March 31, 1983

Docket Nos. 50-528/529/530
Report Nos. 83-09,-06,-04

MEMORANDUM FOR: Dan Sternberg, Chief, Reactor Projects Branch 1

FROM: T. Young, Jr., Chief, Reactor Projects Section 2

SUBJECT: SPECIAL INSPECTION - PALO VERDE (ALLEGATIONS)

A special, unannounced inspection is scheduled at Palo Verde on April 4-8, 1983. A team consisting of myself, Al Johnson, John Burdoin, Gaston Fiorelli and Lou Vorderbrueggen will examine the facts surrounding as many of the allegations as we can during this inspection. Al and Gaston will primarily work on the new allegations in the Royce Affidavit. The rest of us will primarily work on the allegations in the Gunderson Affidavit.

/s/

T. Young, Jr., Chief
Reactor Projects Section 2

cc: A. Johnson
J. Burdoin
G. Fiorelli
L. Vorderbrueggen

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OFFICE	RV/db JEJ						
SURNAME	T.Young,Jr.						
DATE	3/31/83						

83-105

JUN 30 1983

Docket Nos. 50-528, 50-529, 50-530

Arizona Public Service Company
P. O. Box 21666
Phoenix, Arizona 85036

Attention: Mr. T. G. Woods, Jr.
Executive Vice President
Arizona Nuclear Power Project

Gentlemen:

Subject: Systematic Assessment of Licensee Performance (SALP) for the Palo Verde Nuclear Generating Station

This refers to the SALP for the Palo Verde Nuclear Generating Station (PVNGS) conducted by this office for the period July 1, 1981 through February 28, 1983, and discussed with your management staff on May 25, 1983. The report of our meeting is attached as Enclosure 1. A copy of our SALP report is included as Enclosure 2. Also attached as Enclosure 3 is a copy of our letter dated May 10, 1983, which transmitted our SALP report to you for review prior to our May 25 meeting.

Although a response to our SALP report was not required, your letter dated June 10, 1983 presented comments regarding certain activities discussed in the enclosed SALP report and at our May 25 meeting. A copy of this letter is attached as Enclosure 4. No changes were made to our SALP report as a result of your letter or our May 25 meeting.

During our May 25 meeting, you questioned our intent regarding a statement in the first paragraph, page 6, of our SALP report, which stated, "These actions indicate concern for the establishment of proper planning...." As we stated during our meeting, the intent of this statement was that the actions taken by APS indicated a concern on your part for the proper planning and control of the activities discussed.

Overall, our assessment determined that your activities associated with the PVNGS were conducted in a cooperative, professional, and safety-conscious manner during the period of this assessment. The SALP report identifies certain aspects of your activities which merit your continued attention, and which will be examined by our ongoing inspection program. In general, however, we recognize your high level of safety performance and trust that it will continue in the future.

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We consider that this SALP process and our meeting with you were beneficial and reinforced mutual understanding of your activities and our regulatory program. Your cooperation is appreciated.

In accordance with 10 CFR 2.790(a), a copy of this letter and its enclosures will be placed in the NRC Public Document Room. No reply to this letter is required.

Sincerely,

J. B. Martin
Regional Administrator

Enclosures:
As stated

bcc: RSB/Document Control Desk (RIDS)

Distributed by RV (w/enc 1, 3 and 4):
SALP Board Members
B. H. Faulkenberry, RV
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Resident Inspector
Mr. Martin
pink & green copies (w/o enc)
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RV					
P. Johnson/dot	T. Young	J. Martin	P. Narbut	D. Sternberg	B. Faulkenberry
6/24/83	6/24/83	6/29/83	6/24/83	6/27/83	6/29/83

ENCLOSURE 1

U.S. NUCLEAR REGULATORY COMMISSION

REGION V

Report Nos. 50-528/83-16, 50-529/83-09, 50-530/83-07

Docket Nos. 50-528, 50-529, 50-530

License Nos. CPPR-141, CPPR-142, CPPR-143

Licensee: Arizona Public Service Company
P. O. Box 21666
Phoenix, Arizona 85036

Facility Name: Palo Verde Nuclear Generating Station - Units 1, 2 and 3

Meeting at: APS Corporate Offices (Deer Valley), Phoenix, Arizona

Meeting date: May 25, 1983

Inspector: P N Johnson 6/24/83
P. N. Johnson, Reactor Inspector Date Signed

Approved by: Talbert Young Jr. 6/24/83
T. Young, Jr., Chief Date Signed
Reactor Projects Section No. 2

Summary:

Meeting on May 25, 1983 (Report Nos. 50-528/83-16, 50-529/83-09 and 50-530/83-07)

Scope: Special management meeting to discuss the results of the NRC Region V assessment of the licensee's performance from July 1, 1981 to February 28, 1983, as part of the NRC's Systematic Assessment of Licensee Performance (SALP) Program. Areas addressed are discussed in the enclosed report.

Results: A summary of the NRC licensee performance assessment was presented. No new enforcement actions were identified.

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DETAILS

1. Licensee Attendees

T. G. Woods, Jr., Executive Vice President, Arizona Nuclear Power Project
E. E. Van Brunt, Jr., Vice President, Nuclear Projects Management
G. C. Andognini, Vice President, Nuclear Operations
J. A. Roedel, Corporate Quality Assurance Manager
J. R. Bynum, Manager, Nuclear Operations
J. E. Kirby, PVNGS Startup Manager
A. C. Rogers, PVNGS, Nuclear Engineering Manager
D. B. Fasnacht, Nuclear Construction Manager
W. E. Ide, Construction Quality Assurance/Quality Control (QA/QC) Manager
E. L. Lewis, Manager, Technical and Administrative Support
G. E. Pankonin, PVNGS, Startup QA/QC Manager
C. N. Russo, PVNGS, Operations QA/QC Manager
B. S. Kaplan, Quality Systems and Programs Manager
B. F. Goodwin, Nuclear Records Management Manager
C. W. Lacey, Vice President and Manager, Domestic Operations, L. A. Power Division, Bechtel Corporation
A. C. Gehr, Attorney, Snell & Wilmer

2. NRC Attendees

B. H. Faulkenberry, Deputy Regional Administrator, Region V
D. M. Sternberg, Chief, Reactor Projects Branch No. 1, Region V
P. P. Narbut, Reactor Inspector (Construction), Region V
P. H. Johnson, Reactor Inspector (Operations), Region V
G. Fiorelli, Senior Resident Inspector (Operations)
L. E. Vorderbrueggen, Senior Resident Inspector (Construction)
E. Licitra, Project Manager, NRR

3. Discussion

A brief summary of the NRC's Systematic Assessment of Licensee Performance (SALP) program was presented to explain the basis and purpose of the program.

