

U.S. NUCLEAR REGULATORY COMMISSION

REGION V

Report Nos. 50-528/89-02, 50-529/89-02, 50-530/89-02

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

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

Licensee: Arizona Nuclear Power Project
P.O. Box 52034
Phoenix, Arizona 85072-2034

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

Inspection at: Phoenix, Arizona

Inspection conducted: January 9-13, 1989

Inspectors:

A. Johnson
A. Johnson, Enforcement Officer

2/24/89
Date Signed

S. Ramsey FRL
C. Ramsey, Reactor Inspector

2/24/89
Date Signed

Approved by:

S. Richards
S. Richards, Chief
Engineering Section

2/24/89
Date Signed

Summary:

Inspection During The Period January 9-13, 1989 (Report Nos. 50-528/89-02, 50-529/89-02, and 50-530/89-02)

Areas Inspected: An unannounced reactive inspection of the licensee's fire protection program by two regional inspectors to followup on allegations received by the NRC.

Results:

General Conclusions and Specific Findings

1. Two of the allegations were substantiated. One of the substantiated allegations regarding offsite fire department assistance resulted in a violation of NRC requirements and the other resulted in an open item that will require subsequent NRC followup on corrective actions that have been initiated by the licensee.
2. Two of the allegations were partially substantiated. However, based on corrective actions taken by the licensee, no further NRC action is required.



3. One allegation was not substantiated. Therefore, no further NRC action is required.

Significant Safety Matters: The violation concerning offsite fire department assistance, and the unresolved item concerning qualifications of the fire protection staff, are considered to be significant safety matters. During the inspection, the licensee indicated that corrective action would be taken expeditiously regarding the assistance of offsite fire departments. The licensee had already initiated training to improve the qualifications of the fire protection staff prior to the inspection. According to the licensee, training for the fire protection staff will be a continuing process until their qualifications meet or exceed the criteria specified in ANSI 3.1. These corrective actions will be verified by the NRC during subsequent inspections.

Summary of Violations: One violation was identified.

Summary of Deviations: None

Summary of Open Items: One new unresolved item and one new open item were identified.



DETAILS

1. Persons Contacted

Arizona Nuclear Power Project

- *J. Haynes, Vice President, Nuclear Production
- T. Shriver, Compliance Manger
- *K. Clark, Lead Compliance Engineer
- *W. Marsh, Director, Nuclear Production
- *O. Zeringue, Manager, Unit 3
- *R. Adney, Assistant Plant Manager
- *J. Allen, Manager, Unit 2
- *C. Thurman, Manager, Unit 3
- *R. Pontes, Nuclear Engineering
- *T. Thompson, Nuclear Engineering
- *J. Tench, Acting Director, Site Services
- *L. Souza, Manager, Quality Audits and Monitoring
- *C. Belford, Supervisor, Fire Protection
- *F. Garrett, Fire Protection Engineer, Risk Management
- *H. Bieling, Manager, Emergency Planning/Fire Protection
- *A. McCabe, Manager, Unit 1 Maintenance
- *S. Karimi, Senior Compliance Engineer

*Denotes those attending the exit meeting held on January 13, 1989.

2. Followup on Allegation File No. RV-88-A-0057

On November 8, 1988, Region V received information alleging to possible safety related concerns at the Palo Verde Nuclear Generating Station. Followup activities relative to these concerns were performed by the inspectors to address each of the issues discussed in the allegation and their implied impact on safe operation of the plant.

A. Characterization

Allegation File RV-88-A-0057a - An allegation was received by the NRC indicating that the licensee's staff did not understand the technical design criteria relevant to required functional testing of carbon dioxide fire suppression systems. It was alleged that due to a lack of familiarity with the system design, and fear of inadvertent actuation of the systems during required functional testing, the licensee's staff falsified test results for the systems. It was further alleged that one individual's employment was terminated by the licensee for falsifying carbon dioxide system functional test records, but that the licensee's investigative staff believed that another individual, who is currently employed by the licensee, was also involved in the falsification of the test records.



