U.S. NUCLEAR REGULATORY COMMISSION

REGION V

Report Nos.: 50-528/89-19, 50-529/89-19 and 50-530/89-19

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

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

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

Inspection at: Wintersburg, Arizona

Inspection Conducted: April 24-28, 1989

Performed By: M. Cillis — 5/30/89
M. Cillis, Senior Radiation Specialist — Date Signed

Approved By: Emilio M. Garcia — 5/30/89
E. M. Garcia, Acting Chief — Date Signed
Facilities Radiological Protection Section

Summary:

Areas Inspected: Routine unannounced inspection of occupational exposures during extended refueling outages; including external and internal exposure control; review of allegation file RV-89-A-0020; follow-up of open items, enforcement items and licensee reported items, and facility tours. Inspection procedures 30703, 83728, 83729, 83750, 92701, 92700, and 92702, were addressed.

Results: In the areas inspected, the licensee's programs appeared adequate to accomplish their safety objectives. However, weaknesses were noted during the review of refueling activities conducted in Unit 1. A non-cited violation involving leak test of sealed sources is identified in paragraph 5.

DETAILS

1. Persons Contacted

   a. Licensee

   D. B. Karner, Executive Vice President
   J. G. Haynes, Vice President, Nuclear Production
   W. C. Marsh, Plant Director
   *J. E. Kirby, Nuclear Production Support Director
   *C. N. Russo, Quality Assurance/Quality Control Assistant Director
   *T. D. Shriver, Compliance Manager
   *W. E. Ide, Plant Manager - Unit 1
   *D. Heincke, Plant Manager - Unit 2
   *P. Hughes, Radiation Protection and Chemistry Manager
   *J. R. Mann, Central Radiation Protection Manager
   *R. A. Badsgard, Engineering and Construction Superintendent
   *J. M. Sills, Radiation Protection Standards Supervisor
   *K. R. Oberdorf, Radiation Protection Manager - Unit 1
   *A. G. Ogurek, Radiation Protection Manager - Unit 2
   *W. E. Sneed, Radiation Protection Manager - Unit 3
   *J. A. Scott, Chemistry Manager - Unit 3

   b. NRC

   B. H. Faulkenberry, Deputy Regional Administrator - Region V
   T. Polich, Jr., Senior Resident Inspector
   *D. Coe, Resident Inspector

   *Denotes those personnel present at the exit interview held on April 28, 1989.

   In addition, the inspector met and held discussions with other licensee and contractor personnel.

2. Occupational Exposure, Shipping, and Transportation (83728, 83729 and 83750)

   Shipping and transportation were examined during a previous inspection (see Region V Inspection Reports 50-528/88-42, 50-529/88-41 and 50-530/88-40).

   A. Audits

   It should be noted that the licensee has contracted for the services of a vendor to perform most of the refueling work inside the Unit 1 Reactor Building. All resources for performing the work and implementation of the licensee's radiation protection program are performed by the vendor staff. The work package agreement is referred to as the integrated work package. A description of the integrated work package is contained in Region V Inspection Report 50-528/89-07. A licensee oversight group consisting of three senior

radiation protection technicians (RPT) and one lead radiation protection technician for each twelve hour shift have been assigned to monitor the performance of the vendor's radiation protection group and workers for compliance to: licensed conditions, 10 CFR Part 20 and licensee procedures.

During the inspection several individuals from the Unit 1 and central radiation protection groups expressed concern to the inspector over the performance of the vendor's radiation protection staff. A review of Radiological Controls Problem Reports for the period of April 18 through April 26, 1989, disclosed 293 deficiencies that had been identified by the licensee's radiation protection oversight group.

