ENCLOSURE 2

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket Nos.:	50-528; 50-529; 50-530
License Nos.:	NPF-41; NPF-51; NPF-74
Report No.:	50-528/97-07; 50-529/97-07; 50-530/97-07
Licensee:	Arizona Public Service Company
Facility:	Palo Verde Nuclear Generating Station, Units 1, 2, and 3
Location:	5951 S. Wintersburg Road Tonopah, Arizona
Dates:	March 10-14, 1997
Inspector:	Michael P. Shannon, Radiation Specialist
Approved By:	Blaine Murray, Chief, Plant Support Branch Division of Reactor Safety

ATTACHMENT: Supplemental Information

EXECUTIVE SUMMARY

Palo Verde Nuclear Generating Station, Units 1, 2, and 3
NRC Inspection Report 50-528/97-07; 50-529/97-07; 50-530/97-07

This routine announced inspection focused upon the licensee's radiation protection program during the Unit 3 refueling outage. Areas inspected included: external and internal exposure control programs, planning and preparation, contractor training and staffing, control of radioactive material and contamination, and nuclear assurance audits and evaluations.

Engineering Support

- No deviations to the commitments in Section 12.5 of the Updated Final Safety Analysis Report were identified (Section E2.1).

Plant Support

- In general, a good external exposure program was implemented. A non-cited violation was identified involving a worker who entered a locked high radiation area using a radiation exposure permit which did not authorize such an entry. A non-cited violation was identified involving the failure to inventory locked/very high radiation area keys (Section R1.1).
- Housekeeping within the radiological controlled area was very good (Section R1.1).
- An effective internal exposure control program was in place. A very good air sampling program was in operation (Section R1.2).
- Radiological outage work planning was very good. Lessons learned were included in work packages. The as low as is reasonably achievable (ALARA) committee was actively involved in outage exposure goal setting (Section R1.3).
- Effective radioactive contamination controls were implemented. Radioactive material was properly labeled and posted (Section R1.4).
- A violation was identified involving the failure to post a radiation area (Section R1.4).
- In general, a very good ALARA program was in place. The station ALARA committee was supported by all station work groups. However, the operations department had not attended an ALARA sub-committee meeting since December 1995 (Section R1.5).

- Management demonstrated support for the ALARA program by delaying the start of the refueling outage by 16 hours in an effort to decontaminate the reactor coolant system (Section R1.5).

- A very good contractor radiation protection training program was maintained. An appropriate number of trained and qualified contractor radiation protection technicians were on site to support outage work. Radiation protection supervision was appropriately involved in the development of the contractor radiation protection program (Section R5.1).

- An excellent audit program had been implemented by the nuclear assurance department. Nuclear assurance auditors had strong radiological operational and technical backgrounds. Self-assessments performed by the radiation protection department provided management with a good assessment of the radiation protection program (Section R7.1).

REPORT DETAILS

Summary of Plant Status

Units 1 and 2 operated at full power. Unit 3 was in a refueling outage. No events occurred during this period that adversely affected the inspection.

III. Engineering

E2 Engineering Support of Facilities and Equipment

E2.1 Updated Final Safety Analysis Report Review (UFSAR)

a. Inspection Scope

The inspector reviewed selected topics presented in Section 12.5, "Radiation Protection Program," of the UFSAR to ensure agreement with commitments.

b. Observations and Findings

A recent discovery of a licensee operating their facility in a manner contrary to the UFSAR description highlighted the need for a special focused review that compares plant practices, procedures, and/or parameters to the UFSAR descriptions. While performing the inspection discussed in this report, the inspector reviewed the applicable portions of the UFSAR that related to the areas inspected. The inspector verified that the UFSAR wording was consistent with the observed plant practices, procedures, and/or parameters.

c. Conclusion

No deviations to the commitments in Section 12.5 of the UFSAR were identified.

