U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report No. 50-312/85-28

Docket No. 50-312 License No. DPR-54

Licensee: Sacramento Municipal Utility District
P. O. Box 15830
Sacramento, California 95813

Facility Name: Rancho Seco Nuclear Generating Station

Inspection at: Clay Station and Sacramento, California

Inspection conducted: September 23-27, 1985, October 7-15, 1985 and telephone discussions of October 18, 21, 22, 23 and 24, 1985

Inspectors:

GP Yuhas for
M. Cillis, Radiation Specialist — 11/20/85 Date Signed

GP Yuhas for
C. Hooker, Radiation Specialist — 11/20/85 Date Signed

GP Yuhas for
R. Cook, Radiation Specialist — 11/20/85 Date Signed

Approved By:

GP Yuhas
G. P. Yuhas, Chief, Facilities Radiological Protection Section — 11/20/85 Date Signed

Summary:

Inspection on September 23-27, 1985, October 7-15, 1984 and telephone discussions of October 18 21, 22, 23, and 24, 1985 (Report No. 50-312/85-28)

Areas Inspected: Routine unannounced inspection by regionally based inspectors of unresolved items (NUREG-0737, II.B.3 - Post-Accident Sampling System (PASS) and II.F.1 - Additional Accident-Monitoring Instrumentation), chemistry and radiation protection organization, liquid and gaseous waste management, audits, licensee action on previous inspection findings, tests of air cleaning systems, radioactive materials source control, and a tour of the facility. During this inspection, Inspection Procedures 25565, 83722, 84723, 83724, 92701, and 92702 were performed. The inspection involved a total of 140 hours onsite by three inspectors.

Results: Of the ten areas inspected, one violation involving failure to adhere to procedures as required in Technical Specifications, Section 6.11 (see paragraph 13), and one violation involving failure to perform a proper calibration of the flow rate monitoring devices in the reactor building purge vent and auxiliary building stack flow effluent radiation monitors pursuant to TS Table 4.20-1 and Section 1.5.4 (see paragraph 10) were identified. Four deviations related to the unresolved item involving the licensee's failure to implement written commitments made to the NRC with respect to NUREG-0737, Items II.B.3 and II.F.1 (see paragraph 3.IV) were also identified.

DETAILS

1. Persons Contacted

A. Licensee Personnel

*G. Coward, Plant Manager
*S. Redeker, Operations Manager
+*F. Kellie, Acting Chemistry and Radiation Protection Superintendent
+*R. Columbo, Regulatory Compliance Supervisor
*J. McColligan, Assistant Plant Manager, Nuclear Operations
+*H. L. Canter, QA Operations Surveillance Supervisor
J. Sullivan, QA Engineering Supervisor
+*S. Nicolls, Senior Chemistry Radiation Assistant (SCRA)
+*E. Bradley, Supervising Health Physicist
+*W. Spencer, Nuclear Operations Superintendent
+*N. C. Brock, I&C Superintendent
+W. Wilson, SCRA
S. Manofsky, SCRA
+*J. Reese, Plant Health Physicist
+*J. Field, Technical Support Superintendent
R. Thomas, Senior Nuclear Operations Engineer
D. Wiles, I&C Supervisor
M. Hardin, I&C Engineering Technician
+R. Fraser, Senior Nuclear Operations Engineer
D. Cox, Senior Nuclear Engineer
*A. Alvi, Principal Chemical Engineer
*R. Roehler, Licensing Engineer
F. Thompson, Training Superintendent
+*M. Bua, Training Supervisor
J. Dickenson, Chemistry Radiation Assistant (CRA)
P. Howard, CRA
G. Martin, CRA
R. Meyers, Emergency Preparedness Supervisor
P. Wagner, I&C Engineer
D. Talma[illegible], CRA
E. Madamoa, CRA
W. Hampton, CRA
D. Price, Training Instructor
R. Bowser, SCRA
J. Bower, Training Supervisor
S. Carmichael, I&C Associated Engineer
+R. Lowrence, Maintenance Superintendent

B. Non-Licensee Personnel

Applied Radiological Controls (ARC)

R. Rewalt, Supervisor, Senior Radiation Protection Technician
P. Carter, Senior Chemistry and Radiation Protection Technician

Impell Corporation

W. Hellums, Health Physicist
+*P. Lavely, Health Physicist

Bechtel Corporation

*J. Shelter, Outage Manager

C. Nuclear Regulatory Commission

*J. Eckhardt, Senior Resident Inspector
*G. Perez, Resident Inspector

*Denotes attendance at exit interview conducted on September 27, 1985.