Implied Significance to Plant Design, Construction, or Operation

The licensee's operations staff may not be adequately trained in the design and operation of carbon dioxide fire suppression systems. Therefore, these systems are not properly being verified operable in accordance with Technical Specification requirements.

Assessment of Safety Significance

Carbon dioxide fire suppression systems are required to be verified operable through periodic functional testing to ensure their ability to extinguish a fire that threatens redundant safe shutdown trains. The operability of these systems is placed in question by the alleged falsified surveillance test results.

The inspectors interviewed cognizant licensee personnel and examined two reports of investigation relating to the termination of two licensee employees. One of the investigations was performed by the ANPP Affirmative Action Group, dated November 2, 1987, and the other investigation (involving falsification of surveillance test record No. 14MT-9FP08 on August 1, 1987) was performed by the site security group, dated August 18, 1987. The reports were found to be detailed and substantive, and provided the basis for the licensee's termination of the employees.

With respect to the allegation that another individual was involved in the instance of falsification of carbon dioxide fire suppression system surveillance test records, an individual who participated in the site security group investigation dated August 18, 1987, stated that he did not believe any other individuals employed by the licensee were involved. He documented in the investigation report that the working environment significantly contributed to the confusion and error that resulted in the termination of the individual who performed the test. The investigation reports concerning the falsification of the test record did not support the allegation that anyone other than the employee that was terminated was involved.

The falsification of the test record was immediately detected by licensee personnel. The falsification involved recording a volt meter identification number on the test record other than the one that was actually used in the test. Although the wrong voltmeter was used in the test by the individual who was terminated, the individual recorded unsatisfactory conditions at steps in the test procedure where the voltmeter was used and additionally noted that there was no receipt of an alarm in the control room when expected. (i.e. step No. 8.2.3.3 of the August 1, 1987 test). The falsified test was declared void prior to acceptance of the test results. The test was re-run on August 5, 1987 and satisfactory results were obtained. However, this test identified the same deficiencies at the procedural steps requiring the use of a calibrated voltmeter and alarm receipt in the control room.



Staff Position

Partially Substantiated - Based on the inspectors' followup activities, the inspectors substantiated that one licensee employee was terminated for falsifying carbon dioxide fire suppression system functional test records, and the licensee's fire protection staff was not adequately trained to perform this testing. The inspectors found no evidence that other individuals currently employed by the licensee were involved in falsification of the test records. This portion of the allegation was not substantiated.

Action Required

The licensee has initiated a training program to upgrade the qualifications and training of the fire protection staff. This is further discussed in paragraph 2.D of this report.

B. Characterization

Allegation File RV-88-A-0057b - An allegation was received by the NRC indicating that the licensee's quality assurance staff did not followup on other safety related work that was performed by an individual that the licensee terminated for falsifying test records.

Implied Significance to Plant Design, Construction, or Operation

The licensee's Quality Assurance Department may not be properly addressing quality verification and root cause analysis in the area of work performed by individuals. Therefore, the ability of important to safety equipment to perform its intended safety function may not be systematically verified by the licensee's quality assurance program.

Assessment of Safety Significance

The inspectors interviewed cognizant licensee personnel and examined the licensee's Quality Assurance Investigation Report No. 87-072. The licensee performed this investigation in response to a "Hot Line" concern that was phoned in by the employee who was terminated by the licensee for falsifying the carbon dioxide fire suppression system functional test discussed in item 2.A above.

