U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report Nos.: 50-528/91-10, 50-529/91-10, 50-530/91-10

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

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

Licensee: Arizona Public Service Company
P. O. Box 53999, Station 9012
Phoenix, Arizona 85072-3999

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

Meeting Location: Arizona Public Service Company (APS) Corporate Offices
Phoenix, Arizona

Meeting Conducted: February 13, 1991

Approved by: Bernard J. Way 3/13/91
H. J. Wong, Chief Date Signed
Projects Section II

Summary

A management meeting was held on February 13, 1991 at APS corporate offices to discuss the NRC Systematic Assessment of Licensee Performance (SALP) for the period ending November 30, 1990. The NRC's initial SALP report was issued as Report Nos. 50-528/529/530/90-53. Following the SALP meeting the NRC held a management meeting to discuss recent observations and concerns.

DETAILS

1. Meeting Attendees

Arizona Public Service Company (APS)

O. DeMichele, President, Chief Executive Officer
W. Conway, Executive Vice President, Nuclear
J. Levine, Vice President, Nuclear Production
B. Simpson, Vice President, Nuclear Engineering
J. Bailey, Vice President, Nuclear Safety and Licensing
B. Ballard, Director, Quality Assurance
W. Ide, Plant Manager, Unit 1
R. Flood, Plant Manager, Unit 2
R. Adney, Plant Manager, Unit 3
D. Gouge, Manager, Plant Support
R. Page, Manager, Management Services
S. Guthrie, Deputy Director, Quality Assurance
P. Caudill, Director, Site Services
G. Overbeck, Director, Site Technical Support
J. Bailey, Director, Nuclear Engineering
D. Mauldin, Manager, Site Maintenance
D. Marks, Manager, Nuclear Safety
J. Scott, General Manager, Site Chemistry
P. Hughes, General Manager, Radiation Protection
J. LoCicero, Manager, Independent Safety Engineering
P. Crawley, Manager, Nuclear Fuel Management
D. Brown, Manager, Simulator
M. Powell, Manager, Licensing
W. Quinn, Director, Licensing/Compliance
T. Bradish, Manager, Compliance
R. Rouse, Supervisor, Compliance
N. Loftin, Legal Counsel
C. Emmett, Senior Coordinator - Owner Services
D. Stover, Manager, Business Planning
D. Andrews, Information Officer

Nuclear Regulatory Commission

J. Martin, Regional Administrator
R. Zimmerman, Director, Division of Reactor Safety & Projects
F. Wenslawski, Deputy Director, Division of Radiation Safety & Safeguards
B. Boger, Director, Division of Reactor Projects III, IV, and V
J. Dyer, Project Director, NRR
D. Kirsch, Chief, Reactor Safety Branch
H. Wong, Chief, Reactor Projects Section II
D. Coe, Senior Resident Inspector
F. Ringwald, Resident Inspector
J. Sloan, Resident Inspector
M. Cillis, Regional Inspector
C. Thompson, Project Manager, NRR
G. Cook, Public Affairs Officer

Pinnacle West

R. Snell, Chairman

Participating Utilities

R. Henry, Site Representative, SRP
I. Troncoso, Senior Vice President, Operations Group, El Paso Electric
M. Benac, Manager, PV Oversight, El Paso Electric
K. Hall, Site Representative, El Paso Electric
D. Summers, Manager, Nuclear Services, PNM
A. Cordova, Engineer, Nuclear Services, PNM
D. Cox, Project Manager, Southern California Edison
J. Draper, Site Representative, Southern California Edison
N. Bassin, Executive Engineer, LADWP/SCPPA
R. Balingit, Nuclear Enginer, LADWP/SCPPA

Arizona Corporation Commission

S. Olea, Chief Engineer
J. Brown, Electrical Engineer

2. Systematic Assessment of Licensee Performance (SALP)

Mr. Martin opened the SALP management meeting and indicated that a management meeting would be held following the presentation of SALP results to discuss the NRC's observations over the past two days and items of recent NRC interest. Mr. Martin indicated that these issues could serve as an agenda for the next meeting with APS. Mr. DeMichele stated that improvements in Palo Verde's performance were due to the present Palo Verde management team's hard work and that additional effort would be needed to address the areas identified in the SALP report.

