



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
1600 E. LAMAR BLVD
ARLINGTON TX 76011-4511

October 22, 2015

Randall K. Edington
Executive Vice President, Nuclear/CNO
Mail Station 7602
Arizona Public Service Company
P.O Box 52034
Phoenix, Arizona 85072-2034

SUBJECT: PALO VERDE NUCLEAR GENERATING STATION – NRC INTEGRATED
INSPECTION REPORT 05000528/2015003, 05000529/2015003,
AND 05000530/2015003

Dear Mr. Edington:

On September 30, 2015, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at the Palo Verde Nuclear Generating Station Units 1, 2, and 3. On October 8, 2015, the NRC inspectors discussed the results of this inspection with R. Bement and other members of your staff. Inspectors documented the results of this inspection in the enclosed inspection report.

The NRC inspectors did not identify any findings or violations of more than minor significance.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, "Public Inspections, Exemptions, Requests for Withholding," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC's Public Document Room or from the Publicly Available Records (PARS) component of the NRC's

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Sincerely,

/RA/

Geoffrey Miller, Chief
Project Branch D
Division of Reactor Projects

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

Enclosures:

Inspection Report 05000528/2015003,
05000529/2015003, 05000530/2015003
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OFFICIAL RECORD COPY

Letter to R. Edington from G. Miller dated October 22, 2015

SUBJECT: PALO VERDE NUCLEAR GENERATING STATION – NRC INTEGRATED
INSPECTION REPORT 05000528/2015003, 05000529/2015003,
AND 05000530/2015003

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U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket: 05000528, 05000529, 05000530

License: NPF-41, NPF-51, NPF-74

Report: 05000528/2015003, 05000529/2015003, 05000530/2015003

Licensee: Arizona Public Service Company

Facility: Palo Verde Nuclear Generating Station

Location: 5801 South Wintersburg Road
Tonopah, AZ 85354

Dates: July 1, 2015 through September 30, 2015

Inspectors: C. Peabody, Senior Resident Inspector
D. Reinert, PhD, Resident Inspector
D. You, Resident Inspector

Approved By: Geoffrey B. Miller
Chief, Project Branch D
Division of Reactor Projects

SUMMARY

IR 05000528, 529, 530/2015002; 7/1/2015 – 9/30/2015; Palo Verde Nuclear Generating Station Units 1, 2, and 3, Integrated Inspection Report

The inspection activities described in this report were performed between July 1, 2015 and September 30, 2015, by the resident inspectors at Palo Verde Nuclear Generating Station.

The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process."

No findings were identified.

PLANT STATUS

Units 1, 2, and 3 operated at 100% power for the entire inspection period.

On September 16, 2015 Unit 2 declared a Notice of Unusual Event upon the rapid combustion of a Non-Class 1E 480V load center breaker that was being returned to service following maintenance.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01)

.1 Readiness for Seasonal Extreme Weather Conditions

a. Inspection Scope

On September 21, 2015, the inspectors completed an inspection of the station's readiness for seasonal extreme weather conditions. The inspectors reviewed the licensee's adverse weather procedures for severe thunderstorms during the monsoon season and evaluated the licensee's implementation of these procedures. The inspectors verified that prior to the monsoon season, the licensee had corrected weather-related equipment deficiencies identified during the previous monsoon season.

The inspectors selected a risk-significant system that was required to be protected from severe thunderstorm and flooding:

- Essential spray pond system

The inspectors reviewed the licensee's procedures and design information to ensure the system would remain functional when challenged by adverse weather. The inspectors verified that operator actions described in the licensee's procedures were adequate to maintain readiness of these systems. The inspectors walked down portions of these systems to verify the physical condition of the adverse weather protection features.

These activities constituted one sample of readiness for seasonal adverse weather, as defined in Inspection Procedure 71111.01.

b. Findings

No findings were identified.

.2 Readiness for Impending Adverse Weather Conditions

a. Inspection Scope

On July 18, 2015 the inspectors completed an inspection of the station's readiness for impending adverse weather conditions. The inspectors reviewed plant design features,

the licensee's procedures to respond to tornadoes and high winds, and the licensee's implementation of these procedures. The inspectors evaluated operator staffing and accessibility of controls and indications for those systems required to control the plant.

These activities constitute one sample of readiness for impending adverse weather conditions, as defined in Inspection Procedure 71111.01.

b. Findings

No findings were identified.