The quality assurance investigation report was substantive and contained detailed information about the work performed by the individual who was terminated. In an interview with the inspectors, the quality assurance investigator, who was the author of the report, stated that the terminated individual had not performed any other safety related work. He stated that the individual's work had been limited to firefighting duties and visual surveillance of firefighting equipment. The quality assurance investigator also stated, and his report documents, his conclusion that the terminated individual had never performed a carbon dioxide functional test before. The report further concludes that training on the test procedure and the use of calibrated test equipment, was requested



prior the individual's falsification of the test record, but in violation of ANSI 3.1, this training was denied by the incumbent fire protection supervisor.

Staff Position

Unsubstantiated - Based on the inspectors' interviews with cognizant licensee personnel and examination of the licensee's Quality Investigation Report No. 87-072, substantial evidence was produced which established that the licensee performed a detailed investigation of work that was performed by the individual who was terminated. Furthermore, this evidence showed that the licensee performed a comprehensive root-cause analysis of the circumstances which contributed to falsification of the test record by the terminated employee. On this basis, the inspectors could not substantiate the allegation.

Action Required

None

C. Characterization

Allegation File RV-88-A-0057c - An allegation was received by the NRC indicating that false information was provided to the NRC in Licensee Event Report (LER) No. 84-001, and in the Unit 1, July 6, 1988, Transformer Fire Post Trip Report.

Specifically, the licensee stated in LER No. 84-001, that the cause of inoperable fire rated assemblies (a violation of plant Technical Specifications) during the period December 1984 to June 1988, was cognitive personnel error. The alleger stated that the cause of these conditions was a conscious decision by plant management to omit the subject fire rated assemblies from Technical Specification requirements.

Additionally, the licensee stated in the Unit 1 transformer fire post trip report dated July 6, 1988, that there was no backup power supply to the transformer deluge automatic sprinkler valves, and that the oil retention pits for the transformers did not adequately contain the oil and water during the fire. Therefore, the burning oil flowed down the storm drain into the drainage ditch which resulted in spreading the fire outside of the controlled area. The alleger maintained that there is a backup power supply to the transformer deluge automatic sprinkler systems, and the transformer oil retention pits have enough capacity to hold the entire transformer lube oil inventory plus ten minutes of simultaneous automatic sprinkler water flow from all sprinkler systems. The alleger alleged that the reason the burning oil flowed outside the controlled area and spread the fire, is that the oil retention pits were improperly maintained and they were filled with water at the time of the fire. The alleger cited these conditions as examples of licensee management's inattention to detail in the fire protection area.



Implied Significance to Plant Design, Construction, or Operation

The allegation implies that the licensee may not have implemented and properly maintained a plant design that is required by the facility operating licenses. Licensee management attention to detail in the area of fire protection may not be adequate to achieve the relevant expectations of the NRC approved fire protection program requirements for Palo Verde Units 1, 2, and 3.

Assessment of Safety Significance

Regarding LER No. 84-001, the licensee provided the inspectors with a copy of licensee Technical Specification Interpretation No. 143 for Section 3/4.7.12 of plant Technical Specifications dated September 16, 1985. The request for this interpretation was initiated as characterized in the allegation. The management resolution to the requested interpretation reads, "The phrase, separating safety-related fire areas or separating portions of redundant systems important to safe shutdown within a fire area, applies to the sealing devices that are part of those fire-rated assemblies providing safety-related fire area separation, or separating portions of redundant systems important to safe shutdown. It's these that are required for OPERABILITY to exist".

To acquire a clear understanding of the meaning of the management intent represented by the interpretation, the inspectors interviewed a licensee individual who was an originator of the management resolution. This individual stated that the resolution intended that sealing devices that are part of safety-related fire area boundaries and fire area boundaries protecting redundant safe shutdown systems be verified operable pursuant to plant Technical Specifications. According to this individual, no sealing devices in safety-related fire-area boundaries or boundaries separating portions of redundant systems important to safe shutdown were identified as exceptions to this resolution.