Mr. Zimmerman began the SALP presentation by noting the Operations area had remained a Category 2 but was seen as improving with the potential for a Category 1 next period. This assessment was based upon the relatively event free operations during which many different types of evolutions were completed. There appeared to be relatively little difference between the performance level of the three units, the common thread being a "hands-on" attitude by management. Positive and negative examples of management decisions from the SALP report were mentioned, but the strengths in this area were noted to outweigh the weaknesses. The recommendation of the SALP board to ensure appropriate groups are involved with management decision making was emphasized. Mr. Conway stated that he accepts these comments and recognizes the need to continue emphasis on conservative decision making. He noted that rotation of experienced people is occurring between units and experienced engineering personnel will be placed with unit maintenance organizations. In addition, he credited the Management Observation Program with increasing management awareness of operations activities, and improvements to the simulator as positive aspects. He further stated that in order to continue progress toward certification of the present simulator, progress on contracting for the second simulator had slowed, but was still proceeding.

Mr. Zimmerman continued by noting that the Maintenance and Surveillance area had improved from a Category 3 to Category 2. Several improvements were noted and included the appointment of a site maintenance manager, the implementation of a 12-week planned maintenance schedule, Preventive Maintenance program redefinition, mockup facilities, maturing of the MNCR program, better material support, and a sound surveillance program. However, several examples of weak maintenance planning, scheduling, and work performance were cited as an indication of further need for continuing management attention to this area. Findings from the NRC Diagnostic Evaluation Team in the maintenance and surveillance areas and problems with initiating and completing Root Cause of Failure evaluations were noted as additional evidence of the need to continue strengthening this area. Mr. Zimmerman stated that the SALP Board recommendations in this area were the same as the last SALP report and encouraged continued improvement. Mr. Conway acknowledged the need to improve work planning and stated that improvements had been realized in the Unit 1 surveillance outage presently being completed. He further stated that his own tours in the units led him to believe that managers and supervisors were getting into the field to observe work in progress, that the rework rate was being carefully reviewed to establish goals, and that a long term vendor manual improvement program was underway. Mr. Conway concluded by restating that the smooth Unit 1 outage progress is a good indicator of improvement and that he will continue his efforts in this area.

Mr. Zimmerman continued by noting that the improvement in Engineering and Technical Support from Category 3 to Category 2 was based on improved quality of technical work, filling key permanent management positions, establishment of the Site Nuclear Engineering Department, improved engineering response to plant events and problems, and a proactive involvement in finding problems. He then noted weaknesses that continued with the resolution of emergency lighting problems from the previous SALP period and which resulted in an additional civil penalty, and weak engineering work in the follow through of problems related to motor operated butterfly valve retests and the Core Operating Limits Supervisory System. Finally, he noted that the Engineering Evaluation Request (EER) backlog had not improved much over the SALP period. In addition, although APS performed an Electrical Distribution System design review, a subsequent NRC review of this same area identified deficiencies which should have been discovered by APS. The Board recommendations for this area were noted to emphasize continued development of individual understanding of new organizations' roles, responsibilities, and interface requirements, and increased aggressiveness to preclude lingering issues such as those associated with emergency lighting. Mr. Simpson generally agreed with these comments and stated that the on-site engineering organization is continuing to evolve with the recent decision to place engineers directly in the units to assist with day-to-day maintenance and engineering issues. Mr. Conway added that APS needs to improve the ability to get the right people and level of management involved with the issues and to improve the mechanisms of dealing with industry and NRC information flow on technical concerns. Mr. Conway concluded by agreeing that the SALP assessment was on target, and that the engineering organization is now approaching a semblance of order and stability such that expectations can be further solidified, and that

moving engineering personnel directly into the units will ultimately be an improvement.

Mr. Zimmerman continued by noting the improvement in Safety Assessment/Quality Verification from a Category 3 (improving) to a Category 2 was a reflection of a strong QA Monitoring and Audit group, improving oversight groups such as PRB and ISEG, personal involvement by Mr. Conway, the maturing MNCR and QDR processes, the management of the unit restarts by the Management Review Committee (MRC), and increasing technical self-sufficiency. He then noted that weakness persists in that management appeared reluctant to fully address the emergency lighting issues which had surfaced in the previous SALP period, and that the operator medical examination programmatic deficiencies which resulted in a civil penalty should have received prompt attention when initially identified by the NRC. Further weakness appears to exist in the process of post reactor trip review in that the recent Unit 3 post trip restart decision was not thorough. Finally, he noted that the SALP Board recommendations included avoiding future performance of the type associated with the emergency lighting and medical examination issues. Mr. Conway stated general agreement with these comments. He continued by stating that the MRC has spun off into the Offsite Review Committee (OSRC) and that he has high hopes for this group. He then noted that he has seen improvements in the PRB discussions, and that overall APS needs to do a better job of finding problems before the NRC identifies them. He concluded by stating that APS people are beginning to expect QA to do more in this area.