+Denotes attendance at exit interview on October 11, 1985.

In addition to the individuals identified above, the inspector met with and held discussions with other members of the licensee's and contractors staff.

2. Organization and Qualifications

Inspection Report 50-312/85-12, paragraph 3(b) identified that the site Chemistry and Radiation Protection Superintendent (C&RPS) position was vacated and the possibility that the Chemistry and Radiation Protection (C&RP) group would be re-organized. Discussions related to the C&RPS replacement and re-organization of the facility C&RP group were held with the licensee's staff during this inspection.

The Manager of Nuclear Operations indicated that changes in the facility organization and the C&RP group were in the process of being implemented. These changes are based on the recommendations of two independent evaluations performed by LRS and General Dynamics. The Manager of Nuclear Operations informed the inspector that an individual has been selected to fill the vacated C&RPS's position. He added that recommendations made by the two independent evaluations were currently being evaluated by the licensee's staff and it was too soon to state whether or not all of the recommendations would be implemented. He expected that it would take at least six to twelve months before the final reorganizational plan would be determined.

The inspector noted that the preliminary reorganizational plans differ from what is currently prescribed in Technical Specifications, Section 6.2, "Organization". The proposed changes appear to indicate that the Chemistry and Radiation Protection group will be split into two separate groups (i.e. Chemistry as one group and Radiation Protection as another). Enhancement of the Radiation Protection staff is also expected. The examination disclosed that position responsibilities and job titles are expected to change. The C&RPS title is expected to change to Radiation Protection Manager (RPM). The inspector noted that the Chemistry, Radiation Protection, Fire Protection, and Operations Supervisors will be reporting to the Operations Manager. Previously,

both Chemistry and Radiation Protection Supervisors reported directly to the Plant Superintendent. The inspector was informed that the RPM position will be able to report directly to the Plant Manager (e.g. dotted line) if deemed necessary.

The new RPM is expected to report for duty on or before January 1, 1986. A review of his resume was conducted. It appears that the selected RPM's training (education) and qualifications are consistent with the requirements prescribed in Technical Specifications, Section 6.3, "Facility Staff Qualifications". The individual has approximately sixteen years associated with radiation protection activities at commercial and naval nuclear plants.

The examination further disclosed that the acting C&RPS has been authorized to increase the current Chemistry and Radiation Protection technician staff from twenty-four slots to thirty-six slots. At the time of this inspection twenty-seven positions were accounted for. Twenty-one of the technicians were on hand at the time of this inspection. Eighteen of the twenty-one currently meet the qualifications prescribed in TS, Section 6.3.

Other portions of the Chemistry and Radiation Protection organization remain unchanged from that described in Inspection Report 50-312/85-12.

No violations or deviations were identified.

3. Unresolved Item

(Unresolved, 83-24-01) Inspection Report 50-312/83-24, paragraph 9 identified as an unresolved item, whether the licensee had fully met the intent expressed in NUREG-0737, Section II.B.3, Post-Accident Sampling System (PASS) and II.F.1, "Additional Accident Monitoring Instrumentation". Inspection Report 50-312/84-08, paragraph 2.V provided a summary of matters that remained unresolved. The NRC letter dated July 30, 1984 transmitting the inspection report requested the licensee to carefully review the report and take appropriate action to correct the basic cause of the conditions identified.

A subsequent written response with respect to the concerns identified in Inspection Report 50-312/84-08 was submitted to the NRC Region V office in a SMUD letter RJR 84-343, dated August 30, 1984. It should be noted that a Commission Order dated March 14, 1983, required that NUREG-0737 items II.B.3 and II.F.1 be implemented by February 1983. The Order states in part: "It is hereby ordered immediately that the licensee shall: Implement and maintain the specific items described in the Attachments to this Order in the manner described in the licensee's submittals noted in Section III herein no later than the dates in the Attachments."