1R04 Equipment Alignment (71111.04)

.1 Partial Walkdown

a. Inspection Scope

The inspectors performed partial system walk-downs of the following risk-significant systems:

- September 9, 2015, Unit 2 plant protection system channels and setpoints
- September 9, 2015, Unit 3 plant protection system channels and setpoints
- September 17, 2015, Unit 1 containment spray system train A

The inspectors reviewed the licensee's procedures and system design information to determine the correct lineup for the systems. They visually verified that critical portions of the systems or trains were correctly aligned for the existing plant configuration.

These activities constituted three partial system walk-down samples as defined in Inspection Procedure 71111.04.

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05)

.1 Quarterly Inspection

a. Inspection Scope

The inspectors evaluated the licensee's fire protection program for operational status and material condition. The inspectors focused their inspection on six plant areas important to safety:

- July 23, 2015, Unit 1 plant computer room, fire zone 16
- July 23, 2015, Unit 3 plant computer room, fire zone 16
- July 30, 2015, Unit 2 remote shutdown room, fire zone 10
- July 30, 2015, Unit 3 remote shutdown room, fire zone 10
- August 1, 2015, Unit 1 main control room, fire zone 17

- August 13, 2015, Unit 2 auxiliary building 100' east electrical penetration room fire zone 42B

For each area, the inspectors evaluated the fire plan against defined hazards and defense-in-depth features in the licensee's fire protection program. The inspectors evaluated control of transient combustibles and ignition sources, fire detection and suppression systems, manual firefighting equipment and capability, passive fire protection features, and compensatory measures for degraded conditions.

These activities constituted six quarterly inspection samples, as defined in Inspection Procedure 71111.05.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program and Licensed Operator Performance (71111.11)

.1 Review of Licensed Operator Requalification

a. Inspection Scope

On August 8, 2015, the inspectors observed an evaluated simulator scenario performed by an operating crew. The inspectors assessed the performance of the operators and the evaluators' critique of their performance.

These activities constitute completion of one quarterly licensed operator requalification program sample, as defined in Inspection Procedure 71111.11.

b. Findings

No findings were identified.

.2 Review of Licensed Operator Performance

a. Inspection Scope

On August 29, 2015, the inspectors observed the performance of on-shift licensed operators in the plant's main control room. At the time of the observations, the plant was in a period of heightened activity due to Engineered Safety Features Actuation System relay testing. The inspectors observed the operators' performance of the following activities:

- Pre-job briefing for operators, electricians, and instrumentation and controls technicians
- Relay functional test setup and prerequisites

- Relay testing and expected actuation of safety features
- Relay testing and equipment restoration

In addition, the inspectors assessed the operators' adherence to plant procedures, including the conduct of shift operations procedure, 40DP-9OP02, and other operations department policies.

These activities constitute completion of one quarterly licensed operator performance sample, as defined in Inspection Procedure 71111.11.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

The inspectors reviewed two instances of degraded performance or condition of safety-related structures, systems, and components (SSCs):

- September 15, 2015, Unit 3 engineered safety features actuation system failed manual actuation switches
- September 22, 2015, Unit 2 diverse auxiliary feedwater system, constant error signals due to degraded fiber optic cables

The inspectors reviewed the extent of condition of possible common cause SSC failures and evaluated the adequacy of the licensee's corrective actions. The inspectors reviewed the licensee's work practices to evaluate whether these may have played a role in the degradation of the SSCs. The inspectors assessed the licensee's characterization of the degradation in accordance with 10 CFR 50.65 (the Maintenance Rule), and verified that the licensee was appropriately tracking degraded performance and conditions in accordance with the Maintenance Rule.

These activities constituted completion of two maintenance effectiveness samples, as defined in Inspection Procedure 71111.12.

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13)

a. Inspection Scope

On September 9, 2015, the inspectors reviewed the weekly risk assessment for Unit 2. This risk assessment is performed by the licensee prior to changes in plant configuration and the risk management actions taken by the licensee in response to elevated risk.

The inspectors verified that this risk assessment was performed timely and in accordance with the requirements of 10 CFR 50.65 (the Maintenance Rule) and plant procedures. The inspectors reviewed the accuracy and completeness of the licensee's risk assessment and verified that the licensee implemented appropriate risk management actions based on the result of the assessment.