The NRC Region V assessment was discussed, including the assessment period, evaluation topics and methods, and assessment results. Licensee representatives stated that the NRC's comments were received in a positive manner, and discussed actions taken and planned to continue effective performance or address weaknesses identified during the SALP review.

After discussion of the SALP report was completed, the attendees discussed certain other topics related to Unit 1 startup. These included anticipated schedule, startup test program development, procedures and programs for plant operation, plant staffing, as-built documentation of electrical terminations, review of system completion and test documentation, and labeling of plant components. With regard to the last topic, the licensee stated that labels would be provided for pumps, valves, and other components important to plant operation or safety.

ENCLOSURE 2

U. S. NUCLEAR REGULATORY COMMISSION

REGION V

SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE

PALO VERDE NUCLEAR GENERATING STATION

APRIL 1983

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TABLES

I. Introduction

a. Purpose and Overview

The Systematic Assessment of Licensee Performance (SALP) is an integrated NRC staff effort to collect available observations on a periodic basis and evaluate licensee performance based on those observations with the objectives of improving the NRC Regulatory Program and Licensee performance.

The period of this assessment was July 1, 1981 through February 28, 1983. Evaluation criteria used during this assessment are discussed in Section III. Each criterion was applied using the "Attributes for Assessment of Licensee Performance" contained in NRC Manual Chapter 0516.

b. SALP Attendees

SALP Board Meeting: April 13, 1983, Region V Office

Board Members:

D. M. Sternberg, Chief, Reactor Projects Branch No. 1 (Board Chairman)
T. Young Jr., Chief, Reactor Projects Section No. 2
G. Fiorelli, Senior Operations Resident Inspector, PVNGS
L. Vorderbrueggen, Senior Construction Resident Inspector, PVNGS
P. H. Johnson, Principal Operations Inspector, RV
P. Narbut, Principal Construction Inspector, RV
J. Eckhardt, Former Principal Construction Inspector, RV
E. Licitra, Project Manager, NRR
H. North, Radiation Specialist, RV
O. Shackleton, Chief Investigator, OI

c. Background

(1) Previous Systematic Assessment of Licensee Performance

The previous Palo Verde Nuclear Generating Station SALP covered the period June 1, 1980 through June 30, 1981. The meeting with license management was held on October 6, 1981. The overall NRC evaluation concluded that the licensee had achieved improvements in previously identified areas of weakness and, in general, good performance in design and construction activities.

(2) Licensee Activities

The following major construction/operations activities were performed during the appraisal period:

Unit 1

Completion of containment post-tensioning system
Completion of containment structural integrity test and integrated leak rate test
Essential completion of piping and electrical cable installation
Completion of reactor vessel internals installation
Completion of ASME Section III preservice examinations
Completion of safety related water tank installations
Completion of battery installation in control building
Completion of repairs to steam separator/dryer supports and fasteners in steam generators
Continuing system turnover to licensee for prerequisite testing
Completion of rubber lining of water reservoir and evaporation pond
Completion of primary and secondary system hydrostatic testing
Achievement of condenser vacuum
Receipt of reactor fuel

Unit 2

Completion of containment dome concrete
Commencement of containment post-tensioning system installation
Completion of reactor vessel internals installation
Completion of safety related water tank installation
Completion of spray pond
Completion of underground diesel oil storage tanks
Continuing piping and electrical cable installation
Completion of battery installation in control building
Completion of repairs to steam separator/dryer supports and fasteners in steam generators
Commencement of systems turnover to startup

Unit 3

Installation of reactor vessel
Installation of steam generators
Installation of safety injection tanks and pressurizer
Installation of diesel generator
Continuing piping installation
Completion of containment dome liner
Commencement of containment dome concrete
Commmencement of spray pond
Commencement of safety related water tank installation

Construction Completion Progress

Date	Unit 1	Unit 2	Unit 3
July 1, 1981	88%	62%	22%
Feb.28, 1983	99%	95%	56%

(3) Inspection Activities:

The senior construction resident inspector was onsite for the entire SALP period. The senior operations resident established residency in August 1981. A second operations resident inspector was assigned in April 1982. Regional inspections were conducted by construction, operations, and radiological safety personnel.

A total of 61 regional and resident inspections were conducted involving 5,171 inspector hours.

Seven investigations by Office of Investigation personnel, were conducted involving 843 investigator hours.

Additional audits by NRR were conducted during this SALP period but are not captured in this report.

No inspections were conducted in the operations areas of surveillance, fire protection, emergency preparedness, security and safeguards or refueling since these activities are not in effect during the preoperational phase.

II. Summary of Results:

The summary of results for each operations and construction functional area are provided in tabular form below. The cateory 1, 2 or 3 ratings are explained in Section III of this report.

Performance Analysis Summary

Operations	No Basis	Category 1	Category 2	Category 3
0.1. Plant Operations			X	
0.2. Radiological Controls		X		
0.3. Maintenance			X	
0.4. Surveillance	X			
0.5. Fire Protection	X			
0.6. Emergency Preparedness	X			
0.7. Security and Safeguards	X			
Construction				
C.1. Soils and Foundations		X		
C.2. Containment and Other Safety Related Structures		X		
C.3. Piping Systems and Supports			X	
C.4. Safety Related Components		X		
C.5. Support Systems			X	
C.6. Electrical Power Supply and Distribution			X	
C.7. Instrumentation and Control			X	
C.8. Licensing Activities		X		

III. Criteria

The following evaluation criteria were applied to each functional area:

1. Management involvement in assuring quality.
2. Approach to resolution of technical issues from a safety standpoint.
3. Responsiveness to NRC initiatives.
4. Enforcement history.
5. Reporting and analysis of reportable events.
6. Staffing (including management).
7. Training effectiveness and qualification.

To provide consistent evaluation of licensee performance, the characteristics applicable to Cagegory 1, 2, and 3 performance were applied as defined in NRC Manual Chapter 0516, Part II and Table 1.

The NRC Manual Chapter definitions of the categories are:

Category 1: Reduced NRC attention may be appropriate. Licensee management attention and involvement are aggressive and oriented toward nuclear safety; licensee resources are ample and effectively used such that a high level of performance with respect to operational safety or construction is being achieved.

Cateogry 2: NRC attention should be maintained at normal levels. Licensee management attention and involvement are evident and are concerned with nuclear safety; licensee resources are adequate and are reasonably effective such that satisfactory performance with respect to operational safety or construction is being achieved.

Category 3: Both NRC and licensee attention should be increased. Licensee management attention or involvement is acceptable and considers nuclear safety, but weaknesses are evident; licensee resources appeared strained or not effectively used such that minimally satisfactory performance with respect to operational safety and construction is being achieved.