The bases of Technical Specification No. 3/4.7.12 reads, "The OPERABILITY of the fire barriers and barrier penetration seals ensure that fire damage will be limited. These design features minimize the possibility of a single fire involving more than one fire area prior to detection and extinguishment." The licensee's interpretation of the Technical Specification requirements appeared to be consistent with the Technical Specification bases. Therefore, the inspectors could not establish that the cause of the inoperable fire barrier penetration seals was attributed to a conscious licensee management decision to omit the seals from the Technical Specification requirements, as alleged.

Regarding the licensee's July 6, 1988 Transformer Fire Post Trip Report, the licensee explained that the concerns raised by the licensee's staff as a result of the fire and which were documented in the report, did not represent factual statements about the facility design. The licensee acknowledged that the statement in the report concerning a backup power supply to the transformer deluge



sprinkler systems was incorrect. In response to this concern, as stated in the post trip report, the licensee issued Engineering Evaluation Report (EER) No. 88-FP-155, dated July 12, 1988. The EER dispositioned the concern by verifying that backup power supplies to the transformer deluge automatic sprinkler systems already existed from two sources (Uninterruptable Power Supply E-QDN-N02 and diesel generators). Therefore, manual initiation of the deluge sprinkler systems for all the transformers was not necessary as described in the post trip report.

Regarding the capacity of the transformer oil retention pits, the licensee is basically required to meet the requirements of NFPA 15 and NFPA 92M. The licensee provided the inspectors with Bechtel Corporation Calculation No. 13-CC-2V-110, Job No. 10C07-002, sheets 171, 172 and 173 of 228, which demonstrates that the oil retention pits are capable of containing the oil from the largest transformer, together with the water from the deluge water spray sprinkler systems operating simultaneously for ten minutes. Deluge sprinkler flow is calculated at 1,730 gallons per minute for two systems operating simultaneously for ten minutes, or 17,300 gallons. The volume of oil from the main transformer is calculated to be 12,000 gallons. The total storage capacity of the oil retention pits is calculated to be 29,300 gallons with the four bays of the pits connected by underground piping. There are six deluge sprinkler systems protecting six transformers. Therefore, if the oil from all six of the transformers, and sprinkler water from all of the deluge water spray sprinkler systems discharged simultaneously, the pits would not have the capacity to contain this volume. However the overflow from the retention pits would be to a safe location, such that no safety related equipment would be damaged. This design satisfies the intent of NFPA 15-1977 sprinkler water drainage requirements as specified in NFPA 92M and the NRC approved fire protection program.

The licensee was not certain of the condition of the retention pits at the time of the July 6, 1988 transformer fire. However, the licensee stated that the pits have been observed to contain water, and they may have contained water at the time of the fire. There was no maintenance program established for the pits at the time of the fire. The licensee indicated that consideration was being given to increasing the capacity of the pits and establishing a maintenance and surveillance program to ensure availability of the retention capacity.

Staff Position

Partially Substantiated - Based on the inspectors' followup activities, the inspectors did not substantiate that the cause of the inoperable fire barrier penetration seals discussed in LER No. 84-001 was a conscious decision by licensee management to omit the seals from Technical Specification requirements. The inspectors did



not substantiate that the transformer oil retention pits had the capacity to hold the entire inventory of oil from all of the transformers and water flow from the deluge water spray sprinkler systems simultaneously, however the inspectors concluded that the design of the retention pits meet the applicable NRC requirements. The inspectors did substantiate that the licensee did not have a maintenance/surveillance program established for the transformer oil retention pits. Because all the deluge systems were activated manually during the July 6 event and the duration of the water flow was not recorded, the inspectors could not establish that the lack of a maintenance/surveillance program was the cause of the burning oil flowing down the storm drains and spreading the transformer fire outside of the controlled area. The inspectors substantiated that the lack of an established maintenance/surveillance program for the transformer oil retention pits at the time of the transformer fire was an example of the licensee's inattention to detail in the fire protection area.