Additionally on August 14, 2015, the inspectors also observed portions of emergent work to repair a 4-way nitrogen supply valve to main steam isolation valve 181. This emergent work activity that had the potential to cause an initiating event, or to affect the functional capability of mitigating systems.

The inspectors verified that the licensee appropriately developed and followed a work plan for this activity. The inspectors verified that the licensee took precautions to minimize the impact of the work activity on unaffected structures, systems, and components (SSCs).

These activities constitute completion of two maintenance risk assessments and emergent work control inspection samples, as defined in Inspection Procedure 71111.13.

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments (71111.15)

a. Inspection Scope

The inspectors reviewed five operability determinations and functionality assessments that the licensee performed for degraded or nonconforming structures, systems, or components (SSCs):

- August 27, 2015, operability determination of Unit 2 control element assembly #88 upper gripper coil current noise
- August 31, 2015, operability determination of the steam generators due to revised input parameters used for UFSAR Chapter 15 accident analysis
- September 10, 2015, functionality assessment of Unit 2 train A essential cooling water radiation monitor following failed source check
- September 23, 2015, operability determination of Unit 1 high pressure safety injection pump B oil leakage
- September 24, 2015, functionality assessment of Unit 3 reactor coolant pump D circuit breaker half trip

The inspectors reviewed the timeliness and technical adequacy of the licensee's evaluations. Where the licensee determined the degraded SSC to be operable or functional, the inspectors verified that the licensee's compensatory measures were appropriate to provide reasonable assurance of operability or functionality. The

inspectors verified that the licensee had considered the effect of other degraded conditions on the operability or functionality of the degraded SSC.

These activities constitute completion of five operability and functionality review samples, as defined in Inspection Procedure 71111.15.

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed five post-maintenance testing activities that affected risk-significant structures, systems, or components (SSCs):

- August 17, 2015, Unit 1 bistable comparator card for high-high containment pressure channel D alarm
- August 11, 2015, Unit 2 charging pump A post maintenance test after conducting a test instruction
- August 26, 2015, Unit 3 bistable comparator card for high-high containment pressure channel D alarm
- September 2, 2015, Unit 1 auxiliary feedwater actuation system switch replacement
- September 9, 2015, Unit 2 safety injection valve #676 circuit breaker contact replacement

The inspectors reviewed licensing- and design-basis documents for the SSCs and the maintenance and post-maintenance test procedures. The inspectors observed the performance of the post-maintenance tests to verify that the licensee performed the tests in accordance with approved procedures, satisfied the established acceptance criteria, and restored the operability of the affected SSCs.

These activities constitute completion of five post-maintenance testing inspection samples, as defined in Inspection Procedure 71111.19.

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors observed eight risk-significant surveillance tests and reviewed test results to verify that these tests adequately demonstrated that the structures, systems, and components (SSCs) were capable of performing their safety functions:

In-service tests:

- August 20, 2015, Unit 2 essential chilled water pump B

Reactor coolant system leak detection tests:

- September 28, 2015, Unit 2 reactor coolant system water inventory calculation

Other surveillance tests:

- July 9, 2015, Unit 3 core protection calculator channel A functional test
- July 14, 2015, Unit 2 supplementary protection system channel A response time testing
- August 1, 2015, Unit 3 reactor coolant system specific activity testing
- August 19, 2015, Unit 2 plant protection system channel A functional test
- August 29, 2015, Unit 2 engineered safety features actuation system train A subgroup relay functional testing
- September 25, 2015, Unit 3 safety injection tank narrow range level verifications

The inspectors verified that these tests met technical specification requirements, that the licensee performed the tests in accordance with their procedures, and that the results of the test satisfied appropriate acceptance criteria. The inspectors verified that the licensee restored the operability of the affected SSCs following testing.

These activities constitute completion of eight surveillance testing inspection samples, as defined in Inspection Procedure 71111.22.

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation (71114.06)

.1 Training Evolution Observation

a. Inspection Scope

On August 8, 2015, the inspectors observed simulator-based licensed operator requalification training that included implementation of the licensee's emergency plan.

The inspectors verified that the licensee's emergency classifications, off-site notifications, and protective action recommendations were appropriate and timely. The inspectors verified that any emergency preparedness weaknesses were appropriately identified by the evaluators and entered into the corrective action program for resolution.