IV. Performance Analysis - July 1, 1981 - February 28, 1983

Operations 0.1. Plant Operations (Preoperational Testing)

During this period approximately 1,000 resident inspection hours were applied to the review and observation of startup testing in Unit 1. Two violations were identified. One involved the failure to follow administrative controls governing temporary modifications and process chemistry and the other violation involved failure to maintain proper plant cleanliness. Inspections conducted during the early stages of startup testing identified the following:

a. Frequent changes in the administrative controls governing the conduct of the testing program caused difficulties in communication of program requirements.

b. Lack of definition of responsibilities related to organizational interfaces caused delays in system completion and problems in the development of startup testing procedures.

c. Inadequate reviews of startup testing documentation for conformance to requirements required a significant amount of electrical retesting.

While some additional effort is still being expended by the applicant, the definition, development and implementation of startup controls and the achievement of project milestones have advanced significantly since the beginning of the period.

Organizational structure and staffing improvements were made during this period. Included in these changes was the formation of a new quality assurance/quality control organization reporting directly to the Executive Vice President. This action resulted in the increased independence of the QA/QC organization from the operating organization. Adjustments were also made to the administrative controls; for example; an independent review of prerequisite test data, the lack of which required the interuption of testing and the retesting of electrical systems. These actions indicate concern for the establishment of proper planning and assignment of priorities and for the control of activities through the use of defined procedures. Enforcement history has been limited to minor programmatic problems.

Progress was made during this assessment period in the development and implementation of administrative controls, programs, and procedures for the operating phase. However, the process to be used for reviewing and approving plant procedures has not yet been completely defined. Methods for tracking the status of procedure development and review are also needed. Attention by the applicant will be required to ensure that necessary procedures and controls are implemented prior to fuel load.

Staffing in the plant operations area has been essentially completed, except that the Operations Superintendent position has been vacant for an extended period. Strong management support for training of the operating staff has been evidenced in a plant-specific simulator and a sizeable and well qualified training staff.

Conclusion

Category 2

Board Recommendation

The Board recommends no change in the inspection effort.

Operations 0.2. Radiological Controls

A total of 170 inspection hours was expended in this functional area; 166 on Unit 1 and 2 hours each on Units 2 and 3. Management exhibited a continuing involvement in assuring quality as evidenced by the care in selection of personnel and in support of staffing. Further evidence is supplied by the level and quality of the commitment to training in this area.

No technical issues involving safety have been identified. The licensee's prompt and considered attention to other matters identified by the inspector provides assurance that safety is of primary concern. The preoperational tests observed have been conducted in a professional and workmanlike manner in accordance with approved procedures and FSAR commitments.

Delays in completion of the Auxiliary Building prevented timely occupancy by the radiation protection and chemistry staff and have consequently delayed portions of the inspection program.

There have been no items of noncompliance, deviations or reportable events identified in this functional area. Inspection of certain radwaste system components identified apparent departures from the FSAR equipment descriptions. The licensee stated that these matters would be examined and inconsistencies between the installed equipment and the FSAR description resolved shortly. Additionally certain gaseous effluent sampling systems do not appear to meet the required standards. The licensee had not responded concerning these matters at the conclusion of the evaluation period.

The licensee has exceeded the staffing levels specified in the FSAR and is recruiting to fill staff positions that exceed FSAR commitments. Management has been responsive to staff requests for increases in staffing levels based on functional group evaluations. The qualifications and abilities of functional group management appear to be appropriate.

The licensee is progressing well in the development of radiation protection and chemistry procedures.

Based on discussions with licensee personnel, review of training and qualification programs and observation of selected portions of the training program the licensee is considered to be committed to a quality training and qualification effort.

Conclusion

Category 1

On the basis of the preoperational inspection findings to date.

Board Recommendation

No change in inspection activity.

Operations 0.3. Maintenance

Approximately 50 resident inspector hours were applied to examining the applicant's maintenance programs. At present the applicant is in the process of developing procedures necessary for the support of corrective or major maintenance activities. The efforts of the maintenance staff in the support of preoperational test activity is diluting the effort to develop these procedures.

The preventative maintenance program at present is adequate for equipment where the facility is undergoing a preoperational test program. The program has been carried over somewhat from the construction program and reflects the fact that much equipment is in a layup condition. The program is currently defined, and training and qualification of personnel contribute to an adequate understanding of assigned work. Audits of maintenance activities are generally complete and through.

Conclusion

Category 2

Board Recommendation

The Board recommends no change in inspection effort.

Construction C.1. Soils and Foundations

There were no items of noncompliance in the soils and foundations area during this SALP period and this work has essentially been completed. There were two construction deficiency reports during this review period dealing with voids in the backfill under the south-east corner of the Auxiliary Building of both Units 1, 2 and 3. These were caused by breaks in the temporary firewater lines in those locations. Based on inspection and review of the activities to evaluate and correct this situation, the involvement of senior licensee management was apparent. They required a thorough feasibility study of the various repair options and a detailed procedure for the selected repair method, with permission to proceed only after prior management approval. In this and other technical issues with potential safety impact, the licensee has demonstrated clear understanding and conservatism with technically sound approaches in their resolutions.

Conclusion

Category 1.

Board Recommendation

The Board recommends no expenditure of inspection effort in this area beyond completion of the currently identified inspection program.

Construction C.2. Containment and Other Safety-Related Structures

The containment and other safety related structures were examined during portions of sixteen inspections during the SALP period. Two items of noncompliance were identified in the area; failure to follow procedure regarding washer size on structural steel bolting and failure to follow drawing requirements regarding structural steel fillet welds. None of these items were considered major and were not repetitive or indicative of a programmatic breakdown. Licensee corrective action concerning these items was prompt and effective.

One construction deficiency report was submitted by the licensee in this area, dealing with Unit 2 fuel building roof truss bolts elongating before reaching required torque. The licensee's corrective action was technically sound and thorough.

The lessons learned during construction of Unit 1 containment and other safety related structures appear to have been effectively used by the licensee's management to minimize problems during the construction of Unit 2 and 3 containments and other safety related structures.

Conclusion

Category 1.

Board Recommendation

The Board recommends no change in inspection effort.

Construction C.3. Piping Systems and Supports

Piping systems and supports were examined in portions of twenty inspections. Five items of noncompliance were identified in the following areas; failure to follow procedure for weld filler metal oven use; failure to meet requirements for capping pipe ends; failure to follow procedure for documenting an out of calibration condition of an automatic welding machine; performance of an unauthorized weld in a safety related drain line and an engineering failure to provide supports for a vertical piping segment connecting to a safety related drain line. None of these items were major or repetitive, however, the number of items indicates a possible programmatic weakness. The licensee's corrective action was timely and appears effective.

The licensee submitted twelve reportable construction deficiency reports in this area. Five were due to vendor supplied hardware problems; five were due to site construction, and two were engineering problems. The licensee's corrective action for the deficiencies was technically sound, thorough, and generally timely. Conservatism was generally exhibited in resolving the issues.

Conclusion

Category 2.

Board Recommendation

The Board recommends no change in inspection effort.