IV. Plant Support

R1 Radiological Protection and Chemistry Controls

R1.1 External Exposure Controls

a. Inspection Scope (83750)

Selected radiation workers and radiation protection personnel involved in the external exposure control program were interviewed. The inspector performed several tours of the radiological controlled area, including the Unit 3 containment building. The following items were reviewed:

- Radiological controlled area access/egress controls,
- Control of high radiation areas and high radiation area keys,
- Radiation exposure permits,
- Job coverage by radiation protection personnel,
- Housekeeping within the radiological controlled area, and
- Dosimetry use.

b. Observations and Findings

High radiation areas were properly controlled and posted. All Technical Specification-required locked high radiation area doors were locked and properly posted. Locked high radiation area flashing lights were operational.

High Radiation Event:

On March 12, 1997, the licensee informed the inspector, that earlier that same day, an Arizona Public Service mechanic entered the locked high radiation area in the low-level radioactive material storage facility without being on the proper radiation exposure permit task or without receiving authorization from radiation protection personnel.

On March 13, 1997, the inspector toured the low-level radioactive material storage facility with members of the licensee's radioactive materials control staff. The inspector noted that the area was properly posted and controlled.

During the tour, members of the licensee's staff walked the inspector through the sequence of events that occurred on March 12, 1997. The inspector concluded that radioactive material control personnel were always located between the worker who had entered the area incorrectly and the radiation source (an opened radioactive waste vault with whole body dose levels as high as 2,500 millirem per hour) and, thus, in this case the worker would not have likely received an unplanned exposure. The inspector also determined that radioactive material control personnel took immediate and proper actions once they identified that the worker was not authorized to be in the area. The worker was escorted out of the area, radiation protection management was notified, and a condition report/disposition request was initiated by the staff.

The inspector was informed that the mechanic had entered the area several times to repair the contact relays for the bridge crane earlier on March 12, 1997, while the area was posted and controlled as a radiological controlled area. The inspector determined that the employee was signed in on the proper radiation exposure permit (9-97-0009A, Task-1) for such entries. When the radioactive waste vault was

opened, radiological work conditions changed from a radiological controlled area to a locked high radiation area. At this point, radiation protection personnel properly posted the area with a locked high radiation area sign and one string of flashing lights, which was added to the existing radiological controlled area posting and rope boundary.

The inspector reviewed Radiation Exposure Permit 9-97-0009A, Task 1, which was used by the mechanic who entered the locked high radiation area and noted it clearly stated "no high radiation area entry." In order to be properly authorized to work in the locked high radiation area, the mechanic should have been logged in under Radiation Exposure Permit 9-97-0009A, Task-3.

Technical Specification 6.12.2 requires, in part, personnel who enter a locked high radiation area, work under an approved Radiation Exposure Permit.

On March 20, 1997, the licensee provided the inspector a copy of their investigation report concerning this matter. The report noted that the worker had entered the area several times to repair the contact relays for the bridge crane on March 12, 1997, while the area was posted and controlled as a radiological controlled area. The licensee determined that there was no willfulness on the part of the worker because he was not part of the pre-job briefing when the area posting was changed. It was also determined that he followed previous work habits when he re-entered the posted locked high radiation area.

The inspector reviewed the licensee's corrective actions regarding this event and determined the corrective actions to be satisfactory to prevent a similar occurrence. This licensee identified and corrected violation is being treated as a non-cited violation, consistent with Section VII.B.1 of the NRC Enforcement Policy (50-530/9707-01).

Key Control:

The inspector reviewed the locked/very high radiation area key issue process and performed an inventory of locked/very high radiation area keys. No problems were identified with the key issue program.

During the inventory of locked/very high radiation keys, the inspector identified that the locked/very high radiation area master keys assigned to operations and stored in the operations shift supervisor's office had not been inventoried since August 12, 1994, when the locked/very high radiation area master keys assigned operations were inventoried to close Condition Report/Disposition Request 94-0182. The inspector determined through interviews with operations personnel that they did not maintain a key to open the box and could only gain access to the locked/very high radiation area master keys by breaking the glass. The inspector inspected the locked/very high radiation area key box and determined that the box was intact.

When key control was discussed with radiation protection management, they stated that it was never their intent to inventory locked/very high radiation area master keys, because they were not routinely issued. The inspector determined by reviewing the key inventory records that the locked/very high radiation area master keys assigned to radiation protection were inventoried each shift in accordance with radiation protection procedures.