These activities constitute completion of one training observation sample, as defined in Inspection Procedure 71114.06.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness, Public Radiation Safety, Occupational Radiation Safety, and Security

40A1 Performance Indicator Verification (71151)

.1 Reactor Coolant System Specific Activity (BI01)

a. Inspection Scope

The inspectors reviewed the licensee's reactor coolant system chemistry sample analyses for the period of July 1, 2014 through June 30, 2015 to verify the accuracy and completeness of the reported data. The inspectors observed a chemistry technician obtain and analyze a reactor coolant system sample on August 1, 2015. The inspectors used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the reported data.

These activities constituted verification of the reactor coolant system specific activity performance indicator Units 1, 2, and 3, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.11 Reactor Coolant System Identified Leakage (BI02)

a. Inspection Scope

The inspectors reviewed the licensee's records of reactor coolant system identified leakage for the period of July 1, 2014 through June 20, 2015 to verify the accuracy and completeness of the reported data. The inspectors observed the performance of a reactor coolant system water inventory determination in accordance with station procedure 40ST-9RC02 on September 28, 2015. The inspectors used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the reported data.

These activities constituted verification of the reactor coolant system leakage performance indicator Units 1, 2, and 3, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

40A2 Problem Identification and Resolution (71152)

.1 Routine Review

a. Inspection Scope

Throughout the inspection period, the inspectors performed daily reviews of items entered into the licensee's corrective action program and periodically attended the licensee's condition report screening meetings. The inspectors verified that licensee personnel were identifying problems at an appropriate threshold and entering these problems into the corrective action program for resolution. The inspectors verified that the licensee developed and implemented corrective actions commensurate with the significance of the problems identified. The inspectors also reviewed the licensee's problem identification and resolution activities during the performance of the other inspection activities documented in this report.

b. Findings

No findings were identified.

40A3 Follow-up of Events and Notices of Enforcement Discretion (71153)

NRC Event Number 51403: Notice of Unusual Event Due to Rapid Combustion of a Load Center Breaker

On September 16, 2015 at 11:01PM, following routine maintenance, the licensee attempted to energize and return to service non-class load center breaker 2ENGN-L04. As the breaker was closed in it failed catastrophically. Local operators observed rapid combustion and resultant charring of the breaker enclosure and housing. The rapid combustion self-extinguished immediately following this audible and visible combustion event. As a result, control room operators declared an emergency classification for notice of unusual event, the lowest of the four emergency classifications designated by the NRC, in accordance with EAL HU2.2 Explosion. The plant continued to operate at 100% power through the event with normal offsite and onsite electrical power distribution alignments. Load center breaker 2ENGN-L04 supplies power to non-essential service loads in the fuel building and has no immediate impact to plant operations or safety mitigating systems. The plant remained stable and the event did not adversely affect the safe operation of the plant or the health and safety of the public. The notice of unusual event was cleared at 4:17AM on September 17, 2015. Spent fuel movement was not in progress at the time of the event. The inspectors responded to the event to verify that

the information provided by the ENS communicator was complete and accurate and no further Agency response was warranted.

These activities constitute completion of one event follow-up sample, as defined in Inspection Procedure 71153.

4OA6 Meetings, Including Exit

Exit Meeting Summary

On October 8, 2015, the inspectors presented the inspection results to R. Bement, and other members of the licensee staff. The licensee acknowledged the issues presented. The licensee confirmed that any proprietary information reviewed by the inspectors had been returned or destroyed.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

R. Bement, Site VP Operations
M. Laca, Site VP Support
J. Cadogan, Engineering VP
C. Kharri, Plant Manager
D. Vogt, Unit 2 Assistant Plant Manager
G. Andrews, Director Regulatory Affairs
E. Dutton, Nuclear Assurance Director
M. McGhee, Regulatory Compliance Section Leader
S. Dornsief, Regulatory Compliance

NO DOCKET ITEMS OPENED, CLOSED, OR DISCUSSED IN THIS REPORT

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Procedures

| <u>Number</u> | <u>Title</u> | <u>Revision/Date</u> |
|---------------|--|----------------------|
| 40AO-9ZZ21 | Acts of Nature | 34 |
| 01DP-0XX01 | Control and Monitoring of Potential Tornado Borne Missiles | 3 |

Condition Reports (CRs)

15-07743

Miscellaneous

| <u>Number</u> | <u>Title</u> | <u>RevisionDate</u> |
|---------------|--------------------------------------|---------------------|
| | Updated Final Safety Analysis Report | 18 |