Mr. Wenslawski continued the NRC presentation of the SALP results by stating that he considers the Radiation Protection area Category 2 rating to be a strong 2 and improved from the previous Category 2 rating. This was based on reorganization and staffing changes which appear to be producing positive results in improving problem resolution, an improved radiation monitoring system, better general employee training in the RP area, good solid waste processing, and excellent plant cleanliness compared to other licensees in Region V. Weaknesses included untimely corrective actions, lack of engineering involvement with the Locked High Radiation Area doors issue, poor procedures for effluent release evaluation, use of junior RP technicians to perform senior technician functions during an RP labor walkout, and the inappropriate management decision to vent a pressurizer into containment. He concluded by noting that the overall program appeared effective and that improvements were evident. Mr. Conway agreed with this assessment, and indicated that organizational changes and filling of key positions with good people has helped. He concluded by expressing concern over the possibility that RP technician walkouts may again create difficulty in maintaining adequate RP staffing, but that this was an industry wide problem.

Mr. Wenslawski continued by noting the Emergency Planning Category 1 rating was improved over the previous Category 2 rating, but that he considered it not a strong Category 1. Strengths were cited to be the significant level of management support, new vehicles, the offsite assembly area, upgrades to EOF and human factor awareness, and resolution of longstanding issues such as accountability drills and improvements to EP procedures. One notable weakness was the improper classification of a

main transformer fire early in the SALP period which had been discussed at length between APS and the NRC. He concluded by noting good overall morale, good initiative, and encouraged continuing the good staff support in this area. Mr. Conway stated that he would like to discuss the perspectives the NRC has on improvements that would make this area a stronger Category 1.

Mr. Wenslawski then continued in the Security area and noting that the rating of Category 2 had been given an improving trend due to notable improvements later in the SALP period. These improvements appeared to strengthen several significant weaknesses seen earlier in this period. The improvements included a training program beyond minimum requirements, strong management involvement, reduced overtime and compensatory measures, and effective use of action plans for corrective action. A few weaknesses were noted which were mostly corrected, and some problems continue to linger such as with closed circuit TV systems. Mr. Conway agreed with this assessment and stated that reaching Category 1 was their goal.

Mr. Martin then noted that although he does not produce the SALP Board results, he is in general agreement with this report. However, he expressed apprehension that when this much improvement is recognized, it may get in the way of hard realistic assessments, and that licensees continue to need to be self-critical with themselves. Now that past construction era problems have been dealt with and a respected management team is in place, the tendency to declare victory must be resisted. He suggested that now is the time to look five years ahead, to not be satisfied with quick fixes, and to resist a tendency to relax. Mr. Martin cautioned that next year it may more difficult to maintain the same level of enthusiasm toward continued improvements. Mr. Martin continued by noting that in talking to people over the last two days, he was impressed by their values and by their understanding of the programs. He stated that Operations and Radiation Protection respond rapidly to pressure to improve because they have measurable indicators and are most inherently accountable. However, Maintenance, Engineering, and Quality Assurance require more effort and gains are more difficult to measure. Engineering shows signs of becoming more intrusive and should be made every bit as accountable as Operations for how the plant runs. Plant problems generally have a strong engineering component and the NRC will continue to focus on this area. Finally, Mr. Martin noted that Quality Assurance still has a long way to go, and that the real test is whether problems become self-revealing or found by others such as NRC or INPO, or problems are found early by QA. Mr. Martin concluded by stating that crisis management appears to be past, and licensee management can now begin to fulfill the expectations that existed when the plant was first built.

Mr. Zimmerman asked for any comments, clarifications, or disagreements with the SALP report or presentation. Mr. Conway stated that he had no disagreements or further comments.