After this matter was discussed with radiation protection management, a night order was written requiring the radiation protection staff to perform an inventory of operations locked/very high radiation area master keys each shift until the master keys were removed from the operations shift supervisors office.

Section 3.4.7 of Radiation Protection Procedure 75RP-9OP02, "Control of Locked High Radiation Areas and Very High Radiation Areas," Revision 10, states, in part, ". . . locked/very high radiation area keys shall be inventoried each shift by the designated oncoming RP technician prior to the completion of shift turnover . . . ."

Technical Specification 6.8.1(a) requires, in part, that written procedures be established, implemented, and maintained covering the activities recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Section 7.e(1) of Appendix A of this regulatory guide includes procedures for access controls to radiation areas.

The inspector determined that the failure to inventory locked/very high radiation area keys was a violation of Radiation Protection Procedure 75RP-9OP02. However, this failure constituted a violation of minor significance and is being treated as a non-cited violation consistent with Section IV of the Enforcement Policy (50-530/9707-02).

Radiation Exposure Permits:

Radiation exposure permits were written in a clear consistent manner. The inspector noted that the limitations section of radiation exposure permit was written in bold red letters informing the workers of areas and radiological conditions that were not authorized. The inspector concluded that by high-lighting the limitation section of the radiation exposure permit, clear direction was provided to radiological workers.

A review of randomly selected active radiation exposure permit packages concluded that documentation was filed in accordance with management's expectations. The inspector noted that the packages contained survey documentation used to develop the radiation exposure permit. All personnel observed by the inspector wore their dosimetry properly and knew to contact radiation protection personnel if their electronic dosimeter alarmed.

The inspector determined that job coverage provided by radiation protection technicians was appropriate for the radiological work observed. Field radiological briefings given by the job coverage radiation protection technicians discussed the radiological conditions in the work area and potential radiological hazards and hold points.

Housekeeping within the radiological controlled area was very good. All trash and laundry containers were properly maintained.

On Tuesday, March 11, 1997, and Thursday, March 13, 1997, the inspector attended a night shift radiation protection supervisor's plant status meeting with the staff, and a radiation protection supervisor's shift turnover meeting, respectively. The inspector noted a good exchange of information between supervision and staff, and determined that both meetings were informative and professional. All personnel were attentive and had the opportunity to address any concerns.

c. Conclusions

Technical Specification-required locked high radiation doors were properly locked and posted. A non-cited violation was identified involving a worker that entered a locked high radiation area using a radiation exposure permit which did not authorize such an entry. A non-cited violation was identified for the failure to inventory locked/very high radiation area keys. Housekeeping within the radiological controlled area was very good. All personnel observed wore their dosimetry properly.

R1.2 Internal Exposure Controls

a. Inspection Scope (83750)

Selected radiation protection personnel involved with the internal exposure control program were interviewed. The following items were reviewed:

- Air sampling program, including the use of continuous air monitors and high efficiency particulate air filtration units,
- Respiratory protection program,
- Whole body counting program, and
- The internal dose assessment program.

b. Observations and Findings

All air sampling equipment observed in the field had current calibration dates and was response checked in accordance with station procedures. The use and positioning of continuous air monitors and air filtration units were appropriate to monitor and limit airborne exposures. Job coverage air sampling equipment observed by the inspector was appropriately positioned to alert workers of changing airborne radiological work conditions.

As of March 13, 1997, three full-faced negative pressure respirators and eight air-supplied bubble hoods had been issued for radiological work. The inspector reviewed selected TEDE/ALARA evaluations, which were performed to ensure compliance with the requirements of 10 CFR Part 20, Subpart H, and concurred with the licensee's conclusions that respiratory protection equipment satisfied TEDE/ALARA principles. No positive whole body counts occurred that exceeded the licensee's administrative action level for recording internal dose.

The inspector reviewed the licensee's program used to determine internal dose assessment. No problems were identified with this program.

c. Conclusions

The internal exposure control program was effectively implemented. A very good air sampling program was in place. The use of continuous air monitors and air filtration units were appropriate to monitor and limit airborne exposures.