Action Required

The licensee indicated that a maintenance/surveillance program would be established for the transformer oil retention pits. The potential for the oil and fire suppression water inventory to overflow from the pits and expose other safety related equipment has generic implications and will receive further NRC followup. This is considered an open item (528/89-02-01) pending further licensee and NRC action.

D. Charaterization

Allegation File RV-88-A-0057d - An allegation was received by the NRC indicating that the licensee's operations fire protection staff was not qualified through training and experience to implement the program requirements. The allegor cited one example that is contained in the licensee's LER No. 88-005. This LER reported to the NRC that the root cause of an event that led to isolation of the Unit 1 fire protection water supply loop, which rendered required fire suppression systems inoperable, was personnel error, and an inadequate procedure. The allegor stated that the reason the licensee's fire protection staff isolated the Unit 1 fire protection water supply was that they did not have the required expertise to read the appropriate P&ID's for the system.

The allegation further states that the current Operations Fire Protection Supervisor did not have the required knowledge and expertise to implement the fire protection program requirements, and that the licensee did not have a technical basis for using Bisco and ICMS penetration seal materials to seal fire barrier penetration openings in Unit 1. The allegor also stated that these materials may not be compatible, and as a mixture, the fire rating of the materials has not been established. The licensee is required to use



materials whose qualifications have been established by test for fire barrier protection of redundant safe shutdown trains.

Implied Significance to Plant Design, Construction, or Operation

The licensee's operations fire protection staff may not be qualified to implement the program requirements. Unqualified materials may be used in Unit 1 as fire barrier protection for safe shutdown trains.

Assessment of Safety Significance

Regarding LER No. 88-005, the licensee acknowledged that the fire protection staff had difficulty reading the P&ID's for the fire protection water supply system. However, the licensee stated that the staff's difficulty in determining the correct method of isolation of the system did not contribute to the system being inoperable for more than 24 hours. According to the licensee, the system was isolated in a manner to declare it inoperable because of leaking Post Indicator Valves (isolation valves). As corrective action for LER No. 88-005, the licensee developed an enlarged composite, one line diagram of the fire water isolation system, implemented new procedure No. 140P-OFP05 and conducted training sessions to provide direction to the fire protection staff on the proper methods of isolating the system.

Regarding the qualifications of the licensee's fire protection staff, the Licensee's Quality Assurance Investigation Report No. 87-072 identified that the staff was not properly trained on seventy-three percent of 82 procedures that they were required to perform.

The qualifications of the staff are governed by the FSAR and ANSI 3.1-1978. A suitable training program is required to be established for managers, supervisors, professional operators, technicians and maintenance personnel to properly prepare them for their assignments. Technicians and maintenance personnel are required to be trained on-the-job by participation in initial calibration, testing and equipment acceptance programs. Technicians are required to have three years of working experience in their speciality of which one year is required to be related to technical training.

In response to Corrective Action Report (CAR) No. CQ87-0099 for the training deficiencies, the licensee initiated a training program for the fire protection staff. According to the licensee, the training program had not completely addressed all of the deficiencies identified in the Quality Assurance Investigation Report. When this training is completed, the licensee indicated that a retraining program would be established and documented to ensure that the qualifications of the staff would be maintained. Interviews with fire protection staff individuals by the inspectors disclosed that the training has been ongoing since January 1988, and has significantly improved the staff's confidence in their ability to perform assigned fire protection duties.



To further verify the qualifications of the licensee's fire protection staff, the inspectors reviewed the licensee's job position descriptions and personnel resumes for the positions of Fire Protection Supervisor, Fire Captain and Fire System Technician.

The licensee's job position description for the position of Fire Protection Supervisor requires that this individual possess an intimate knowledge of fire protection systems and firefighting techniques; thorough knowledge of nuclear power plant systems; NRC fire protection regulations; National Fire Protection Association (NFPA) codes and standards; and, have a sound understanding of engineering and design principles associated with fire protection systems.