The purpose of this inspection was to verify that the licensee's implementation of NUREG-0737 items II.B.3 and II.F.1 was consistent with the order and the licensee's previous commitments. The examination included a review of NRC's Safety Evaluation Reports (SERs) related to Rancho Seco's PASS. The SERs were dated February 15, 1983, and

September 2, 1983. Rancho Seco's correspondence used as a basis for the preparation of the SERs was also reviewed. Additional information related to this matter is contained in Region V Inspection Reports 50-312/83-16 and 50-312/83-26.

I. General Observations

On April 26, 1984, a licensee task force was assigned by SMUD management to resolve all outstanding items associated with PASS. Members of the task force included a Principal Chemical Engineer, I&C Engineer, Maintenance Engineer, and Senior Chem-Rad Assistant. The Principal Chemical Engineer is the Task Force Chairman.

Discussions with the group disclosed that they have not met as a group for approximately one year or longer. Three members assumed that Task Force assignment had been disbanded. The discussions further revealed that the group does not maintain a full awareness of concerns identified in NRC Inspection Reports and of previous commitments made to the NRC. The inspector observed that there appears to be little or no direct management involvement in assuring resolutions are accomplished in a timely manner.

The task force does not maintain a tracking system for assuring previous inspection findings and commitments are resolved or are being implemented. The inspector also noted that the licensee's normal tracking system does not maintain records of prior inspection findings or commitments made with respect to PASS. The results of the examination are discussed in subsequent paragraphs.

II. Summary of Matters Remaining Unresolved

Inspection Report 50-312/84-08 identified the below listed items as unresolved. The licensee's response pertaining to these items provided in the August 30, 1984 letter and the actual status based on this inspection are as follows:

a. NRC Concern

"Sample Shields were not yet available. An Engineering Change Notice (ECN) had been generated (Unresolved)".

Licensee Response

"An engineering change notice (ECN) was not generated; however, the District has contacted the only known supplier of such shields. The detailed design information on the shields has been requested for our review to determine the feasibility of the shields at Rancho Seco. At this time, the District will actively pursue the possibility of an in-house design for the sample shields. In either case, a final decision to purchase or design the shields will be made. The District will submit a schedule by October 26, 1984, for either an in-house design and fabrication or the procurement of vendor supplied shields to be at the Rancho Seco site."

Current Status

Incomplete as of September 27, 1985. No schedule was submitted for procurement and/or design and fabrication of the shields.

Licensee's Comments

The licensee's staff stated that this item was delayed because of other priorities. The licensee is currently in the process of negotiating the procurement of a vendor supplied shielded collection system. Modifications of the PASS will be required to incorporate the use of a vendor supplied shielded collection system.

b. NRC Concern

"Reactor Building sample line to monitor R-15044 - Inspection Report No. 50-312/83-16, Sections II.A and B identified questions related to the quality of iodine and particulate samples obtained by WRGM, R-15044. Particulate and iodine line losses had not been evaluated (83-16-07, Open) (Unresolved)".

Licensee Response

"The District resolved this concern during the exit interview conducted by Messrs. H. North and M. Cillis on May 25, 1984. It was pointed out that the sample line used to sample containment atmosphere through the Post-Accident Sampling System is not used to measure iodine or particulate per our Core Damage Assessment methodology (NEG.100). Therefore, the question of iodine and particulate plate out in the sample line does not apply. Please refer to item II.h(83-16-06) of your letter of July 30, 1984, where the Commission acknowledges the resolution of this item. Items 83-16-07 and 83-16-06 discuss the same finding."

Current Status

This matter is closed (83-17-07) (resolved).

c. NRC Concern

"Relocation of Water/Nitrogen manifold. Engineering completed, construction had not started. In addition, the licensee identified the conductivity adjustment of the ion chromotography system as an item to be relocated, action not complete (Unresolved)".

Licensee Response

(1) "Relocation of the Demineralized Water/Nitrogen manifold is necessitated to meet ALARA only under an accident condition resulting in high radiation levels in the area of the manifold. The present location of the manifold under non-emergency sampling does not pose an ALARA concern. However, the District recognizes the need for relocation of the manifold and has completed the detailed engineering and is in the process of procuring the needed hardware before construction can start. As of now, the construction is scheduled to be completed by October 19, 1984."

(2) "The relocation of the conductivity adjustment to the same room as the PASS control panel is being investigated on a very high priority basis. Several test runs made have not been successful due to the long run of cable between the Wheatstone bridge and the adjustment control and the resulting electromagnetic noise from the surrounding fields. Another test is scheduled to be conducted in the next two weeks by substituting a bigger bridge. We earnestly wish to resolve this problem as soon as possible, but have not had a great deal of success. At any rate, the District should be able to complete this research and development process and finish the installation of remote adjustment capability by September 28, 1984."