R1.3 Planning and Preparation

a. Inspection Scope (83750)

Radiation protection department personnel involved in radiation protection outage planning and preparation were interviewed. The following items were reviewed.

- ALARA job planning;
- Job scheduling and sequencing;
- ALARA packages;
- Incorporation of lessons learned from similar work; and
- Supplies of radiation protection instrumentation, protective clothing, and consumable items.

b. Observations and Findings

The inspector determined that radiation protection personnel were actively involved with the outage radiological work job planning. ALARA packages included lessons learned from past similar site and industry work.

It was concluded from a review of ALARA committee meeting minutes that the committee was appropriately involved in outage exposure goal setting and monitoring.

The inspector reviewed some ALARA field notes, which were written during on-going work, and determined that appropriate items to improve future similar work were identified.

No problems were identified with the adequacy of radiation protection instrumentation, protective clothing, and consumable supplies to support radiological work.

c. Conclusions

Radiation protection personnel were appropriately involved with the outage radiological work job planning. ALARA packages included lessons learned from past similar site and industry work. The ALARA committee was actively involved in outage exposure goal setting and monitoring.

R1.4 Control of Radioactive Materials and Contamination: Surveying, Posting, and Monitoring

a. Inspection Scope (83750)

Areas reviewed included:

- Contamination monitor use and response to alarms,
- Control of radioactive material,
- Portable instrumentation calibration and performance checking programs,
- Adequacy of the surveys necessary to assess personnel exposure, and
- Radiological postings.

b. Observations and Findings

All personnel observed by the inspector used the personnel contamination monitors properly. Radiation protection technicians stationed at the radiological controlled access area responded properly to the personnel contamination monitor alarms and provided clear and proper guidance to workers.

The licensee provided good controls to prevent the spread of radioactive contamination. Contaminated areas were well posted and marked with tape or rope. Step-off pads were placed at the entrances/exits to these areas. The inspector observed radiation work activities while exiting contaminated areas, and noted good health physics practices. All containers, including vacuums, were properly labeled and controlled.

All radioactive material observed was properly labeled and posted. Portable radiation protection survey instrumentation was properly calibrated and source response checked.

The inspector reviewed a number of surveys and determined that they were documented in a clear, consistent manner.

During a tour of the Unit 3 fuel building, on March 12, 1997, the inspector identified that the west stairway leading to the 140-foot elevation was not posted as a radiation area. After a review of surveys for the area, the inspector determined that this condition had existed for at least 8 days. Dose rates on the 140-foot elevation were as high as 400 millirem per hour on contact and 10 millirem per hour at 30 centimeters.

10 CFR 20.1003 defines a radiation area as an area accessible to individuals in which radiation levels could result in an individual receiving a dose equivalent in excess of 5 millirem in 1 hour at 30 centimeters from the radiation source or from any surface that the radiation penetrates.

10 CFR 20.1902 (a) requires that radiation areas be posted with a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION RADIATION AREA."

The failure to post the west stairway leading to the 140-foot elevation of Unit 3's fuel building as a radiation area is a violation of 10 CFR 20.1902 (a) (50-530/9707-03).

c. Conclusions

Station workers used the personnel contamination monitors properly. Good controls to prevent the spread of radioactive contamination were implemented. All radioactive material was properly labeled and posted. A violation was identified for the failure to post the west stairway leading to 140-foot elevation of Unit 3's fuel building as a radiation area.

R1.5 Maintaining Occupational Exposure ALARA

a. Inspection Scope (83750)

Radiation protection personnel involved with the ALARA program were interviewed. The following areas were reviewed:

- ALARA committee support,
- Exposure goal establishment and status,
- Lesson learned capture,
- ALARA suggestion programs, and
- Shutdown chemistry controls.

b. Observations and Findings

During tours of the radiological controlled area, the inspector noted that ALARA low dose (cool areas) and radiological hot spot areas were identified throughout the unit.