Even though the description of the deficiencies appeared to be written in a generic and/or cryptic manner, they did identify significant deficiencies which in many cases appeared to be violations of the licensee's radiation protection manual procedures and in several cases of NRC requirements. As of the conclusion of this inspection, the licensee was considering submitting two Licensee Event Reports pursuant to 10 CFR Part 50.73. When submitted, these reports will be evaluated consistent with the NRC enforcement policy. The oversight group had reported the deficiencies to the Unit 1 Radiation Protection Manager (RPM) routinely. Most of the deficiencies had been corrected as they were identified. An RPT from the oversight group informed the inspector that the contractor radiation group normally takes immediate action to correct deficiencies; however, on several occasions they had argued the need for implementing the controls as prescribed in licensee radiation protection procedures. Several RPTs had expressed their concern of recurring deficiencies on the part of the vendor to a member from the central radiation protection office who had taken steps to notify the Central RPM on April 26, 1989. The Central RPM reported the concerns raised by his staff to the attention of the Nuclear Production Support Director and the Chemistry and Radiation Protection Manager (C&RPM).

The inspector discussed the oversight group findings with the Unit 1 RPM, Central RPM, C&RPM and Compliance Manager.

The Unit 1 RPM informed the inspector that he was going to inform the Unit 1 Plant Manager of the situation at about the same time that the Central RPM had informed the Nuclear Production Support Director.

A meeting, arranged at the request of the Executive Vice President and Vice President, Nuclear Production was held on April 27, 1989. The Region V Deputy Regional Administrator, Senior Resident Inspector and this NRC inspector and other licensee staff members were in attendance.

The oversight groups findings were summarized during the meeting. Both Vice Presidents, the Plant Manager and remaining licensee staff members stated the performance of the Unit 1 contractor radiation protection group was totally unacceptable and would not be tolerated. The licensee management directed that refueling outage work inside the Unit 1 containment be temporarily stopped while a management task force group headed up by the C&RPM assessed the problem. The work stoppage was expected to last for two or three days. The Plant Manager scheduled several meetings to discuss the problem with both his radiation protection staff and the contractor radiation protection staff. It was reemphasized to the contractor radiation protection staff that they would be required to comply with all of the licensee's radiation protection procedures and the applicable regulatory requirements.

By April 28, 1989, the task force had verified that all of the deficiencies identified by the oversight group had been corrected.

The Unit 1 Plant Manager and RPM clarified the responsibilities of the oversight group. The Plant Manager arranged to have a contractor radiation protection staff member accompany the licensee's oversight group assigned to monitor the performance of the contractor radiation protection group. The Plant Manager reminded the radiation protection staff of their authority to stop work when work practices were not safe or consistent with licensee requirements. The Plant Manager made it clear that he was to be kept informed of the status of the contractor radiation protection performance, even if it meant calling him at home. A Health Physicist certified by the American Board of Health Physics was assigned to assist the Unit 1 RPM in providing oversight of refueling work. Additionally, closer surveillance of work activities was to be provided for by the C&RPM and Central RPMs office staffs.

The inspector commended management for immediately addressing the concerns brought to their attention by the Central RPM.

B. Changes

No major changes to the licensee's organization and equipment had been made, except as described in Region V Inspection Reports 50-528/89-07 and 50-528/89-15, the inspection reports identified some temporary changes in the Unit 1 and Unit 3 refueling organizations and in the licensee's ALARA program.

C. Planning and Preparation

Planning and preparation for Unit 1 and 3 refueling outages were essentially complete at the time of this inspection. The licensee were still in the process of attempting to recruit the services of contractor personnel to support Unit 1's scheduled refueling work.

The APS President directed that Unit 1 be defueled and that work on its outage be continued at a slower pace. The amended Unit 1

refueling schedule calls for the fuel to be completely removed from the reactor vessel before any work is performed on steam generators, reactor coolant pumps or any other equipment associated with the primary cooling system. The refueling schedule in Unit 3 was also modified to require the reinstallation of the reactor coolant pumps, securing of the steam generators and completion of all work on the reactor coolant system before the fuel is loaded. Both of these changes are expected to add two to three weeks to the Units 1 and 3 refueling outage schedule.

Plant Managers and their respective staffs in Units 1 and 3 have emphasized that all work will be supported with sufficient resources.