The Fire Protection Supervisor's qualifications described in the resume of the individual filling this position does not appear to meet the criteria for the licensee's job position description and ANSI 3.1. The individual's resume indicates considerable experience in firefighting and emergency medical techniques, but the resume does not indicate that this individual possesses an intimate knowledge of fire protection systems; thorough knowledge of nuclear power plant systems; NRC fire protection regulations; NFPA codes and standards; and a sound understanding of engineering and design principles associated with fire protection systems.

The licensee's job position description for the position of Fire Captain requires that these individuals have a detailed knowledge of fire protection systems, and have a good understanding of firefighting and emergency medical techniques. The position description also requires that these individuals be skilled in the operation of firefighting and emergency medical equipment.

The Fire Captain's qualifications described in the resumes of the individuals filling these positions indicate that the individuals have considerable training and experience in firefighting, emergency medical techniques, and the operation of firefighting equipment. Their qualifications appear to meet or exceed the licensee's job position description for Fire Captains, but these qualifications do not appear to meet the criteria for maintenance technicians as specified by ANSI 3:1.

The licensee's job position description for the position of Fire Technician requires that these individuals have a good understanding of fire protection systems, and be knowledgeable concerning plant safety related systems and the effects of fire on these systems. The position description requires that these individuals be knowledgeable of plant fire protection maintenance procedures and the system's operations procedures, in addition to possessing basic firefighting and emergency medical technician skills. These individuals are required to perform maintenance, engineering, and testing and update required engineering drawings to reflect the actual condition of fire protection systems.



The Fire Technician's qualifications described in the resumes of the individuals filling these positions indicate the the individuals have considerable firefighting and emergency medical technician training and experience. None of the resumes reviewed by the inspectors indicated that these individuals were qualified by training or experience to perform maintenance, engineering, or testing of fire protection systems as specified by the criteria of ANSI 3.1.

Regarding the incompatibility of penetration seal materials used in Unit 1, the licensee provided the inspectors with a licensee vendor evaluation (Impell Corporation No. 1658-045-005, dated August 4, 1987) of Bisco and ICMS penetration seal materials. The evaluation concludes that both materials are formulated from Dow Corning Sylgard 170, and can be mixed together to provide equivalent fire resistance.

Staff Position

Substantiated - Based on the inspectors' followup activities, the inspectors substantiated that the licensee's fire protection staff is not qualified by training and experience to implement all the program requirements, particularly regarding maintenance activities. The licensee's Quality Assurance Investigation Report No. 87-072 documented training deficiencies that were in violation of the FSAR and ANSI 3.1. The inspectors determined that the staff's qualifications apparently do not meet the criteria of the licensee's job position description for the position of Fire Protection Supervisor and the maintenance engineering work experience and training criteria of ANSI 3.1 for Technicians and maintenance personnel. The licensee initiated corrective action for this concern in response to Corrective Action Report (CAR) No. CQ87-0099 prior to the inspector's followup activities.

The inspectors further substantiated that the licensee used Bisco and ICMS penetration seal materials to seal penetration openings in fire barriers in Unit 1 without having a technical basis for the compatibility of the materials and their fire endurance as a mixture. However, the licensee's vendor evaluation (Impell Corporation No. 1658-045-005) subsequently determined that the materials are compatible and as a mixture, they provide appropriate fire endurance.

Action Required

This is considered an unresolved item (528/89-02-02) pending completion of the licensee's corrective actions for the training and qualifications deficiencies and verification by Region V.



E. Characterization

Allegation File RV-88-A-0057e - An allegation was received by the NRC indicating that the licensee's training, coordination and offsite fire department assistance from the Phoenix Fire Department is not adequate. The alleger stated that such training and coordination is rarely, if ever performed.

Implied Significance to Plant Design, Construction, or Operation

Training, coordination and drills by the licensee with offsite fire department assistance is essential to the site's emergency readiness capability to combat major fire occurrences. The allegation implies that this aspect of the licensee's fire protection program may not meet the program requirements as specified in Sections B.5(b) and B.5(c) of Table 9B.3-1 of the FSAR.