Construction C.4. Safety Related Components

Safety related components were examined in portions of eight inspections during this review period. Two items of noncompliance were identified; one regarding a departure from a specified requirement pertaining to welding of the main control panels to the floor embedments in the Unit 1 control room, and the second regarding failure to follow the procedure for access control during reactor vessel internals installation.

The licensee submitted one construction deficiency report regarding a leak in a reactor coolant pump pressure tap nozzle weld. This was apparently due to sensitization of the stainless alloy resulting from stress relief heat treatment activities in an adjacent area.

In this functional area, events have been properly identified, analyzed and appropriately reported. Corrective actions have been effective as indicated by prompt personnel retraining, procedure upgrading and lack of repetition. The nonconformance items were minor violations and were not considered indicative of a programmatic breakdown.

Conclusion

Category 1.

Board Recommendation

The Board recommends no change in the inspection effort.

Construction C.5. Support Systems

One inspection was conducted in this area (specifically, HVAC) in response to an allegation that non-safety class instruments were being installed where safety class instruments were specified. No items of noncompliance were identified.

The licensee did not submit any construction deficiency reports in this area during this review period. The licensee did, however, submit a report of a potentially reportable deficiency on December 22, 1982 and subsequently determined the item to be reportable after the close of this review period. The deficiency dealt with the same subject as the allegation mentioned above. HVAC installation is one of the few activities subcontracted by the licensee's constructor (Bechtel), and which is not given in-depth surveillance by Bechtel's QC group. This may have been a contributing factor in the safety/non-safety instrumentation situation identified above. Although licensee management has demonstrated awareness in all areas in the past and has exercised appropriate control in other support systems areas, the HVAC situation appears to be one that may not have been given thorough review and consideration.

Conclusion

Category 2

Board Recommendation

The Board recommends increased NRC inspection in the HVAC area.

Construction C.6. Electrical Power Supply and Distribution

The electrical power supply and distribution area was examined in portions of ten inspections. One item of noncompliance was identified for failure to follow the procedure for rework of a conduit support. This item was considered of a minor nature. Additionally, allegations in the electrical area were investigated. The inspection reports for those inspections of allegations covers a period of time extending beyond the end of this SALP period.

As a result of the allegations, the NRC reexamined certain aspects of electrical termination crimping. In response to the NRC investigation in this area, the licensee identified a deficiency in their hydraulic crimper calibration program. Even though their evaluation concluded that the resultant terminations were adequate, the licensee considered the item was a reportable construction deficiency due to the program breakdown. In addition, the licensee initiated an examination of other crimping in the plant and identified three other reportable construction deficiencies dealing with vendor problems (these were crimping problems in vendor supplied hardware).

The licensee's actions in this area are an example of the agressive management involvement in resolving potentially significant safety issues.

In addition to the four reportable construction deficiencies noted above, the licensee identified eight other reportable construction deficiencies in the electrical area, one being an engineering problem dealing with sizing of DC motor feeder cables.

Although there is evidence of agressive management involvement in correcting both licensee and NRC identified problems in the electrical area, the NRC considers that continued emphasis by the licensee's management and quality assurance organization is required to prevent the types of problems identified and correct those that are identified.

Conclusion

Category 2

Board Recommendation

The Board recommends no change in the inspection effort.

Construction C.7. Instrumentation and Control Systems

Instrumentation and Control Systems were examined in portions of four inspections. No items of noncompliance were identified.

The licensee submitted eleven construction deficiency reports in this area. Three were engineering related problems, three were field construction problems, four were vendor related problems including termination crimping and one was related to testing errors. The deficiencies related to engineering and field construction indicate a minor weakness in the attention given to detail in the review of engineering documents for clarity of requirements and satisfaction of code provisions, as well as minor errors which may have resulted from omissions or weaknesses in the training/indoctrination of personnel in their job requirements.

Conclusion

Category 2

Board Recommendation

The Board recommends no change in the inspection effort.

Construction C.8. Licensing Activities

The applicant's performance evaluation was based on a consideration of seven attributes as given in the NRC Manual Chapter. For most of the licensing actions considered in this evaluation, only three or four of the attributes were of significance. Therefore, the composite rating was heavily based on the following attributes:

- Management involvement
- Approach to resolution of technical issues
- Responsiveness
- Staffing

For the remaining three attributes, there was no basis for evaluation of Enforcement History and Reportable Events, and only a limited basis for evaluation of Training.

The evaluation was based on review of the following licensing activities:

- Emergency Planning
- Equipment Qualification
- Ultimate Heat Sink Tornado Missile Protection
- Control Room Design
- Resolution of Open Issues
- Independent Quality Assurance Evaluation

. Management Involvement and Control in Assuring Quality.

The overall rating for this attribute is Category 1. There is strong evidence of management involvement in all aspects of licensing activities. As an example, Arizona Public Service Company, on its own initiative, made a corporate decision to engage the services of an independent company for the purpose of performing a quality assurance evaluation of the Palo Verde project.

- Approach to Resolution of Technical Issues from a Safety Standpoint

The overall rating for this attribute is Category 1 with a few individual licensing actions identified as Category 2. The applicant has demonstrated a clear understanding of the issues resulting in technically sound approaches and generally provides timely resolution.

- Responsiveness

The overall rating for responsiveness is Category 2. The applicant generally provides timely responses and there are only a few longstanding licensing issues attibuted to the applicant. Acceptable resolutions are generally proposed.

- Staffing

Category 1 is assigned for this criterion although the ratings for individual licensing activities were equally divided between Categories 1 and 2. The individual ratings were based primarily on the NRC staff's perception of the applicant's staff capabilities in understanding and resolving technical issues.

- Training

There is a very limited basis during the report period to permit an overall rating of this criterion. Only one branch provided a rating (Category 1).

Conclusion

Cateogry 1

Based on the evaluation of Arizona Public Service Company's performance for a number of significant activities in the functional area of licensing with respect to the seven criteria, on overall performance rating of Category 1 is determined. Specifically management attention and involvement are evident in all matters relating to nuclear safety.

Board Recommendation

Continue the existing licensing regulatory relationship.

V. Supporting Data and Summaries

1. Construction Deficiency Reports (CDR's)

CDR's submitted as reportable 10 CFR 50.55(e) items during the reporting period are listed in Table 1. Table 1 provides the dates of the initial notification and the written report. The table also provides a description, the Arizona Public Service (APS) Deficiency Evaluation Report (DER) number, and the applicable functional area.

The Board noted that the licensee has demonstrated a commendable willingness to report all reportable and potentially reportable construction deficiency reports. For example, in 1982, the licensee internally evaluated 85 possible reportable items and determined that twenty-two were in fact reportable. The licensee's threshold for identifying an item as reportable (safety significant) is considered lower than other licensees'. Additionally, the majority of the 85 items were reported to the NRC promptly as potentially reportable items.