D. Training and Qualification of New Personnel

No change had occurred in this functional area from what is described in Region V Inspection Reports 50-528/89-07 and 50-528/89-15.

E. External Exposure Control

Representative radiation exposure records were reviewed. No personnel were observed to have exceeded the licensee's administrative dose limits or the dose limits prescribed in 10 CFR Part 20.101. Additional information in this subject area is discussed in paragraphs 3 and 4, below.

F. Internal Exposure Control

Representative Units 1 and 3 records of air samples collected for work activities, whole body counting, bioassay, and calculations of airborne radioactivity concentrations, were reviewed. No concerns were identified.

G. Maintaining Radiation Exposures ALARA

The licensee performed a chemical plant cleanup (e.g., antimony removal evolution) following the shutdown of Units 1 and 3 in preparation for accomplishing the refueling outages in accordance with the ALARA concept prescribed in 10 CFR Part 20.1(c). The licensee's staff stated that the cleanup processes in Units 1 and 3 were very successful in the removal of large quantities of long-lived activity and expects to see significant results in the reduction of personnel exposures during the refueling outages. A total of approximately 900 curies of long-lived activity was removed from Unit 1 and 490 curies was removed from Unit 3.

The following provides a breakdown of the Units 1 and 3 antimony removal efforts:

Nuclide	Curies of Activity Removed Unit 1	Unit 3
Sb-124	250	40
Co-58	380	280
Co-60	20	20
Others such as Sb-122, Cs-134 Cs-137, Mn-51	250	150

Work activities observed during this inspection period were consistent with the licensee's ALARA program implementing procedures and the applicable Radiation Exposure Permits. The inspector noted that communications between the workers and radiation protection staff had improved.

The REP work package policy described in paragraph 3 below, is reviewed with each worker prior to the start of each job or before being allowed entry into the licensee's radiologically controlled areas. Additionally, when required by the REP, workers receive additional ALARA briefings. Normally, the ALARA briefings are provided for all critical work such as Reactor Coolant Pump and/or Steam Generator work. No concerns related to this matter were identified.

H. Control of Radioactive Materials and Contamination, Surveys, and Monitoring

Representative survey records of refueling activities conducted in Units 1 and 3 were reviewed. No concerns were identified in this area.

Overall, the licensee's radiation protection program in Unit 3 appeared capable of meeting its safety objectives. In Unit 1, the program also appeared capable of meeting its safety objectives; however, continued management attention will be needed to assure that the performance of the contractor group, assigned the responsibility for the implementation of the radiation protection program, is implementing the program in accordance with the applicable regulatory requirements and licensee procedures.

No violations or deviations were identified.

3. Allegation RV-89-A-0020

On April 12, 1989, a Region V inspector received a concern from an individual. This concern related to the badgering of a radiation protection technician. The specific concern was that:

The radiation protection technician, who on April 4, 1989, found a particle on an eddy-current contractor, was badgered to state that he believed the particle was probably not on the skin. Additionally, the technician was badgered to conclude that an

exposure duration of about 30 minutes was more probable than the conservative estimate of 4 hours. The technician originally believed that the longer duration and direct skin contact more accurately reflected the conditions of the exposure.

In this report the individual expressing the concern will be reffered to as individual "A".

The Region V inspector who received the call recommended to individual "A" to bring the concern to Palo Verde Management attention via their Quality Assurance Hotline. Individual "A" agreed to report the matter to the Palo Verde Quality Assurance Hotline. On April 14, 1989, a letter summarizing NRC's understanding of the concern and the individuals intention to notify the QA Hotline was sent to individual "A".

An examination of the concern raised by individual "A" was initiated on April 24, 1989. Discussions held with individual "A" disclosed the following:

- Individual "A" had no direct involvement in the event and therefore did not have any specific information other than what was initially reported.

- Individual "A" did not bring the concern to the attention of the licensee's Quality Hotline due to the lack of confidence in the hotline. The lack of confidence was based on information passed onto individual "A" by co-workers.