Assessment of Safety Significance

Offsite fire department assistance is required to be provided by the NRC approved fire protection program as implemented by license condition, to supplement the fire brigade in the suppression of a fire so that safe shutdown can be achieved and maintained in the event of a major fire occurrence.

Staff Position

Substantiated

The inspectors' followup activities and interview with the Phoenix Fire Department on January 9, 1989 disclosed the following:

- (1) Agreement with the licensee to provide offsite fire department assistance was made between the licensee and the City of Phoenix Fire Department on July 19, 1984, prior to the Unit 1 initial startup. The Phoenix Fire Department's understanding of this agreement is that they are to provide firefighting and hazardous material assistance for major fire events involving non-nuclear materials, but they are not required to provide firefighting assistance in safety related areas in support of safe shutdown. The licensee has no other offsite fire department assistance agreement.
- (2) At the time the agreement was made on July 19, 1984, the Phoenix Fire Department's Hazardous Material Team (3-5 man shifts) were given a familiarization tour of Unit 1. It took 2 or 3 days for the three shifts of Hazardous Material Team members to complete the familiarization tour. Other than the familiarization tour, the Phoenix Fire Department has not received additional training at the Palo Verde site.
- (3) The Phoenix Fire Department does not participate in annual drills at the site and has never received any type of radiological training from the site.



- (4) The licensee did notify the Phoenix Fire Department to be on the alert during the July 6, 1988 transformer fire, however, this was an unusual request. The licensee does not normally notify the department of fire occurrences.
- (5) The licensee's only method of requesting assistance from the Phoenix Fire Department is via commercial telephone.
- (6) The Phoenix Fire Department's response time to the site by ground transportation or by helicopter is 1-hour.
- (7) The Phoenix Fire Department does not have a helicopter designated for emergency response to the site. The department's helicopter is shared with another state department and may not be available for this purpose. According to the department's spokesman, by agreement, the licensee is required to provide helicopter transportation for the department if assistance is needed. The licensee indicated that their corporate helicopter may not be available for this purpose during day shift hours due to other corporate needs. The helicopter pilot is only available during normal day shift hours. Therefore, the helicopter is not available during backshift hours.
- (8) Other than by agreement with the licensee, the Phoenix Fire Department has no jurisdiction at the site because the site is located in an unincorporated area. Therefore, the department is not required to respond to fire occurrences at the site.
- (9) If required through agreement, the Phoenix Fire Department could dispatch the following equipment and manpower to the site:
 - 60 firefighters
 - 10 fire engines
 - 3 ladder trucks
 - 1500 to 2000 gallons of chemical foam
 - 1-2000 gallon tanker
 - 2-1000 gallon tankers
- (10) The Phoenix Fire Department has no record of training or drills with the site because these activities have not been performed.
- (11) The Phoenix Fire Department has no preplanned emergency strategies for the site because such planning with the licensee has not been performed.



Action Required

This is considered a violation of License Condition Nos. 2.c(7), 2.c(6) and 2.f of Facility Operating License Nos. NPF-41, NPF-51 and NPF-74, respectively, which indicates that Palo Verde has entered into an agreement with the local offsite fire department for mutual support, and will provide appropriate training (528/89-02-03). The licensee has since indicated that action has been initiated to correct the above deficiencies.

3. Open Items

Open items are matters that have been discussed with the licensee, that will be reviewed further by the inspector, and that involve some action on the part of the NRC, the licensee, or both. Open items disclosed during the inspection are discussed in paragraph 2.D of the report.

4. Exit Meeting (30703)

An exit meeting was held with the licensee's staff on January 13, 1989. The items of concern in this report were discussed at that time. The licensee acknowledged the scope and content of the inspection findings.