The inspector observed a number of job coverage field briefings conducted by radiation protection technicians and noted that ALARA work practices were stressed to all workers. Workers interviewed by the inspector knew the general radiological conditions in their work area and the low dose waiting areas.

The inspector reviewed the minutes from the station ALARA committee meeting since March 1996, and noted good involvement of all station groups. In addition to the ALARA committee, the licensee had established an ALARA sub-committee which was comprised of working level personnel from all the major work groups.

A review of the sub-committee meeting minutes indicated that the sub-committee was instrumental in incorporating a number of ALARA suggestions and awards. During the review of the ALARA sub-committee meeting minutes, the inspector identified that the operations department had not attended a meeting since December 1995. The inspector noted that the ALARA committee was informed of the lack of operations department support of the sub-committee during their February 29, 1996, meeting. Licensee management stated that they would work with the sub-committee to improve the operations department support.

The inspector reviewed the outage exposure summary data for the refueling outage (U3R6) and noted that post shutdown dose rates were approximately twice as high as the last Unit 3 refueling outage (U3R5), 160 millirem per hour versus 80 millirem, respectively. The licensee has written a "level 1" investigation report, which requires senior station management involvement, and two condition reports/disposition requests, to identify the cause of the unexpected increased dose rates. The licensee had not completed their investigation during this inspection period.

The inspector noted that station management demonstrated their support for the ALARA program by delaying the start of the refueling outage by 16 hours in an effort tc decontaminate the reactor coolant system and reduce the general area dose rates.

The inspector determined that the 127 person-rem, Unit 3 refueling outage exposure goal, was challenging. A review of the trending data verses remaining work indicated that there was a good possibility of meeting the outage exposure goal, even with the elevated dose rates encountered during shutdown.

Twenty ALARA suggestions had been submitted during 1996, and three ALARA suggestions had been submitted for 1997, as of March 13, 1997. All 1996 ALARA suggestions had been reviewed, evaluated, and closed in a timely manner. The inspector noted that the three ALARA suggestions submitted for 1997 had been reviewed and evaluated. The inspector determined that there was a good ALARA suggestion program in place.

c. Conclusions

Overall, a very good ALARA program was in place. ALARA work practices were stressed to all workers during field pre-job briefings. The station ALARA committee was supported by all work groups. The operations department had not attended an ALARA sub-committee meeting since December 1995. Management demonstrated support for the ALARA program by delaying the start of the refueling outage by 16 hours in an effort to clean up the reactor coolant system. Unit 3's refueling outage exposure goal was challenging.

R5 Staff Training and Qualification in Radiological Protection and Chemistry

R5.1 Radiation Protection Staff Training

a. Inspection Scope (83750)

Personnel involved with contractor radiation protection technician training and resume evaluation were interviewed. The following items were reviewed:

- Contractor radiation protection technician training lesson plans, and
- Resumes of contractor radiation protection technicians.

b. Observations and Findings

The inspector reviewed the qualifications of radiation protection instructors assigned to train the contractor radiation protection personnel brought on site to support outage activities, and noted that these individuals had a number of years of operational radiation protection and instructor experience.

Fifty-three senior contractor radiation protection technicians and 17 junior contractor radiation protection technicians were hired to support outage radiological activities. The inspector noted that approximately 70 percent of the contractor radiation protection technicians had worked previous Palo Verde outages. Randomly selected senior contractor resumes were reviewed. It was noted that all senior radiation protection contractors were all American Nuclear Standards Institute 3.1 (3 years of radiation protection experience) level technicians.

The lesson plans used for training contract radiation protection technicians were well organized, developed, and site and industry lessons learned were incorporated. Radiation protection management was appropriately involved in developing the training topics. However, the inspector noted that radiation protection management had not monitored the contractor radiation protection classroom training, as in past outages. Radiation protection management acknowledged the inspector's comment, and stated they planned to monitor portions of future outage contractor classroom training.

The Northeast Utilities' radiation protection screening program was used to evaluate the general radiological knowledge of the contract radiation protection technicians brought on site to support outage activities. The Northeast Utilities program is recognized and approved by a number of utilities as an acceptable method to evaluate radiation protection technician's general radiological knowledge. The inspector noted that both junior and senior contractor radiation protection technicians were required to pass this examination within the last 2 years, prior to performing radiation protection activities.