A RPT named by individual "A" was interviewed and denied any involvement in the event and was unaware of any badgering that may have taken place. The RPT was aware that the event had occurred.

A review of the Unit 3 Personnel Contamination Log for the period of January 1 through April 24, 1989 was conducted. The log described the contamination event that was referred to by individual "A". The name of the RPT who had surveyed the contaminated worker was noted in the log. Additionally, a review of the contaminated workers personnel exposure records was conducted. The workers personnel exposure records contained a detailed description of the event that had been reported by the Chemistry and Radiation Protection Manager and individual "A". The report also contained statements made by the contaminated worker, all involved RPTs and one engineer. None of the statements were made by the two persons that were either fully or partially named by individual "A".

The contaminated worker, the RPT who actually found the particle on the worker (individual "B"), three senior RPTs and two engineers were interviewed. All stated that there was an intensive investigation conducted by the licensee's staff; however, all of the individuals denied any knowledge of any badgering. This included individual "B" and the contaminated worker. Individual "B" was convinced that the particle was on the workers modesty garments and not his skin. Individual "B" could not state the length of time that the particle was on the worker because it had been identified by another RPT located inside the containment. Individual "B" happened to be at the containment personnel hatch when the

worker exited the containment. Individual "B" assumed responsibility for the contaminated worker at that point and performed all of the follow-up surveys of the worker until the particle was removed. Individual "B" did receive some consultation from a senior RPT and a radiological engineer during this period. Individual "B" and others were questioned periodically for the next several days by the licensee's staff conducting the investigation.

Copies of the licensee's investigation reports were reviewed with the key individuals. This included a review of some of the statements that had been prepared and signed by the individuals. All agreed that there was a lot of questioning that went on, but denied that there was any badgering. The contaminated worker informed the inspector that he was convinced that the particle was on his modesty garment based on his personal observations of what occurred after he exited the containment. The worker added that the licensee's staff has kept him well informed during and after their investigation process had been completed. Individual "B" described in detail, as did one of the engineers, how it was concluded that the particle was determined to be on the workers modesty garment. Individual "B" explained that he had taped a seal around the modesty garment shirts worn by the worker and then had the worker don a long legged modesty garment. Using this method would contain any particle inside of the short legged modesty garment or long pair modesty garment after he moved the worker from containment personnel hatch to the personnel decontamination facility. The licensee's investigation report documents individual "B's" statement as it was described to the inspector.

A mockup of the occurrence was also conducted by the licensee's investigative staff. The mockup included a map of the particle movement on the thigh of a manikin. The mockup showed the particle would have moved over an area of approximately 20 square centimeters in lieu of the one square centimeter used for determining the dose received to the worker. Based on the results of the mockup, the licensee's staff came to the same conclusion that the particle had to be on the workers modesty garment and not his skin. Additionally, because it could not be determined whether the particle was on the workers cloth protective clothing prior to donning them or if it got on his modesty garment sometime between the time of entry and the time of exit, (i.e., more likely after his paper coveralls tore) a value of 4.3 hours was used to determined the exposure received by the worker from the particle.

The licensee's investigation disclosed the following additional information:

- The licensee was issuing protective clothing based solely on monitoring performed by the laundry vendor. After the April 4, 1989, event, the licensee's radwaste group monitored 100% of the laundered protective clothing. Some clothing were found to contain pure Cobalt-60 particles ranging up to 124,000 dpm (e.g., approximately 0.06 uCi). The conclusion drawn from this information was also used as a factor for assigning the exposure time of 4.3 hours.

- Battelle's preliminary analysis was consistent with the license analysis (i.e., 0.47 microcurie Cobalt-60 particle).

- A tentative dose at 7 mg/cm^2 to the skin of the whole body of 2660 mRem was determined based on the preliminary results obtain from Battelle. The licensee's staff will verify the accuracy of preliminary dose assess to the worker upon receipt of Battelles final report.