2. Inspection Activities

Inspection activities for the SALP period are provided in tabular form.

- Table 2 lists the inspections conducted during the SALP period.
- Table 3 provides a breakdown of NRC inspection manhours utilized at the three sites.

3. Investigation Activities

During the SALP period, the investigative staff of Region V, which on July 19, 1982 came under the Office of Investigations, initiated 7 investigations involving the Palo Verde Nuclear Generating Station. Regional inspection personnel initiated two additional investigations of allegations during the period. Four of the investigations were closed, and five remain open. At the close of the SALP period, one item of noncompliance had been issued pertaining to the allegations dealing with the installation of an unauthorized, undocumented weld in a radioactive floor drain system.

4. Enforcement Actions

There were no escalated enforcement actions during the SALP period.

Items of noncompliance issued during the SALP period are listed in Table 4. Tables 5 and 6 provide a summary of items of noncompliance for the operations functional areas and the construction functional areas respectively.

5. Management Conferences

One management conference was held during the appraisal period which dealt with the SALP subject of regulatory performance. That was the 1981 SALP meeting held October 16, 1981 (described in report 50-528/81-17).

Other management meetings were held as described below:

- July 8-9, 1981 - NRC management visit to the site to review the status of construction and to present the NRC inspection program for preoperational and startup testing and subsequent plant operation.

- October 13, 1981 - A meeting was held at the NRC Region V Office in Walnut Creek, California at the request of the licensee to discuss their actions involving three construction deficiencies reported under 10 CFR 50.55(e). The deficiencies involved discontinuities in vendor suipplied pipe spool welds, pipe elbow welds and failures in embedment plate bolts.

TABLE 1

REPORTABLE 10 CFR 50.55(e) REPORTS

Verbal Notif. Date	Written Report	Description	APS DER No.	Functional Area
6/12/81	Final 7/10/81	Electrically operated circuit breakers contain a bearing which may deform.	81-16	C6
6/18/81	Final 10/21/81	Pullman Power Products did not provide the required weld joint preparation on pipe supports.	81-17	C3
	Revision 6/8/82	Redetermined Not Reportable		
7/2/81	Final 7/30/81	Contrary to ASME III requirements, pipe support drawings for piping lugs require fillet welds in lieu of full penetration welds.	81-20	C3
7/15/81	Final 10/21/81	Certain Agastat relays have a premature time out condition.	81-22	C6
11/3/81	Final 11/25/81	Unit 2 Fuel Building roof truss bolts elongate before reaching required torque value.	81-29	C2
9/10/81	Final 10/15/81	Limitorque Valve Operators require replacement of shaft keys.	81-31	C3
10/7/81	Final 5/20/81	Void in backfill under Unit 1 Auxiliary Building due to break in temporary line.	81-35	C1
12/3/81	Final 12/30/81	Unit 1 Safety Injection System 8" motor operated valve by Borg Warner may fail as installed horizontally per design.	81-46	C3
12/15/81	Final 1/5/82	Unit 2 Diesel Generator defective cylinder head.	81-48	C6
12/15/81	Final 1/5/82	NSSS Water Level Transmitters may give erroneous readings due to variations of water leg.	81-49	C7
12/30/81	Final 8/23/82	Unit 1 Diesal Generator Wiring not separated per IEEE	81-51	C7

Verbal Notif. Date	Written Report	Description	APS DER No.	Functional Area
12/30/81	Final 5/24/82	Unit 1 Main Control Panel violates separation requirements for class IE and nonclass wiring.	81-53	C7
1/5/82	Final 9/29/82	Unit 3 waterline leak under Auxiliary Building.	81-55	C1
1/5/82	Final 7/6/82	Type HMA Relays have excess uninsulated leads which could cause short circuits.	81-57	C6
2/22/82	Final 3/23/82	Diesel Generator Lube Oil Strainer Baskets require replacement.	82-3	C7
3/3/82	Final 7/23/82	Instrument clamp drawings do not show locknuts required by ASME III.	82-4	C7
3/26/82	Final 6/8/82	Instrument clamps were installed without calculations for thermal expansion and seismic requirements.	82-12	C7
4/7/82	Final 7/7/82	Unit 1 and 2 Instrument installation bolting was used without issue control required by ASME.	82-14	C7
4/15/82	Final 7/14/82	Pipe supports are installed in Unit 1 with invalid heat numbers; not traceable.	82-15	C3
7/7/82	Final 8/6/82	Diesel Generator Control Panel wiring not crimped into terminal lugs.	82-36	C7
7/13/82	Final 11/15/82	Class IE wiring crimped with less pressure than specified due to lack of maintenance program for crimp tools.	82-37	C6
8/6/82	Final 12/28/82	Unit 1 Instrument AC circuit breakers were left set below allowable trip range after testing.	82-40	C7

Verbal Notif. Date	Written Report	Description	APS DER No.	Functional Area
8/2/82	Final 11/12/82	GE Switchgear in Unit 3 has loose wires due to improperly crimped termination lugs.	82-41	C6
7/9/82	Interim 8/9/82	Reactor Coolant Pump Pressure Tap nozzle weld leak due to overheating stainless alloy.	82-42	C4
8/13/82	Final 2/7/83	Main Control Panels in Unit 2 have improperly crimped termination lugs.	82-43	C7
8/13/82	Final 12/7/83	Load centers in Units 1, 2, 3 have improperly crimped termination lugs.	82-44	C6
8/26/82	Final 11/15/82	Safety Injection System Valves installed with motor operators not qualified for inside containment.	82-45	C3
9/1/82	Final 12/7/82	Instrument line check valves seized open by welding heat.	82-48	C7
9/8/82	Final 10/8/82	Unit 1 Steam Generator has pipe support incorrectly welded to sway struts instead of approved brackets.	82-49	C3
9/30/82	Final 2/22/83	Unit 1 Main Steam Valves have internal corrosion from exposure while removed for system hyrdrostatic test.	82-54	C3
9/30/82	Final 2/22/83	DC Motor feeder cable sizing may not provide sufficient voltage at full load.	82-55	C6
10/15/82	Final 12/28/82	Auxiliary feedwater valves are carbon steel instead of stainless, purchase error.	82-57	C3

Verbat Notif. Date	Written Report	Description	APS DER No.	Functional Area
10/21/82	Final 11/22/82	Diesel generator high voltage cubicles and foundations have bolts on 3 sides, but seismic qualification test used 4 sides.	82-58	C6
10/21/82	Final 11/22/82	Unit 3 diesel generator piston has nonconforming material certification.	82-60	C6
11/24/82	Final 12/23/82	Unit 1 Refueling Water Storage Tank Suction Strainers improperly secured due to oversize bolt holes.	82-75	C3
12/17/82	Final 1/17/83	Improperly crimped termination lugs in Unit 2 Water Chillers.	82-78	C6
12/22/82	Final 1/19/83	Mechanical Shock Absorbers do not permit 5 degree movement.	82-82	C3
1/18/83	Final 2/16/83	Diesel gen voltage reg. sys. trans. may not perform at high temperatures.	83-1	C6
2/3/83	Final 2/28/83	Undersize shock suppressor accepted by QC.	83-6	C3
2/3/83	Final 2/28/83	Rockwell Hydrogen Recombiner Qualification Test Failure	83-8	C5