Current Status

Relocation of the Water/Nitrogen manifold has been completed. Relocation of the conductivity adjustment to the same room as the PASS control room was incomplete at the time of this inspection; however, ECN 5735 had been recently issued to relocate the conductivity bridges to the PASS control panel. (Unresolved)

Licensee Comments

Relocation of the conductivity bridge is expected to be accomplished in February of 1986 (See Part III, item III(c)).

d. NRC Concern

"Inspection Report No. 50-312/83-16, Section II.B.2, identified a pressure limitation with respect to operation of WRGM, R-15044 (Containment Atmosphere) (83-16-08, Open) (Unresolved)".

Licensee Response

"The wide range gas monitor (WRGM, R-15044) used for the Containment Atmosphere is designed to sample up to a sample

pressure of 15.0 pounds per square inch above the atmospheric pressure. Under a Design Basis Accident (DBA) condition, as evaluated in the FSAR for Rancho Seco, the time period during which the containment pressure exceeds the 15.00 psig limit of the radiation monitor, R-15044, is limited to no more than 17 minutes and the limiting condition takes place only during the very early stages of a DBA. Although the pressure inside the Reactor Building does peak to 57 psig, the SFAS starts the Reactor Building Sprays at 30 psig and the pressure transient falls below the 15.00 psig within 17 minutes. The Core Damage Assessment Procedure which uses the information from this monitor would not be activated before the accident condition had first been stabilized or several hours after the initiation of the DBA. The internal pressure limitation of the R-15044 to 15 psig during normal or accident operating condition does not in any manner pose a restriction on its operability or intended function."

Current Status

This item is closed (83-16-08) (resolved).

e. NRC Concern

"Reactor building isolation valves supplying containment atmosphere samples to PASS, the H_2 monitors and radiation monitor R-15044 cannot be opened during plant operation, due to a Technical Specification limitation (Unresolved). A proposal to change current sample penetration to the penetration supplying the existing containment atmosphere monitor is under consideration".

Licensee Response

"The four reactor building isolation valves, two for each train, are remotely operated through operator action and can be opened during the plant operation without the violation of any Technical Specifications. According to our Technical Specifications under the section of Containment Integrity it is stated, "all automatic containment valves are operable or closed by Safety Features Actuation System". Since all four of the valves meet the "operable" criteria, the system is functional during plant operation. District wishes to point out an additional safety feature of this sampling line; the opening of any one of the valves does not in fact degrade the isolation of the containment to the outside since the sample line forms a closed loopback to the containment. Any sample drawn from the containment atmosphere is returned back to the containment. We feel this design feature makes it unnecessary to consider further modification of the system."

Current Status

This item remains unresolved. The inspection disclosed that many of the licensee's staff were unaware of the above response until it was brought to their attention by the inspector. It is currently being evaluated by the licensee for final resolution. (Unresolved)

f. NRC Concern

"No procedure for core damage assessment. The licensee had prepared Nuclear Engineering Guideline (NEG) 100 Estimating Core Damage, original, April 10, 1984. The guideline was approved by the Engineering and QC Superintendent. The guideline had been prepared without coordination with the Chemistry and Radiation Protection staff. The guideline specified that containment atmosphere and reactor coolant water samples were to be collected using the PASS and analyzed for radioisotopic concentration. The PASS was not designed to permit concurrent collection of gas and liquid samples. The breakdown in communications between the Engineering and Chemistry and Radiation Protection organizations resulted in the generation of an apparently unworkable procedure (Unresolved)".

Licensee Response

"Currently, the District does not have a Core Damage Assessment Procedure (CDAP), but has prepared a Nuclear Engineering Guideline NEG 100 which will be the basis for writing a detailed CDAP. District has scheduled the completion of a workable CDAP by September 12, 1984.

Neither the PASS nor the CDAP or the present NEG.100 was intended to require concurrent sampling and/or analysis of liquid and gas samples. Current communications with the Chemistry and Radiation Protection and the plant operations engineering groups have shown that the liquid and gas sampling is understood by all to be a sequential rather than a parallel operation".