The inspector could not substantiate the concern raised by the allege

No violations or deviations were identified.

4. Follow-up of Licensee Action on Open and Unresolved Item (92701)

Open Item 50-528/88-35-01 (Closed): This item involved two unsecured locked high radiation areas (LHRA) that were found and reported to the NRC by the licensee's staff on September 27, 1988. The licensee's evaluation of the events, as documented in ANPP memorandum #222-00434-JMS/RDM, dated October 24, 1988, was reviewed by the inspector.

The evaluation disclosed that although both areas were posted and controlled as LHRAs, neither area contained radiation levels which woul have required the areas be posted as LHRAs during the times the areas were left open and unattended. This finding is consistent with the inspector's findings that was reported in Inspection Report 50-528/88-35

The licensee's actions for preventing a recurrence of the two events appeared to be satisfactory. This matter is closed.

Open Item 50-528/89-07-01 (Closed): This item involves a licensee commitment to provide supervisory skills training to Radiation Protection Technicians (RPTs) who are temporarily promoted as Lead RPTs for the refueling outages in Units 1 and 3.

The inspector reviewed a training lesson plan and attendance records as a means to verify the training had been provided to the Lead RPTs that were selected. The licensee is still committed to develop a formal training plan that will be provided to all supervisory personnel. This commitment is documented in the licensee's December 29, 1988, response to an NOV. The licensee expects to implement their formal training plan starting by the end of June 1989. This matter is closed.

Open Item 50-528/89-07-03 (Closed): This item involves a licensee commitment to issue their revised ALARA program procedures and to train the Units 1 and 3 radiation protection staff to the new ALARA program. The licensee committed to issue the procedures and to train the staff prior to the start of the respective refueling outages in Units 1 and 3.

A review of revised ALARA procedures and appropriate records and discussions held with the radiation protection staff in Units 1 and 3 revealed that the licensee had issued the new procedures and was training personnel in accordance with their commitment. This matter is closed.

Open Item 50-528/89-07-05 (Closed): Inspection report identified that the instructions provided to workers attending the General Employee Training (GET) had the potential for hindering the reporting of safety concerns to the NRC in accordance with 10 CFR 19.15(b).

A licensee review of the GET had been accomplished by the Training and Compliance Manager, both had concluded that the instructor presented GET course was adequate. However, both agreed that the computerized presentation of GET may be misleading. Plans have been made to revise the computerized training course to support the start of the Unit 2 refueling outage in September of 1989. This matter is closed.

Open Item 50-528/89-07-06 (Closed): This item involved the backlog of 700 portable radiation survey instruments that were in the maintenance shop for repairs and or calibration. This amount appeared to be excessive in view of the scheduled outages planned for at Units 1 and 2. An examination of this item disclosed that four additional contracted I&C personnel were added to reduce the backlog and support the Units 1 and 3 refueling outages. The backlog of instruments at the time of this inspection had been reduced to 53. This matter is closed.

Open Items 50-528/IN-88-10, 50-528/IN-89-27, 50-529/IN-88-10 and 50-530/IN-88-10 (Closed): These items refers to two Information Notices. The topics of these Information Notices are shipments of contaminated equipment between nuclear power facilities and the limitations on the use of waste forms and high integrity containers (HICs) for disposal of low-level radwaste. The licensee had received and distributed the notices in accordance with established procedures. Personnel having responsibility for shipping and transportation activities and HICs used for disposal of low-level radwaste were familiar with the notices and the issues addressed therein. This matter is closed.

Open Item 50-528/89-07-04 (Open): This item refers to the limited amount of information provided on Radiation Exposure Permits (REPs). Inspection Report 50-528/89-07 had identified that general data on radiological conditions (i.e., contamination, airborne levels, radiation levels) are normally omitted from the REP and were not clearly disseminated to the workers.