TABLE 2

INSPECTIONS CONDUCTED (7/1/81 - 2/28/83)

PALO VERDE NUCLEAR GENERATING STATION

Unit 1 50-528 Report No.	Unit 2 50-529 Report No.	Unit 3 50-530 Report No.	Dates	Inspector(s)	Areas
81-09	81-09	81-09	7/6-7/10/81	Regional Construction	Piping, containment post tensioning instrumentation electrical
81-10	-	-	6/9-7/10/81	Regional	QA and administrative controls
81-11	-	-	7/8-7/9/81	Regional Operations	Management Visit
81-12	81-10	81-10	8/17-8/21/81	Regional Construction	Reactor Vessel internals, concrete, structural steel, electrical, preservice inspection, pipe supports
81-13	-	-	8/3-8/31/81	Resident Operations	Training, staffing, preoperational testing.
81-14	81-11	81-11	7/8-7/30/81	Resident Construction	Components, post-tensioning, piping, structural steel
81-15	81-12	81-12	8/3-9/4/81	Resident Construction	Post tensioning, internals, piping, pipe supports structure
81-16	-	-	9/1-9/30/81	Resident Operations	Preoperational testing, QA, maintenance, training
81-17	81-13	81-13	10/6/81	Regional and Resident	SALP Meeting
81-18	81-14	81-14	10/13/81	Regional	Meeting regarding piping and structural bolts
81-19	-	-	10/19/23/81	Regional Radiation	Radiation protection chemistry, training

Unit 1 50-528 Report No.	Unit 2 50-529 Report No.	Unit 3 50-530 Report No.	Dates	Inspector(s)	Areas
81-20	81-15	81-15	10/5-10/30/81	Regional Construction	Piping, structural steel, components concrete electrical instrumentation, preservice
81-21	-	-	10/1/10/30/81	Resident Operations	Preoperational testing, maintenance startup testing, QA
81-22	-	-	11/2-11/30/81	Resident & Regional Operations	Preoperational testing, QA, training
81-23	81-16	81-16	9/28-10/31/81	Resident Construction	Piping, components, liner welding penetrations
81-24	81-17	81-17	11/2-12/4/81	Resident Construction	Internals installation, piping, supports
81-25	-	-	12/1-12/24/81	Resident Operations	Startup testing, QA, test equipment
82-01	-	-	1/4-1/24/82	Resident Operations	Startup testing, QA
82-02	82-01	82-02	1/25-1/29/82	Regional Construction	Instrumentation, structural steel welding as built configuration
82-03	82-02	82-02	1/4-1/29/82	Resident Construction	Piping, penetrations, concrete 50.55(e) items
82-04	-	-	2/1-1/19/82	Resident Operations	Startup testing, maintenance and calibration TMI actions
82-05	-	-	2/16-2/19/82	Regional Radiation	TLD Placement, staffing, training
82-06	-	-	1/2-2/5/82	Regional Operations	Procedures, staffing, safety committee, QA
82-07	82-03	82-03	2/1-2/26/82	Resident Construction	Piping, liner welding, electrical records 50.55(e) items

Unit 1 50-528 Report No.	Unit 2 50-529 Report No.	Unit 3 50-530 Report No.	Dates	Inspector(s)	Areas
82-08	82-04	82-04	3/1-4/2/82	Resident Construction	Electrical 50.55(e)
82-09	-	-	3/22-4/30/82	Resident Operations	Reorganization, prerequisite testing, preoperational testing.
82-10	82-05	82-05	3/29-4/2/82	Regional Construction	Electrical, components, Bulletins and Circulars
82-11	-	-	5/10-5/14/82	Regional Radiation	Radiation protection, chemistry environmental protection, training
82-12	82-06	82-06	4/5-4/30/82	Resident Construction	Piping, electrical pepetrations, instrumentation 50.55(e) items
82-13	-	-	5/3-5/28/82	Resident Operations	Preoperational testing, QA, Maintenance
82-14	82-07	82-07	5/3-6/25/82	Resident Construction	Piping, Reactor Vessel and Steam Generator Installation, 50.55(e) items
82-15	-	-	4/26-4/28/82	Regional Operations	Procedures, training
82-16			Cancelled		
82-17	82-08	82-08	5/11-5/14/82	Regional Construction	Structural welding, pipe welding
82-18	-	-	6/8-6/10/82	Regional Operations	Procedures, safety committee
82-19	-	-	6/1-6/25/83	Resident Operations	Preoperational testing, training

Unit 1 50-528 Report No.	Unit 2 50-529 Report No.	Unit 3 50-530 Report No.	Dates	Inspector(s)	Areas
82-20	-	-	7/6-7/7/82	Regional Radiation	Radiochemistry
32-21	-	-	7/1-7/16/82	Resident Operations	Startup testing, maintenance
82-22	-	-	7/17-8/20/82	Resident Operations	Startup testing, training, maintenance, QA
82-23	-	-	8/23-9/17/82	Resident Operations	Startup testing, maintenance, QA
82-24	-	-	9/27-10/1/82	Regional Radiation	Radiation protection, training, radwaste system, Circulars and Notices
-	-	82-09	8/2-8/6/82	Regional Construction	Liner welding, pipe pipe supports
82-25	82-09	82-10	8/30-9/3/82	Regional Construction	Pipe Supports, welding
82-26	82-10	82-11	7/13-09/3/82	Resident Construction	Grouting, post tensioning, penetrations piping, electrical, 50.55(e) items
82-27	-	-	9/20-10/15/82	Resident Operations	Startup testing, QA, maintenance training
82-28	82-11	82-12	9/13-10/8/82	Resident Construction	Post tensioning, electrical, 50.55(e)
82-29	82-12	82-13	10/4-10/8/82	Regional Construction	Electrical, components structural welding
82-30	-	-	10/18-11/19/82	Resident Operations	Startup testing, design changes, QA preoperational testing, SG Chemistry