All contractor radiation protection technicians were tested on site-specific information and on-the-job training and evaluations were given and tracked by radiation protection supervision.

The on-the-job evaluation qualification program was reviewed. Tasks listed were appropriate and evaluation guidelines were clearly stated.

c. Conclusions

An appropriate number of trained and qualified contractor radiation protection technicians were on site to support outage work. A large percentage of contractor radiation protection technicians had worked previous Palo Verde outages. Radiation protection supervision was involved in the development of the contractor radiation protection program.

R6 Radiological Protection and Chemistry Organization and Administration

The inspector reviewed the present organization chart and compared it to an organization chart obtained during the previous inspection. The radiological decontamination group was recently placed under the radiation protection

organization. The inspector noted fewer contaminated areas in the auxiliary building than during past inspections. Radiation protection management stated that the reorganization enabled them to better set the priorities pertaining to reclaiming an area. Because the changes were recently implemented, no conclusion was reached with regard to the reorganization.

R7 Quality Assurance in Radiological Protection and Chemistry Activities

R7.1 Quality Assurance Audits and Surveillances, and Radiation Department Self-Assessments and Radiological Occurrence Reports

a. Inspection Scope (83750)

Selected personnel involved with the performance of quality assurance audits and surveillance, and radiation department self-assessments were interviewed. The following items were reviewed:

- Qualifications of personnel who performed nuclear assurance radiation protection audits and evaluations,
- Nuclear assurance audits performed since March 1996,
- Nuclear assurance evaluations performed since March 1996,
- Radiation protection department self-assessments performed since March 1996, and
- Radiological condition report/disposition requests written since March 1996.

b. Observations and Findings

The inspector reviewed the qualifications of the lead nuclear assurance auditors assigned to assess radiation protection department activities. Three individuals were assigned to oversee radiation protection department activities. The inspector determined that all three nuclear assurance auditors had a number of years of operational and technical radiation protection experience.

The inspector reviewed Nuclear Assurance Audit 96-008, which was performed between March 5 and 15, 1996. The audit provided a good assessment of the radiation protection program. The audit identified four "areas for management attention" (deficiencies). Areas for management attention were tracked by the licensee's condition report/disposition request system, which was used to track corrective actions. The inspector reviewed the recommended corrective actions pertaining to this audit, and determined that they appeared appropriate to correct the deficiencies identified. The inspector noted that these items were closed out in a timely manner.

The inspector reviewed the audit schedule and determined that it covered the appropriate program areas to provide management with a good overview of the radiation protection program. Radiation protection management was properly involved in the development of the audit scope.

Selected nuclear assurance radiation protection evaluation reports were reviewed. The reports covered a broad range of radiation protection activities and provided management with a good tool to assess the radiation protection program.

Self-assessments were clearly written and covered a wide range of radiation protection activities. The inspector determined that the self-assessments provided a good overview of the radiation protection program. No problems were identified with the radiation protection self-assessment schedule.

No problems were identified during the review of radiological condition reports/disposition requests. The inspector noted that recommendations to prevent a re-occurrence appeared to be appropriate and corrective actions were closed out in a timely manner. No negative trends were identified by the inspector during his review.

c. Conclusions

The nuclear assurance auditors assigned to assess radiation protection activities had strong radiological operational and technical backgrounds. Audit 96-008 provided a good assessment of the radiation protection program. Radiation protection department self-assessments provided management with a good overview of the radiation protection program. No problems were identified with radiological condition reports/disposition requests.

R8 Miscellaneous Radiological Protection and Chemistry Issues

R8.1 (Closed) Violation 529/9402-01: Not Wearing a TLD in the Radiological Controlled Area

This violation involved a contract employee working inside the radiological controlled area, who had removed his security badge and dosimetry, and placed them several feet away from himself. The inspector confirmed that the corrective actions described in the licensee's response letter, dated April 13, 1994, were completed. No additional examples were noted during the inspection.