Current Status

This item was completed. Core Damage Assessment Procedure AP.56, Rev. 1, dated 03-01-85 has been implemented (resolved).

g. NRC Concern

"Boron and Chloride analysis should be keyed to restrictions related to Core Damage Assessment (Unresolved)".

Licensee Response

"This matter will be resolved during the development of the CDAP and will meet the schedule commitment of October 12, 1984, as discussed for item (d) above."

Current Status

This item was completed (resolved).

h. NRC Concern

"Demonstration of representative sampling accuracy and range of analysis capability was not complete (Unresolved)."

Licensee Response

"Work is continuing to complete and close out this item before September 12, 1984."

Current Status

This item was incomplete as of the time of this inspection. It should be noted that the PASS is designed to obtain a containment atmosphere sample and reactor coolant samples from the pressurizer, "B" OTSG bottom drain line, and the reactor building sump via the decay heat system. There is insufficient data to state with any degree of accuracy how well the system works. Representative sampling of containment atmosphere, "B" OTSG bottom drain line, and the pressurizer had not been demonstrated as of Septmeber 27, 1985. Representative sampling from the decay heat system is based on the comparison of only two samples that were just recently obtained (e.g. August 28, 1985). To date, no attempt has been made to sample from the "B" OTSG drain line. Policies regarding startup and system testing, frequency for use of the PASS system under normal plant operations, training, demonstration of representative sampling, range of analysis, and accuracy have not been established. This item remains unresolved.

Licensee Comments

The licensee's staff indicated that they are hesitant to obtain samples from the "B" OTSG drain line because it is a potential crud trap which could greatly increase the radiation levels along its lengthy sample lines if it were used. The staff stated they have not been able to demonstrate representative sampling of the containment atmosphere because of the problem discussed in item II.(e) above.

i. NRC Concern (NUREG-0737, II.F.1.2)

"Procedure development for recovery of shielded and unshielded iodine and particulate samples from G.A. monitors. Procedures

AP.305-24, Reactor Building Air and Stack Samples, Rev. 2, April 11, 1984, AP.305-26, Auxiliary Building Air and Stack Samples, Rev. 2, December 14, 1983 and AP.305-29, Radwaste Service Area Vent Samples, original, July 11, 1983, address recovery of particulate and iodine sample media from the General Atomic (GA) Wide Range Gas Monitor (WRGM) skid. Procedures AP.305-24 and AP.305-26 provide instructions for collection of low activity, non emergency samples. Procedure AP.305-29 provides similar instructions but does not specifically limit sample recovery to low activity, non emergency conditions. None of the procedures address recovery of high activity post accident samples (Unresolved) (83-16-09), (Open)."

Licensee Response

"All three of the above procedures will be reworked to address the recovery of the particulate and iodine media for transport to the analysis station under normal and accident conditions of low and high activity, respectively. The District proposes the proper completion of the three procedures by October 12, 1984."

Current Status

This item remains open (83-16-09) (Unresolved). Procedures were not developed to address recovery of high activity post accident samples. The licensee's staff could not determine why this item was not completed.

III. Additional Observations

a. An NRC letter to SMUD, dated July 12, 1982 requested the licensee to submit information related to the following criterion:

"Criterion

If in-line monitoring is used for any sampling and analytical capability specified herein, the licensee shall provide backup sampling through grab samples, and shall demonstrate the capability of analyzing the samples. Established planning for analysis at offsite facilities is acceptable. Equipment provided for backup sampling shall be capable of providing at least one sample per day for 7 days following onset of the accident, and at least one sample per week until the accident condition no longer exists.

Clarification

A capability to obtain both diluted and undiluted backup samples is required. Provisions to flush inline monitors to facilitate access for repair is desirable. If an offsite laboratory is to be relied on for the backup analysis, an explanation of the capability to ship and obtain analysis for

one sample per week thereafter until accident condition no longer exists should be provided."

The licensee's response dated October 13, 1982 to this request reads as follows:

Response

"Grab sample collection flasks are provided to allow the acquisition of any type of sample conditions required to perform the desired analysis. As stated previously, methods are still under development for the handling, transport and analysis of the grab samples."