Unit 1 50-528 Report No.	Unit 2 50-529 Report No.	Unit 3 50-530 Report No.	Dates	Inspector(s)	Areas
82-31	82-13	82-14	11/15-11/19/82	Regional Construction	Heat treatment, Bulletins and Circulars
82-32	-	-	11/18-12/17/82	Resident Operations	Prerequisite testing
82-33	-	-	11/22-12/17/82	Resident Operations	Design changes, preoperational testing, verification
82-34	-	-	10/12-11/19/82	Resident Construction	Components, penetrations, pipe welding, 50.55(e) items
82-35	-	-	12/26-12/23/82	Regional Construction	Containment SIT, ILRT
82-36	-	-	12/8-12/10/82	Regional Operations	Procedures
82-37	82-15	82-16	11/22-12/30/82	Resident Construction	Allegations in HVAC, SIT penetrations
82-38	-	-	12/20/82-1/21/83	Resident Operations	Startup testing, ILRT, QA, fuel receipt, TMI Items
83-01	-	-	1/4-1/7/83	Regional Operations	Records, training
83-02	-	-	1/4-1/17/83	Regional Construction	Allegations in piping and welding
83-03	83-01	83-01	2/14-2/18/83	Regional Radiation	Material License, environmental, preoperational testing, radiation protection
83-04	83-02	-	1/24-2/18/83	Resident Operations	Startup testing, maintenance
83-05	83-03	83-02	1/10-2/28/83	Resident Construction	Allegation followup, piping, hangers, 50.55(e), Bulletin, Tendon Sleeve Repair Unit 2

TABLE 3

SUMMARY OF INSPECTION ACTIVITIES (7/1/81-2/28/83)

PALO VERDE NUCLEAR GENERATING STATION

Activity	Manhours Unit 1	Manhours Unit 2	Manhours Unit 3
A. Construction			
1. Resident	406	382	352
2. Region	564	198	155
B. Operations			
1. Resident	2663	22	0
2. Region	259	0	0
C. Radiological Safety	166	2	2
D. Safeguards	0	0	0
E. Emergency Preparedness	0	0	0
F. Investigations (OI)	843	0	0
Total	4901	604	509

Total for three Units: 6014

TABLE 4

ENFORCEMENT ITEMS (7/1/81 - 2/28/83)

PALO VERDE NUCLEAR GENERATING STATION

Inspection Report No.	Subject	Severity Level	Unit Applicability	Functional Area
50-528/81-12* 50-529/81-10*	Failure to follow procedural moisture controls for weld filler metal. Lunch found in weld rod oven.	VI	1/2	C.3 Construction-Piping Systems and Supports
50-528/81-12* 50-529/81-10*	Failure to follow procedure for access control for fuel pool area (housekeeping)	VI	1/2	C.4 Safety-Related Components
50-528/81-12*	Failure to follow procedure Insufficient sized washer	V	1	C.2 Construction-Containment and other Safety Related Structures
50-528/82-02*	Omission of fillet welds on structural steel required by drawing	V	1	C.2 Construction-Containment and other Safety Related Structures
50-528/82-09	Excessive debris in battery charger rooms and in remote shutdown cabinet area (housekeeping)	V	1	0.1 Operations-Preoperational testing
50-528/82-09	Temporary modification tags not installed on certain systems where safety valves had been removed and temporary vents had been installed	V	1	0.1 Operations-Preoperational testing

*Severity levels for inspection report 82-02 and earlier are in accordance with the NRC's Interim Enforcement Policy 45 FR 66754 (October 7, 1980) which provided six severity levels. Severity levels after 82-02 are in accordance with the NRC Enforcement Policy (10 CFR Part 2) Appendix C) 47 FR 9987 (March 9, 1982), which provides five severity levels.

TABLE 4 (Con't)

ENFORCEMENT ITEMS (7/1/81 - 2/28/83)

PALO VERDE NUCLEAR GENERATING STATION

Inspection Report No.	Subject	Severity Level	Unit Applicability	Functional Area
50-528/82-10 50-529/82-05	Failure to follow procedure for rework of an electrical conduit support	V	2	C.6 Construction-Electrical Power Supply and distribution
50-528/82-12 50-529/82-06	Pipe ends not capped contrary to procedure	V	2	C.3 Construction-Piping Systems and Supports
50-528/82-25 50-529/82-09	Control room panels not welded to floor plates per drawing requirements	IV	1	C.4 Safety Related Components
50-528/82-25	The work performed with an out of calibration welding machine was not evaluated as required by procedure.	V	2	C.3 Construction-Piping Systems and Supports
50-528/82-30	Water used in unplanned fill of steam generator No. 1 did not meet chemistry specifications	V	1	0.1 Operations-Preoperational testing
50-528/83-02	Unauthorized, undocumented weld installed in radioactive drain line	V	1	C.3 Construction-Piping Systems and Supports
50-528/83-02	Pipe supports not provided for radioactive drain line (engineering omission)	V	1	C.3 Construction-Piping Systems and Supports

TABLE 5

OPERATIONS ENFORCEMENT SUMMARY (7/1/81-2/28/83)

PALO VERDE NUCLEAR GENERATING STATION-UNIT 1*

Operations Functional Area	Severity Levels I	II	III	IV	V	VI	Total
1. Plant Operations (Preoperational Testing)					3		3
2. Radiological Controls							0
3. Maintenance							0
4. Surveillance							0
5. Fire Protection							0
6. Emergency Preparedness							0
7. Security and Safeguards							0
8. Refueling							
Totals	0	0	0	0	3	0	3

*Units 2 & 3 are not listed, there were no Operations items of noncompliance given.

TABLE 6

CONSTRUCTION ENFORCEMENT SUMMARY (7/1/81-2/28/83)

PALO VERDE NUCLEAR GENERATING STATION

Construction Functional Area	Severity Levels I	II	III	IV	V	VI	Total
1. Soils and Foundations							
Unit 1							0
Unit 2							0
Unit 3							0
2. Containment and Other Safety Related Structures							
Unit 1					2		2
Unit 2							0
Unit 3							0
3. Piping Systems and Supports							
Unit 1					2	1	3
Unit 2					2	1	3
Unit 3							0
4. Safety Related Components							
Unit 1				1		1	2
Unit 2						1	1
Unit 3							0
5. Support Systems							
Unit 1							0
Unit 2							0
Unit 3							0
6. Electrical Power Supply Distribution							
Unit 1							0
Unit 2					1		1
Unit 3							0
7. Instrumentation and Controls							
Unit 1							0
Unit 2							0
Unit 3							0
8. Licensing Activities							
Unit 1							0
Unit 2							0
Unit 3							0
TOTALS	0	0	0	1	7	4	12

ENCLOSURE 3

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

MAY 10 1983

Docket Nos. 50-528, 50-529, 50-530

Arizona Public Service Company
P. O. Box 21666
Phoenix, Arizona 85036

Attention: Mr. E. E. Van Brunt Jr., Vice President
Nuclear Projects Management

Gentlemen:

Subject: Systematic Assessment of Licensee Performance

This letter is sent to confirm a meeting with your management on May 25, 1983 which was arranged through Mr. J. A. Roedel your Corporate Quality Assurance Manager. The purpose of this meeting is to discuss the Systematic Assessment of Licensee Performance (SALP), which was recently completed for your Palo Verde Nuclear Generating Station for the period July 1, 1981 through February 28, 1983. The meeting is scheduled to begin at 10:30 a.m. at your Deer Valley project office, Conference Room A. An agenda for the meeting is enclosed.