Section 1R04: Equipment Alignment

Procedures

| <u>Number</u> | <u>Title</u> | <u>Revision/Date</u> |
|---------------|---|----------------------|
| 40ST-9ZZM1 | Operations Mode 1 Surveillance Logs | 66 |
| 40ST-9SI13 | LPSI and CS System Alignment Verification | 32 |
| 73ST-9SI06 | Containment Spray Pumps and Check Valves – Inservice Test | 40 |

Section 1R05: Fire Protection

Procedures

| <u>Number</u> | <u>Title</u> | <u>Revision/Date</u> |
|---------------|--|----------------------|
| 30DP-9WP11 | Scaffolding Instructions | 25 |
| 14OP-9FP03 | Fire Protection System (Halon) | 6 |
| 14FT-9FP22 | Halon System Inspection | 10 |
| 33FT-9FP03 | Halon Fire Suppression System Damper Functional Test | 6 |

Condition Reports (CRs)

| | | | |
|----------|----------|----------|----------|
| 15-05380 | 15-04887 | 15-05014 | 15-04663 |
|----------|----------|----------|----------|

Miscellaneous

| <u>Number</u> | <u>Title</u> | <u>Revision/Date</u> |
|---------------|---|----------------------|
| | Pre-Fire Strategies Manual | 25 |
| | PVNGS Updated FSAR | 17 |
| | Installation Specification for Seismic Cat IX and Non-Seismic Scaffolding | 23 |
| 13-MM-0658 | Fire Protection Halon System | |

Section 1R11: Licensed Operator Requalification Program and Licensed Operator Performance

Procedures

| <u>Number</u> | <u>Title</u> | <u>Revision/Date</u> |
|---------------|--|----------------------|
| EP-0901 | Classifications | 9 |
| EP0801A | EAL Classification Chart | 0 |
| 40DP-9OP02 | Conduct of Shift Operations | 68 |
| 40DP-9OP07 | Operations Department Operating Guideline Instructions | 21 |
| 40DP-9OP14 | Control of Operator Information Aids | 33 |
| 40DP-9OP15 | Operator Challenges and Discrepancy Tracking | 27 |
| 36ST-9SA01 | ESFAS Train A Subgroup Relay Functional Test | 49 |

Miscellaneous

| <u>Number</u> | <u>Title</u> | <u>Revision/Date</u> |
|---------------|------------------|----------------------|
| SES-0-04-I-09 | Dropped CEA/SGTR | 0 |

Section 1R12: Maintenance Effectiveness

Procedures

| <u>Number</u> | <u>Title</u> | <u>Revision/Date</u> |
|---------------|------------------|----------------------|
| 70DP-0MR01 | Maintenance Rule | 40 |

Condition Reports (CRs)

| | | |
|----------|----------|----------|
| 15-07012 | 15-04184 | 15-05610 |
|----------|----------|----------|

Work Orders (WOs)

| | |
|---------|---------|
| 4559074 | 3044837 |
|---------|---------|

Miscellaneous

| <u>Number</u> | <u>Title</u> | <u>Revision/Date</u> |
|---------------|--------------------------------------|----------------------|
| | Palo Verde Maintenance Rule Database | |
| | System Health Report – SA | March 18, 2015 |

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

Procedures

| <u>Number</u> | <u>Title</u> | <u>Revision/Date</u> |
|---------------|---|----------------------|
| 02DP-9RS01 | Operational Risk Management | 1 |
| 40DP-9RS01 | Operations Department Online Nuclear Risk Management Mode 1 and 2 | 3 |
| 40DP-9AP21 | Protected Equipment | 7 |
| 51DP-9OM03-02 | Emergent Work and Scope Expansion Decision Guide | 1 |

Condition Reports (CRs)

15-06090 15-06019

Miscellaneous

| <u>Number</u> | <u>Title</u> | <u>Revision/Date</u> |
|---------------|---|----------------------|
| | Scheduler's Evaluation for PV Unit 3 | August 14,2015 |
| | Scheduler's Risk Evaluation for PV Unit 2 | September 9, 2015 |
| | Integrated Risk Screening Determination | |

Section 1R15: Operability Determinations and Functionality Assessments

Procedures

| <u>Number</u> | <u>Title</u> | <u>Revision/Date</u> |
|---------------|--|----------------------|
| 40DP-9OP26 | Operations Condition Reporting Process and Operability Determination/Functional Assessment | 41 |