Current Status

SERs dated February 15, 1983 and September 2, 1983, recognize that the licensee's PASS is capable of obtaining both diluted and undiluted samples as noted in the above response. The licensee's system is currently capable of obtaining a three milliliter (ml) undiluted or diluted grab sample. The licensee is currently in the process of ordering a complete sampling package (grab sample flask and shield) from a vendor. The grab sample size is expected to increase up to 50 ml if the vendor package is approved.

At the present time, procedures for handling and shipping the expected highly concentrated undiluted liquid samples (e.g. 10 Curies/ml) have not been developed. Sample shields for transporting the samples were not available at the time of this inspection (see item II.(c) in paragraph c, above).

Licensee's Comments

The staff stated that they only plan to take diluted samples until such time that the vendor package and procedures become available. No firm completion date has been established for completing this item. The staff expects that there would be a long lead time (e.g., early 1987) before the shields will become available.

b. Updating of SMUDs Technical Specifications pursuant to Generic Letter 83-37, "NUREG-0737 Technical Specifications" to include NUREG-0737, Items II.B.3 and II.F.1 as license conditions has not been completed. The licensee proposed submittal (Amendment 83, Supplement 2 of January 23, 1984, and Amendment 100 of January 23, 1985) are currently being negotiated between the licensee and NRR.

c. The licensee staff has submitted Modification Request No. 126, dated June 24, 1985, "Post-Accident Sampling System Improvements" to management for the following improvements:

- Add control valve in the pH/conductivity loop to load ion chromatograph.
- Relocate Ion Chromatograph (IC) support equipment, revise IC configuration and replace Dionex Program Controller with a manual control panel.
- Relocate isotope analyzer, power supply and cryogenic flask near PASS panel.
- Move grab sample taps from east end to the west end of the Sample Collection and Analysis Station (SCAS).
- Replace SCAS drain pumps P-710A&B.
- Add gross sample radiation monitor.
- Replace Decay Heat Removal Containment Sump sample line leaking valves.
- Add pressure, temperature and level instruments on different tanks in the SCAS.
- Simplify and create new graphics on PASS panel.
- Eliminate unnecessary tube fittings from SCAS sample lines.
- Replace existing gas and liquid separation tank V-715 and valve HV-70007.

The purpose for the modifications are:

- To improve the reliability and performance of PASS.
- To minimize the sampling and analysis time for liquid and gaseous samples.
- To reduce radiation exposure for operating personnel.
- To reduce operator training time.

Construction, startup testing, and turnover to Nuclear Operations of the above improvement items are not expected to be completed until March 1987.

d. The following observations related to operation of the PASS on August 27 and 28, 1985, were reported by the licensee's Quality Assurance staff in QA surveillance reports 447 and 448:

- QA surveillance report 447 made the following observation: "Chem-Rad personnel struggled with a complex and unreliable system to prepare it for operation during the emergency drill. The Chem-Rad people demonstrated

knowledge of the system and principles of its operation, but were unable to make the PASS perform all its design functions." The report added: "The Chem-Rad personnel expressed frustration that the problems they had identified in the past were not resolved in a timely manner and that they were" under the gun "to make the system operational in a limited amount of time."

- QA surveillance report 448 provided the following information: "Personnel attempted to use the PASS operating procedure, but found it nearly impossible to follow. The area is too confined to use SCBA equipment and perform the assigned task, even under the ideal conditions which existed during the drill. The ion chromatograph (IC) did not operate smoothly, and the remote controller unit for the IC did not change detector ranges properly....The system would prove difficult, if not impossible to operate in its present configuration during a real accident.

  Once it was determined that the procedure was unworkable, the Technicians manipulated the PASS based on their system knowledge. The problem with the IC detector range was noted and corrected, and an accurate value for boron was obtained. A sample was drawn for the Ge(Li) detector and analyzed which produced an accurate radiochemistry analysis (values were compared to Chem Lab results for Decay Heat samples analyzed earlier). A qualitative indication of chlorides was obtained from the IC on a second sample. Following sample analysis, a pressure spike in the demin water supply caused the flow element to jam and block the demin flush water supply to the PASS.

  One potential Health Physics problem with the system design was noted by the participants. Presently, a minimum inventory of 8 liters of water must be maintained in the PASS waste tank due to instrumentation design. During an actual failed fuel accident, 8 liters of reactor coolant (at 10 Ci/ml) would contain 80,000 Ci. This inventory would present a significant radiation hazard to anyone required to operate the PASS under these conditions and would render the Ge(Li) detector useless."

