLAN STATUS INDICATORS
    - MONITOR STATUS OF COMPLETING TASKS
  - PERFORMANCE INDICATORS
    - MONITOR EFFECTIVENESS OF ACTIONS
  - STANDARD REP[illegible] EXAM[illegible]

- RCTS
  - ASSURES EACH DET OBSERVATION TRACKED/CLOSED
  - RESPONSIBILITIES:
    - SECTION 3.0: ACCOUNTABLE FOR CLOSURE
    - ALL OTHER SECTIONS: TRACK PROGRESS/ASSURE CLOSURE

- DET REPORT CLOSURE FILES
  - PROVIDES DOCUMENTATION/BASIS FOR CLOSURE

JNB - 5
10/3/90

(4)

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

DEC 3 1 1990

MEMORANDUM FOR: James M. Taylor
Executive Director for Operations

FROM: John B. Martin
Regional Administrator

SUBJECT: STATUS OF STAFF ACTIONS RELATED TO THE DIAGNOSTIC EVALUATION AT PALO VERDE

In my memorandum to you dated September 14, 1990, I stated that I would provide an updated status report regarding the actions related to the Diagnostic Evaluation performed at Palo Verde. The present status of these actions is summarized below.

Action Items 1 and 3: "Review and evaluate the adequacy of the licensee's response to the DET report. Conduct detailed discussions of the licensee's Business Plan."

Status - Management meetings were held in the Region V office on October 3 and November 5, 1990 during which all categories of the Business Plan were discussed. We focused upon the motor operated valve and maintenance improvement programs in some detail. The Business Plan identifies specific objectives to meet improvement goals and assigns specific responsibilities and due dates. My assessment is that the Business Plan is a workable method for focusing organizational resources and monitoring progress toward established goals. We will continue to monitor the licensee's effectiveness in its implementation.

Action Items 2 and 4: "Evaluate and issue any enforcement action. Review the implementation of the licensee's corrective actions to the DET findings and enforcement actions."

Status - As I reported earlier, the licensee has contested four of the eleven violations cited. We will continue discussions with the licensee on these citations, and will continue our review of the licensee's contentions relative to the DET findings. We expect our response to be issued in January 1991.

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DEC 3 1 1990

We have reviewed and closed two of the remaining seven violations. In addition to completing our review of the enforcement related corrective actions, we have programmed a review of the licensee's motor operated valve and check valve programs into the FY91 Master Inspection Plan using Safety Assessment/Quality Verification modules. Finally, these areas have received additional emphasis during the routine inspection program.

for John B. Martin
Regional Administrator

Wong

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

January 7, 1991

Docket Numbers 50-528, 50-529, and 50-530

Arizona Public Service Company
P.O. Box 53999, Station 9012
Phoenix, Arizona 85072-2034

Attention: Mr. W. F. Conway
Executive Vice President, Nuclear

Gentlemen:

SUBJECT: REPLY TO APS LETTER REGARDING DIAGNOSTIC EVALUATION TEAM REPORT NOTICE OF VIOLATION (INSPECTION REPORT 50-528, 529, 530/89-56)

In a letter dated July 17, 1990, a Notice of Violation was issued related to the findings from the Diagnostic Evaluation Team Report for the Palo Verde Nuclear Generating Station. You provided a response to the Notice of Violation in a letter dated August 31, 1990. In that response you admitted some of the violations and while you disagreed with certain violations, you stated that the underlying concerns associated with these violations were addressed. We will review your corrective actions to the violations and the issues raised in the Diagnostic Evaluation Team Report in subsequent inspections.

Enclosure 1 to this letter provides our reply regarding those violations which you contested. In summary, after careful review of your response and discussions with your staff, we have concluded that the contested violations should be withdrawn. For these violations our records will be modified to reflect withdrawal of the violations.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice", a copy of this letter and the enclosure will be placed in the NRC's Public Document Room.

Should you have any questions concerning this letter, we will be pleased to discuss them with you.

Sincerely,

R. P. Zimmerman, Director
Division of Reactor Safety
and Projects

Enclosure: As Stated

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cc w/enclosure:
Mr. O. Mark DeMichele, APS
Mr. James M. Levine, APS
Mr. Jack N. Bailey, APS
Mr. E. C. Simpson, APS
Mr. Blaine E. Ballard, APS
Mr. Thomas R. Bradish, APS
Mr. Robert W. Page, APS
Mr. Arthur C. Gehr, Esq., Snell & Wilmer
Mr. Al Gutterm. . Newman & Holtzinger P.C.
Mr. Charles R. Kocher, Esq., Assistant Council, SCE Company
Mr. James A. Boeletto, Esq., SCE Company
Mr. Charles B. Brinkman, Combustion Engineering, Inc.
Mr. Charles Tedford, Director, Arizona Radiation Regulatory Agency
Chairman, Maricopa County Board of Supervisors
Mr. John W. Norman, Chief, Arizona Corporation Commission