The inspector noted that Units 1, 2 and 3 had developed REP work packages. The work packages contained the REP and current radiological conditions that were related to the REP. Work packages were maintained at the entry point to Radiologically Controlled Areas (RCAs) and at the job site. Each work package is reviewed by the RPT and worker prior to entry into RCAs. Discussions with each Radiation Protection Manager disclosed that the REP work package policy has been very successful in the dissemination of radiological conditions to workers and in controlling work. The policy had been implemented on a trial basis at the recommendation of the Radiation Protection Standards group. The RPMs stated that the new REP work package concept will be permanently implemented. The inspector observed the new policy that was in effect and concluded that it was an improvement. This item will be examined during a subsequent inspection.

Open Items 50-529/88-39-03 and 50-530/88-38-02 (Closed): These items are generic to Units 1, 2 and 3, therefore, future reference and/or review of these items will be tracked under open item 50-528/88-40-03. This matter is closed at Units 2 and 3.

Items 50-529/87-25-01 (Closed): This item is generic to Units 1, 2 and 3, and therefore any future review or reference to this item will be tracked under open item 50-528/87-24-02. This matter is closed at Unit 2.

Open Item 50-528/87-24-02 (Open): This matter refers to an NRC concern regarding the frequency and trending of personnel skin and clothing events (see Inspection Reports 50-528/87-24, 50-528/88-33 and 50-528/89-03).

A review of personnel contamination events that have occurred since the start of the Units 1 and 3 refueling outages was performed. Additionally, discussions related to this matter were held with the licensee's staff and at the exit interview.

The review of personnel contamination events showed that a significant increase in the number of events had occurred in both Units 1 and 3 since the start of refueling activities. The Unit 1 Plant Manager stated that he expressed a concern to the Unit 1 Radiation Protection Manager (RPM) because of the sudden increase in personnel contamination events that have occurred since the start of refueling on April 18, 1989. The majority of the events involved clothing contaminations. There were no contamination events of any significance that would have required a dose estimate to be performed. All of the Unit 1 events involved low levels of contamination. The Unit radiation protection staff and RPM review all events for probable cause. Additionally, a trending evaluation of all the events are performed for the purpose of determining if there any similarities in the events that may be addressed with the implementation of additional corrective actions.

In Unit 3, the numbers of personnel contamination events were higher than at Unit 1. From January 1 till April 24, 1989, Unit 3 had at least 52 personnel clothing contamination events. There were at least ten personnel contamination events involving "Hot Particles" that were reported between the period of April 2 and April 11, 1989. The Unit 3 staff and RPM also carefully review each event for probable cause and trending purposes. One of the "Hot Particle" events is discussed in paragraph 3, above. The licensee's dose assessment for the personnel contamination events involving the "Hot Particles" were reviewed. The dose estimates were performed in accordance with licensee procedure 75RP-9RP05, Contamination Dose Evaluation. The licensee's radiation protection staff had notified the NRC Region V staff of the event discussed in paragraph 3 and two events that occurred on April 9, 1989. Each of the three events involved a discrete Cobalt-60 particle. A brief description and preliminary dose estimates for the April 9th events are described below:

Event #1: A worker was found to have two particles in close

proximity to each other. Isotopic/quantitative identification of the particles are as follows:

Particle #1	7.85	uCi	Co-60
Particle #2	77.4	uCi	Co-60
	0.645	uCi	Cr-51

The particles were found on the outer surface of the workers plastic jump suit, in the area of his left inner thigh. The exposure time was determined to be 30 minutes.

The preliminary calculated beta and gamma total dose at 7 mg/cm^2 to the skin of the whole body was 3913 mRem.

Event #2: A worker was found to have a 198.6 uCi Cobalt-60 particle on the outer surface of his second pair of rubber gloves, in the area of his right ring finger. The exposure time was 30 minutes.

The preliminary calculated beta and gamma dose at 7 mg/cm^2 to the extremity was 13,796 mRem.

The NRC's dose estimates for the two events were in general agreement with the licensee's calculations.