Discussions with the PASS Task Force Chairman revealed he had not seen, received, or been made aware of the above surveillance reports.

e. A review of the PASS procedure AP.305-35, Rev. 5, dated August 21, 1985, was accomplished during the inspection. The following observations were made:

- The procedure is 145 pages in length, it has no index, and appears to be very difficult if not impossible to follow

by individuals not having knowledge or training in use of the system.

The licensee is aware of these problems and has taken steps to simplify the procedure. However, additional testing and the improvements discussed under item III.c above need to be accomplished in order to simplify the procedure.

f. In a letter to the NRC, RJR 83-512 of June 17, 1983, the licensee stated: "The District will commit to refresher training involving use of PASS equipment for a sufficient number of designated equipment users to insure the availability of trained personnel to support post-accident sampling requirements. The frequency of such testing/training will be every six months ±25%."

The information provided in the June 17, 1983, was used by the NRC as a basis for issuance of the September 2, 1983 SER. The SER concluded that the licensee met all eleven of the criteria outlined in NUREG-0737 for PASS based on the information provided in the June 17 letter.

Current Status

Discussions with the licensee's staff and a review of training records disclosed:

- The licensee's Training Superintendent, Task Force Chairman, and Chem-Rad group users were not aware of the June 17, 1983 commitments until it was brought to their attention by the NRC inspector.

- Designated equipment users have not been identified. At the time of this inspection one licensee Senior Chem-Rad Assistant, one licensee Chem-Rad Assistant, and Senior Chemistry and Radiation Protection Technician under contract to ARC, were the only PASS part time users assigned to become skilled in operational aspects and to resolve its operational problems.

- The last class room training conducted was in April 1984. The licensee's staff stated that no additional classroom or hands-on training was provided since April 1984 except for the individuals discussed above who were primarily assigned to assure the system worked properly for the emergency drill held on August 28, 1985.

- Several of the previously trained individuals have either moved on to other positions or are no longer employed at SMUD.

- Discussions were held with the individuals that were previously trained in 1983 and 1984. Seventy-five percent

of those questioned stated they currently would not be able to operate the system unless they received additional training (e.g., class room and on-the-job). The remaining twenty-five percent stated they felt they could operate the PASS by following the procedure. All individuals questioned stated that they had not received any additional training or conducted hands on training since receiving the initial training.

g. The inspector asked the licensee's staff if they would be able to demonstrate their capability to sample the containment atmosphere and reactor coolant with the reactor at 100% power utilizing individuals selected by the inspector. The inspector stated the selection would be made from those individuals previously trained in 1983 and 1984; however, individuals involved in the August 28, 1985 drill, were to be excluded from the selection.

The licensee's staff stated they would be willing conduct the demonstration. However, they felt the staff lacked: (1) an awareness of the changes that have occurred since they were previously trained, (2) hands-on training, and (3) the current operating procedure was extremely difficult to follow. Therefore, the staff felt it would be useless to conduct the demonstration. The inspector agreed.

IV. Summary of Matters Remaining Unresolved

II (a): Availability of PASS sample shields.

The licensee was informed that this item is an apparent deviation from their August 30, 1984 commitment (85-28-01).

II (c): Relocation of Water/Nitrogen manifold and ion chromotograph controls.

The licensee was informed that failure to finish the installation of remote adjustment capability by September 28, 1984, was an apparent deviation of their commitment made in their August 30, 1984 letter (85-28-02).

II (e): Inability to obtain reactor building atmosphere sample during operation resulting from Technical Specifications imposed restrictions on isolation valves during operations. (Unresolved)

The inspector reminded the licensee that this problem was identified in September 1983 (see Inspection Report 50-312/83-24, paragraph 9) and of their August 30, 1984 response which stated that the system is functional during plant operations. The inspector informed the licensee that a final resolution to this item must be determined in

a timely manner even it requires the installation of Engineered Safety Feature type valves.

II (h): Representative sampling, accuracy, and range of capability not demonstrated and documented. (Unresolved)

It is not clear whether the licensee has fully met the intent of Criterion 10 expressed in NUREG-0737, Section II.B.3 and as provided in their response to this item which is identified in a licensee letter to the NRC dated, May 2, 1983. The May 2nd letter states, "These items will be verified during the startup and system testing". As previously discussed, the licensee has not demonstrated that representative reactor coolant samples from the pressurizer, "B" OTSG bottom drain line, or containment atmosphere can be obtained. Currently the licensee's capability related to this topic is based solely on two reactor coolant samples taken from the decay heat system. The examination disclosed that the licensee has not defined or implemented a PASS startup and system testing program, nor, did it appear like the licensee had sufficient data available that clearly indicated the PASS functioned as it was designed.