3. Management Meeting

Following the SALP meeting the NRC conducted a brief management meeting to discuss some of the observations made by members of the NRC during the previous two days. Mr. Zimmerman opened this portion of the meeting by indicating three broad categories of comment: Engineering, Maintenance, and Oversight groups. Mr. Kirsch began the Engineering discussion by noting the continuing high number of open Engineering Evaluation Requests (EERs), many of which are excessively old. Mr. Simpson responded by stating that previous reviews of old EERs resulted in prioritization which led to a great many EERs which were considered too low in priority to work given the continuing input of higher priority EERs, and that another review was expected to be complete in the first quarter of 1991 and would include validation and disposition of older EERs. In addition, he stated that placing engineering personnel into the plant organizations for technical assistance for maintenance activities should help reduce the number of unnecessary EERs submitted. Mr. Martin commented that an unresponsive EER system builds up a skepticism on the part of those who submit them, and that maintenance engineers should have well defined roles such that they do not make hasty technical judgements during field work. Mr. Simpson then indicated that limitations would be placed on the authority of the maintenance engineers.

Mr. Kirsch continued the Engineering discussion by noting that a March 1990 NRC Information Notice regarding the adequacy of safety-related room coolers was not acted upon aggressively by APS until January 1991. Mr. Simpson described the time sequence of events that resulted in this delay and noted that he had improved the review process for Information Notices in October 1990 but that better timeliness was still needed. Mr. Zimmerman strongly agreed with this, noting that acting upon immediate questions of operability is a very fundamental concept. Mr. Martin added that it was a poor reflection on Engineering that QA brought this issue into proper focus. Mr. Simpson agreed with these comments. Mr. Zimmerman then noted that he observed that the average number of field changes to design change packages appeared excessive and that engineering could still improve the quality of these packages. Mr. Simpson also agreed with this.

Mr. Dyer then discussed his review of the quality of Incident Investigation Reports and corrective actions. He noted an improving trend in IIR quality, but that closure of corrective actions was sometimes weak. Mr. J. N. Bailey indicated that closure requires complete action, not just promises, and that he is reviewing the Commitment Management Program to better define thresholds. Mr. Zimmerman added that the NRC confidence in root cause of failure programs is weakened when good front end work is done, but there is a lack of follow through. Mr. Martin noted that these type of discussions have been historical with APS and that changing the system usually is not the answer if people use the systems as intended. He concluded by stating that individual accountability for proper corrective action is crucial to this process and that the NRC will continue to review this area.

Mr. Zimmerman continued the discussion by noting oversight areas which have room to improve, specifically Quality Engineering, Quality Control,

and the Independent Safety Evaluation Group. Mr. Bailey and Mr. Ballard indicated agreement with these comments. Mr. Zimmerman then cautioned that current licensee consideration of changes to the Technical Specification requirements for an offsite review group should carefully evaluate the benefits of such change against the potential loss of a full time technical review body which is currently required. Mr. J.N. Bailey generally agreed with these comments.

Mr. Wenslawski then commented on some positive aspects of the Radiation Protection program including a more pro-active role. Mr. Hughes indicated agreement and acknowledged that further improvement was needed.

Mr. Wong then noted licensee efforts to better define an appropriate Preventive Maintenance program and encouraged further thought into the question of how much on-line maintenance was acceptable from an overall risk perspective. Mr. Coe added that currently the NRC has questioned the performance of APS Emergency Diesel Generator surveillance inspections with the plant on-line, which apparently is not in compliance with the Surveillance Requirement.

Mr. Martin then expressed concern over the general extent of maintenance being done by some utilities with the plant on-line. The Technical Specifications were not written with the assumption that extensive maintenance would be performed voluntarily within action statements. Additionally, problems with operator performance at other facilities have been noted due to burdensome administrative workloads associated with on-line maintenance. Although the NRC is emphasizing adequate maintenance programs, there does not always appear to be a thorough understanding of the probabilistic risk impact on overall plant safety. However, his discussions with APS personnel involved with PRA indicated that this group was thinking about these issues and attempting to integrate the results into plant operations and maintenance policies. Mr. Martin expressed an interest in discussing this area further during future management meetings. He then stated that he was glad to see APS making outage management decisions that avoided mid-loop operations conditions, noting that these operations are looked at more seriously in other countries. Mr. Levine responded by stating that APS would be folding risk analysis into the Preventive Maintenance program and hoped to get their arms around this issue over the next couple of months. Mr. J. N. Bailey then noted that goals for safety system availability have been discussed within APS and that he is in agreement with Mr. Martin's observation that further analysis is warranted.

Mr. Conway asked for the NRC's perceptions on how the current Unit 1 outage has gone, and Mr. Coe commented that his discussions with Unit 1 personnel indicate general enthusiasm for the "war room" concept, and that the outage being three days ahead of schedule appears to be evidence that the concept is working. Mr. Martin suggested that proof of an effective outage is reflected in a successful return to operation. Mr. Martin then concluded the meeting.