RESPONSE TO CONTESTED VIOLATIONS
DIAGNOSTIC EVALUATION TEAM REPORT NOTICE OF VIOLATION

On July 17, 1990, a Notice of Violation was issued for violations identified during an NRC Diagnostic Evaluation. The licensee responded to the Notice on August 31, 1990. In the licensee's response, the licensee admitted seven of the violations and contested the validity of four violations. A summary of the licensee's response for the contested violations and our evaluation and conclusions are as follows:

A. Violation I.B.2 - This violation involved the failure to track the number of cycles of an overthrust condition which occurred on Limitorque motor operators to assure that the maximum number of cycles recommended by Limitorque were not exceeded. The licensee responded that because of the design conservatism of the Limitorque actuators, the actual final design thrust limit is 110 percent of the published rating. While at one time torque switch trip setpoints were above 100 percent, the final thrusts for these valves did not exceed 110 percent as evidenced by MOVATS testing and APS engineering evaluation. In addition, the licensee states that Limitorque recommends replacement of the actuator after 100 cycles when the torque switch setpoints are set at 110 percent of the rated thrust and that APS does not set these setpoints such that the final thrust would exceed 110 percent.

NRC response - In that the final actual thrusts for motor operated valves were shown by analyses or actual testing to not exceed 110 percent of the rated thrust, the NRC agrees that a violation as stated in the Notice of Violation did not occur and therefore, this violation should be withdrawn.

B. Violation I.B.3 - This violation involves the apparent contradiction between Notes 14 and 15 of Document 13-J-ZZI-004 related to the removal of torque switch limiter plates. The licensee disagrees that the notes are contradictory and that the limiter plate does not act as a locking device. The licensee argues that the limiter plates were installed by Limitorque to control the maximum torque switch settings and that because: (1) APS is now using MOVATS to set the torque switch settings, and (2) torque switch setpoints are established in the MOV data base document, administrative controls are sufficient to control the settings when the limiter plate must be removed to increase the switch setting above the range of the limiter plate.

NRC response - It is the NRC's view that Notes 14 and 15 are at best confusing as to whether torque switch limiter plates should be left in place or not following MOVATS testing. Note 14 apppears to recommend leaving the limiter plate in place if possible after testing, and Note 15 appears to recommend not installing the limiter plate after testing.

Based on discussions with APS personnel, we have confirmed that the basis of the maximum thrust values in Document 13-J-ZZI-004 assure that the design basis of the valve and valve components are maintained and that MOVATS testing assures that the torque switch setpoints are within the values established in the MOV data base document. Therefore, in the

event that torque limiter plates are removed after MOVA testing, there is assurance that valve design requirements are met.

We note that Limitorque Maintenance Update 89-1, in discussing maximum torque switch settings, states, "Removal of the torque switch limiter plate to obtain a higher torque switch setting risks the possibility of damage to the valve/actuator or exceeding the motor's ability to generate output torque" and "Limitorque does not recommend removal of the torque switch limiter plate." These statements and recommendations clearly caution against the removal of the limiter plate.

While we conclude a violation did not occur, we recommend that APS carefully consider the benefits of maintaining the torque limiter plates in place for all MOVs.

C. Violation I.C.3 - This violation involves the apparent failure to follow work instructions in that a diesel generator cylinder cock was apparently left open after completion of a work order. The licensee disagrees that a violation occurred in that a Human Performance Evaluation was performed, and APS concluded that the valve was closed following maintenance, but may have opened slightly as a result of engine cooldown or vibration. The licensee indicates that if the cylinder cock was left open during testing, the increase in diesel engine noise would readily indicate an open cylinder cock.

NRC response - In that the exact causal factor has not been determined for why the cylinder cock was found slightly open and in that the licensee's explanation may be as probable as any other, the NRC concludes that this violation should be withdrawn.

D. Violation II.A - This violation involves the apparent failure of the licensee to take appropriate corrective actions to preclude repetition of the bending of an Auxiliary Feedwater valve stem. During replacement of a bent valve stem, the licensee apparently did not recognize the cause of the bent stem and during the maintenance process bent the replacement stem. The licensee disagrees with the violation in that the original valve stem was bent due to material strength problems and the replacement stem was bent as a result of a different problem, namely torque switch setpoint drift. Since these two problems are unrelated, the licensee argues that corrective actions for the original problem would not have precluded the bending of the replacement stem to the extent that it was caused by setpoint drift.

NRC response - Based on the response provided by APS and discussions with APS personnel, it appears that while some as-found information was lost regarding the original identification of the bent valve stem issue in Unit 3, enough information was available to conclude that an inappropriate torque switch setting was not a concern and that spring pack relaxation was considered as a reason that the motor was burned out with the torque switch contacts in the closed position. APS focused on the valve stem material properties. This was eventually confirmed in subsequent evaluations. The NRC agrees that this violation should be withdrawn.