No concerns with respect to the licensee's methodology or calculations were identified. Concerns expressed in the inspection reports referenced in this paragraph were reiterated during the exit interview. The licensee acknowledged the inspectors concerns by stating that all personnel contamination events are taken seriously and that they would continue to pay close attention and carefully review all personnel contamination events to determine how they may be reduced or eliminated. This matter will be examined during a subsequent inspection.

Unresolved Item 50-529/88-22-05 (Closed): This item concerns whether or not the licensee audits conducted pursuant to Technical Specifications (TS) 6.5.3.5(b) were in compliance with the licensee condition which states that audits of unit activities shall encompass: "The performance, training and qualification of the unit staff once per 12 months."

A review of licensee memorandum #030-01462-LAS of March 30, 1989, discloses that audits conducted to TS 6.5.3.5(b) after 1987 were consistent with the TS requirements. Discussions with the QA/QC Assistant Director disclosed that TS 6.5.3.5(b) audits conducted prior to 1987 were based on one central organization which was in effect at the time. Audits conducted prior to 1987 were consistent with the one central organization (e.g., Unit) concept. This matter is closed.

Overall, the licensee's programs addressing NRC follow-up and unresolved items appears capable of meeting its safety objectives.

No violations or deviations were identified.

5. Licensee Action on Enforcement Items and Follow-up of Written Reports of Non-routine Events (92700 and 92702)

Licensee Event Report (LER) 50-528/86-63-L0 (Closed): LER 86-63-L0 (sic) for Unit 1 identified that a 97.7 millicurie radioactive sealed source had not been wipe tested in accordance with TS 4.7.10.2(a) requirements since receipt of the source in 1986. The source had been inadvertently identified as a 97.7 microcurie source upon receipt. TS 3.7.10 only requires that each sealed source in excess of 100 microcuries be wipe tested; therefore, the source had not been wipe tested since receipt. The inspector verified that the requirements of TS 4.7.10.2(a) had been accomplished and that the corrective actions prescribed in the LER and licensee memorandum #215-00636-JRM/RBO of November 30, 1988 had been implemented. This violation is not being cited because the criteria specified in Section V.G of the Enforcement Policy were satisfied (NCV-50-528/89-19-01). This matter is closed.

Licensee Event Report 50-530/88-05-L0 involving an unauthorized entry into a locked high radiation area is being addressed and tracked under enforcement item 50-530/88-33-01. This matter is closed.

Overall the licensee's program for addressing LERs and enforcement items appears capable of meeting its safety objectives.

No violations or deviations were identified.

6. Facility Tours

Tours of the licensee's facilities were conducted during the inspection. Independent radiation measurements were made using an Eberline ion chamber survey instrument, Model RO-2, Serial Number 2691, due for calibration on July 18, 1989. The following observations were made:

a. Work practices appeared to be consistent with the REP's and ALARA concept.

b. All personnel observed on tours were equipped with proper dosimetry.

c. Radiation monitoring equipment were in current calibration.

d. Housekeeping in work areas had continued to receive attention.

e. Posting and labeling practices were consistent with 10 CFR 19.11 and 20.203. The inspector did note several areas in Unit 1's Radwaste Building that were over posted. The areas required a dose rate instrument for entry when in fact dose rates in the areas were essentially none detectable. This observation was brought to the attention of the Unit 1 Radiation Protection Manager. The areas were subsequently deposted.

Overall, the licensee's program appeared capable of meeting its safety objectives.

No violations or deviations were identified.

7. Exit Interview

The inspector met with the licensee representatives, denoted in paragraph 1, at the conclusion of the inspection on April 28, 1989. The scope and findings of the inspection were summarized.

The inspector stated that although the specific areas examined were adequate, an unusual number of deficiencies were identified with the performance of the contractor radiation protection group in Unit 1. The inspector added that while the oversight group maintained control over the situation it will require constant management attention to ensure refueling activities can be accomplished safely and in accordance with all of the regulatory requirements and licensee procedures. Licensee management acknowledged the findings and noted that corrective action had already been initiated and that refueling activities in both Units 1 and 3 will be more closely monitored.