Expected meeting attendees from the NRC are listed on the enclosed meeting notice. Anticipated Arizona Public Service Company attendees are also listed, as provided by Mr. Roedel, although other members of your management may attend as you desire.

A copy of our report of this assessment is also enclosed. A written response is not required. You will have an opportunity to provide comments on the report during our May 25 meeting, and may submit written comments within twenty days thereafter.

Following our meeting and receipt of your response, if any, the enclosed report, your comments, and a summary of our findings will be placed in the NRC Public Document Room.

Your continued cooperation is appreciated.

Sincerely,

J. L. Crews, Director
Division of Resident, Reactor
Projects and Engineering Programs

Enclosures:
As stated

ENCLOSURE 4

Arizona Public Service Company

P.O. BOX 21666 • PHOENIX, ARIZONA 85036

THOMAS G. WOODS, JR.
EXECUTIVE VICE PRESIDENT
ARIZONA NUCLEAR POWER PROJECT

June 10, 1983
ANPP-24039 - JAR

Mr. J. B. Martin
Regional Administrator
U. S. Nuclear Regulatory Commission
Region V
Creekside Oaks Office Park
1450 Maria Lane - Suite 210
Walnut Creek, California 94596-5368

Subject: Arizona Public Service Company (APS) Comments to NRC Systematic Assessment of Licensee's Performance
File: 83-010-026

Dear Mr. Martin:

On Wednesday, May 25, 1983, Arizona Public Service Company (APS) met with NRC Region V to review the results of NRC Region V Systematic Assessment of Licensee's Performance (SALP) for the period July 1, 1981, through February 28, 1983. The following confirms the comments on the SALP Report that were provided orally at the meeting.

1. Operation 0.1, Page 6, Second Paragraph

"Attention by the applicant will be required to ensure that necessary procedures and controls are implemented prior to fuel load."

Response

Arizona Public Service Company management will ensure that necessary procedures and controls are implemented prior to fuel load.

2. Operations 0.2, Radiological Controls, Page 7, Second Paragraph

"Inspection of certain radwaste system components identified apparent departures from the FSAR equipment descriptions. The Licensee stated that these matters would be examined and inconsistencies between the installed equipment and the FSAR description will be resolved shortly. Additionally, certain gaseous effluent sampling systems do not appear to meet the required standards."

Response

a. The radwaste installation has been reviewed by Operations Engineering and inspected by Operations QA/QC and the system is installed in accordance with the FSAR except minor nameplate data which will be corrected.

b. With regard to the isokinetic sampling, we are reviewing the 90^{o} sharp radius bends in the system to evaluate their acceptability.

3. Operations 0.3, Maintenance, Page 7, Last Paragraph

"At present the applicant is in the process of developing procedures necessary for the support of corrective or major maintenance activities. The efforts of the Maintenance staff in the support of preoperational test activity is diluting the effort to develop these procedures."

Response

Arizona Public Service Company will assure that Maintenance will have adequate procedures for the major maintenance and the support of corrective action activities.

4. Construction C.3, Piping Systems and Supports, Page 9, First Paragraph

"Piping systems and supports were examined in portions of twenty inspections. Five items of noncompliance were identified in the following areas: failure to follow procedure for weld filler metal oven use; failure to meet requirements for capping pipe ends; failure to follow procedure for documenting an out-of-calibration condition of an automatic welding machine; performance of an unauthorized weld in a safety-related drain line; and an engineering failure to provide supports for a vertical piping segment connecting to a safety-related drain line. None of these items were major or repetitive, however, the number of items indicates a possible programmatic weakness. The Licensee's corrective action was timely and appears effective."

Response

Arizona Public Service Company has carefully reviewed these five items of noncompliance and does not believe that these noncompliances indicate a programmatic weakness. Based on analysis and consideration of the effects and contents of the noncompliances, we are convinced that these are isolated incidences. Some examples of our analysis of these items include:

(1) Failure to Follow Procedure for Weld Filler Metal Oven Use

This noncompliance was the result of a weld rod control attendant improperly using a weld rod oven. This occurred twice, one discovered by an NRC inspection and the second incident discovered during an ASME audit. Both times, the employees were dismissed. There are 161 rod ovens in use at Palo Verde and much effort is expended to assure that all aspects of weld rod control are in conformance to specifications. We feel this is an act of deliberate violation of procedures and not a programmatic weakness.

(2) Failure to Meet Requirements for Capping Pipe Ends

There has been a continued effort to meet this requirement. Our program has identified, on various occasions, that pipe spools have been left uncapped. However, in consideration that there are approximately 100,000 pipe spools on the site, we feel the program has limited this from occurring too often.

(3) Failure to Follow Procedure for Documenting Out-of-Calibration Condition of an Automatic Welding Machine

This noncompliance was the result of our mistake in including in the procedures adjustments that determine the efficiency of the operation of the automatic welding machine as a calibration activity. This should not have been included as a calibration activity because these adjustments do not have anything to do with the calibration of the welding machine.

(4) Performance of an Unauthorized Weld in a Safety-Related Drain Line

This, in fact, occurred when an individual deliberately violated all existing procedures and performed an undocumented weld. This is not a programmatic weakness.

(5) An Engineering Failure to Provide a Support for a Vertical Piping Segment Connecting to a Safety-Related Drain Line

This, in fact, occurred. The complexity of the imbedded piping drawings made it difficult to determine that this atmospheric drain is not imbedded for approximately five feet (5'). Consequently, a support was not considered to be necessary.

5. Construction C.6, Electrical Power Supply and Distribution, Page 11, Last Paragraph

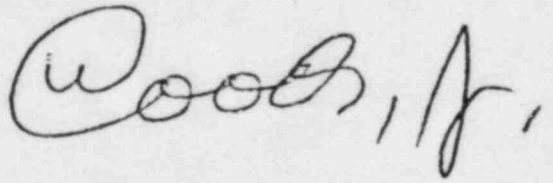
"Although there is evidence of aggressive management involvement in correcting both Licensee and NRC identified problems in the electrical area, the NRC considers that continued emphasis by the Licensee's management and quality assurance organization is required to prevent the types of problems identified and correct those that are identified."

Response

Arizona Public Service Company assures that we will continue to emphasize management and quality assurance activities and assure that the electrical and instrumentation meets our FSAR requirements. We also assure you that the previous problems identified have been appropriately corrected and steps will be taken to prevent recurrence.

Arizona Public Service will continue our high level corporate management involvement in the activities at the Palo Verde Nuclear Generating Station to continue our assurance that safety and quality remains our highest priority.

Very truly yours,



TGWOODS:asd

Distribution:

Richard DeYoung, Director
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

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