Condition Reports (CRs)

| | | | |
|----------|----------|----------|----------|
| 15-05006 | 15-06317 | 15-06289 | 15-06407 |
| 15-06618 | 15-06623 | 15-07942 | 14-03073 |
| 15-06963 | | | |

Miscellaneous

| <u>Number</u> | <u>Title</u> | <u>Revision/Date</u> |
|---------------|---|----------------------|
| CNOA0337 | Applicability of Palo Verde U2 RSG/PU CENTS base deck to PVNGS U1 and U3 RSG/PU | 0 |
| CN-OA-04-24 | PVNGS Chapter 15 CENTS base deck compilation | 0 |
| 15-05006-002 | Level 3 Evaluation Report 15-05006-002 | August 20, 2015 |
| 15-06407 | Leak from HPSI pump couplings (prompt operability determination) | 0 |
| 4593834 | Operations Decision Making Instrument: Control Element Drive Mechanism Upper Gripper Coil Voltage and Current Data Collection in Support of CR 14-03073 | 1 |

Section 1R19: Post-Maintenance Testing

Procedures

| <u>Number</u> | <u>Title</u> | <u>Revision/Date</u> |
|---------------|--|----------------------|
| 36ST-9SB02 | PPS Bistable Trip Units Functional Test | 45 |
| 73TI-9CH08 | Charging Pump Suction Pressure Data Collection | 1 |
| 73ST-9CH06 | Charging Pumps – Inservice Test | 30 |
| 36ST-9SB02 | PPS Bistable Trip Units Functional Test | 45 |
| 36ST-9SB04 | PPS Functional Test – RPS/ESFAS Logic | 24 |

Condition Reports (CRs)

| | | |
|----------|----------|----------|
| 15-05831 | 15-00300 | 15-07118 |
|----------|----------|----------|

Work Orders (WOs)

| | | | | |
|---------|---------|---------|---------|---------|
| 4494367 | 4690280 | 4618102 | 4686201 | 4525859 |
| 4694614 | 4694617 | 4694755 | 4701173 | |

Section 1R22: Surveillance Testing

Procedures

| <u>Number</u> | <u>Title</u> | <u>Revision/Date</u> |
|---------------|--|----------------------|
| 36ST-9SB15 | Supplementary Protection System Response Time Test | 17 |
| 73ST-9EC01 | Essential Chilled Water Pumps – Inservice Test | 27 |
| 36ST-9SA01 | ESFAS Train A Subgroup Relay Functional Test | 49 |
| 36ST-9SB04 | PPS Functional Test – RPS/ESFAS Logic | 24 |
| 40ST-9RC02 | ERFDADS Calculation of RCS Water Inventory | 53 |
| 77ST-9SB17 | CPCS Channel A Functional Test | 10 |
| 74ST-9RC02 | Reactor Coolant System Specific Activity Surveillance Test | 15 |
| 74CH-9ZZ15 | Xenon-133, Iodine-131, and RCS Total Gross Activity and Dose Equivalents | 6 |
| 74OP-9SS01 | Primary Sampling Instrumentation | 40 |

Condition Reports (CRs)

15-04252 15-07848

Work Orders (WOs)

4510586 4521209 4685752

Section 1EP6: Drill Evaluation

Procedures

| <u>Number</u> | <u>Title</u> | <u>Revision/Date</u> |
|---------------|--------------------------|----------------------|
| EP-0901 | Classifications | 9 |
| EP-0801A | EAL Classification Chart | 0 |

Miscellaneous

| <u>Number</u> | <u>Title</u> | <u>Revision/Date</u> |
|---------------|------------------|----------------------|
| SES-0-04-I-09 | Dropped CEA/SGTR | 0 |

Section 40A1: Performance Indicator Verification

Procedures

| <u>Number</u> | <u>Title</u> | <u>Revision/Date</u> |
|---------------|--|----------------------|
| 40ST-9RC02 | ERFDADS Calculation of RCS Water Inventory | 53 |
| 74ST-9RC02 | Reactor Coolant System Specific Activity Surveillance Test | 15 |

Miscellaneous

| <u>Number</u> | <u>Title</u> | <u>Revision/Date</u> |
|---------------|---|----------------------|
| | Technical Specifications | 192 |
| | Palo Verde RCS leak rate data spreadsheet | |

Section 40A3: Follow-up of Events and Notices of Enforcement Discretion

Condition Reports (CRs)

15-07489

Work Orders (WOs)

4545213 4697058