R8.2 (Closed) Violation 529/9604-01: Failure to Follow Radiation Protection Procedures

This violation involved: (1) a worker who performed work in the radiological controlled area overhead without radiation protection authorization; and (2) workers not following the protective clothing requirements that were listed on their radiation exposure permit, as well as, radiation protection personnel who provided job

coverage, that were not aware of the protective clothing requirement. The inspector confirmed that the corrective actions described in the licensee's response letter, dated May 22, 1996, were completed. No additional examples were noted during the inspection.

V. Management Meetings

X1 Exit Meeting Summary

The inspector presented the inspection results to members of licensee management at an exit meeting on March 14, 1997. The licensee acknowledged the findings presented. No proprietary information was identified.

ATTACHMENT

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

J. Levine, Senior Vice President, Nuclear Operations
G. Overbeck, Vice President, Nuclear Production
J. Burgard, Section Leader, Radiation Protection
D. Edwards, Section Leader, Technical Training
J. Gaffney, Department Leader, Radiation Protection
T. Gray, Section Leader, Radiation Protection
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D. Larkin, Senior Engineer, Nuclear Regulatory Affairs
D. Leach, Department Leader, Nuclear Assurance
D. Marks, Section Leader, Nuclear Regulatory Affairs
G. Nelson, Training Coordinator, Technical Training
M. Shea, Director, Radiation Protection

NRC

K. Johnston, Senior Resident Inspector

INSPECTION PROCEDURE USED

83750	Occupational Radiation Exposure

LIST OF ITEMS OPENED AND CLOSED

Opened

530/9707-01	NCV	Failure to use a proper radiation exposure permit to enter a locked high radiation area
530/9707-02	NCV	Failure to inventory locked/very high radiation area keys.
530/9707-03	VIO	Failure to post a radiation area

Closed

530/9707-01	NCV	Failure to use a proper radiation exposure permit to enter a locked high radiation area
530/9707-02	NCV	Failure to inventory locked/very high radiation area keys
529/9402-01	VIO	Not Wearing a TLD in the RCA
529/9604-01	VIO	Failure to Follow Radiation Protection Procedures

LIST OF DOCUMENTS REVIEWED

Radiation Protection Procedure 75PR-ORP03, "ALARA Program," Revision 5

Radiation Protection Procedure 75AC-9RP11, "ALARA Committee," Revision 4

Radiation Protection Procedure 75DP-9RP01, "Radiation Exposure And Access Control," Revision 0

Radiation Protection Procedure 75RP-ORP01, "Radiological Posting," Revision 15

Radiation Protection Procedure 75RP-ORP02, "Radiological Survey Schedule," Revision 2

Radiation Protection Procedure 75RP-9MC01, "Control Of Radiation Protection Instrumentation," Revision 8

Radiation Protection Procedure 75RP-9OP02, "Control of Locked High Radiation Areas and Very High Radiation Areas," Revision 10

Radiation Protection Procedure 75RP-9RP02, "Radiation Exposure Permits," Revision 13

Radiation Protection Procedure 75RP-9RP07, "Radiological Surveys," Revision 8

Radiation Protection Procedure 75RP-9RP09, "Vehicle, Equipment and Material Release," Revision 14

Operations Procedure 40DP-9OP33, "Shift Turnover," Revision 1

Nuclear Assurance Procedure 60DP-OQQ19, "Internal Audits," Revision 1

Nuclear Assurance Procedure 60DP-OQQ17, "Conduct of Nuclear Assurance Evaluations," Revision 6

Nuclear Assurance Division Evaluation Schedule 1996

Nuclear Assurance Division Audit Report 96-008, "Radiation Protection Occupational Exposure"

A Summary of Nuclear Assurance Radiation Protection Evaluation Reports From March 1996

A Summary of Radiation Protection Department Self-Assessments From March 1996

ALARA Committee Meeting Minutes From March 1996

ALARA Sub-Committee Meeting Minutes From March 1996

Radiation Exposure Permit 9-97-0009A

Radiation Exposure Permit 3-3022A

Radiation Exposure Permit 3-3319A

Radiation Exposure Permit 3-3501B2