II (i): Procedures for the recovery of high activity post-accident samples have not been developed (NUREG-0737 II F.1.2).

The licensee was informed that this item is an apparent deviation from the commitment provided in their letter of August 30, 1984, which stated the procedures were to be completed by October 12, 1984. (85-28-03)

III (a): Lack of procedures for obtaining undiluted backup samples. (85-28-04, Unresolved).

This is a new observation.

III (d): Development of simplified PASS operation procedures which can be quickly consulted under emergency conditions. (85-28-05, Unresolved)

This is a new observation.

III (e): Training of PASS equipment users.

The licensee was informed that this item was an apparent deviation from the commitment made in their June 17, 1983 letter to the NRC. (85-28-06, Unresolved)

The above observations and other findings discussed in this section were brought to the licensee's attention at the exit interview. The licensee was further informed that it was not fully clear whether they met the intent of NUREG-0737 or the Commission Order of

March 14, 1983. The inspector expressed concern about the informal approach taken with respect to training, defining how the system will be utilized under normal plant operations, the startup testing program, and what appeared to be a lack of direct management involvement. This item remains unresolved. (83-24-01)

Radioactive Effluent Releases - Gaseous

Licensee records of gaseous waste releases for the period of October 1984 through September 1985 were examined for the purpose of verifying compliance with Technical Specifications, Table 4.22, "Gaseous Effluents."

Selected records and portions of the following documents were reviewed:

- Procedure AP.305-14, "Environmental Releases of Airborne Radioactivity"
- Procedure AP.305-22, "Air Sampling Gland Steam Exhaust"
- Procedure AP.305-23, "Air Sampling Condenser Air Ejector"
- Procedure AP.305-24, "Reactor Building Air and Stack Samples"
- Procedure AP.305-25, "Waste Gas Decay Tank Sampling"
- Procedure AP.305-26, "Auxiliary Building Air and Stack Samples"
- Procedure AP.305-29, "Radwaste Service Area Vent Samples"
- Discharge and release permits for the period of October 1984 through September 1985.
- Semiannual Effluent Release Report of September 26, 1985.
- Annual Radiological Report of March 29, 1985.
- QA Audit Reports #0-678 of December 14, 1984 and #0-691 of May 3, 1985.
- FSAR, Section 11.1, "Radioactive Waste Handling"

It should be noted that paragraph two of the "Bases" in Section 4.20 of the TS states the following:

> "The flow rates in the Reactor Building Purge Vent, Auxiliary Building Stack and Radwaste Service Area Vent are constant as they use single speed fans. The Reactor Building Purge Vent has two different flow rates, winter and summer, however, administrative controls assure using the correct flow rate where applicable. The actual flow rate of the ventilation systems are periodically determined by surveillance procedures. The flow rate measurement devices are used only as flow indicating devices and not for actual measurement of flow rate. Also, as these flow rate devices must be

removed from the ventilation system for the channel test, and in addition transported to the manufacturer for calibration, the frequencies have been set as shown in Table 4.20-1."

Additionally, TS, Table 3.16-1 states: "With the flow rate device inoperable, effluent releases may continue provided the flow rate used is the maximum design flow rate." The examination disclosed the following:

(a) The licensee's staff was unaware of the conflicting statements in the TS concerning that flow rate measurement devices are used only as indicating devices and not for actual flow measurements. Therefore, procedure AP.305-14 allows for use of the measured flow rate for calculating releases from the Radwaste Service Area, Reactor Building Purge, and for the Auxiliary Building Stack. The inspector brought this observation to the licensee's attention. This item will be brought to the attention of NRR for clarification. This item will be examined during a subsequent inspection. (85-28-07)

(b) The SCRA responsible for reviewing discharge/release permits was not aware of the Table 3.16-1, TS requirements related to use of the maximum design flow rates.

(c) Maximum flow rates used for calculation of Reactor Building Purge releases were inconsistent. Flow rate values of 74,000 CFM and/or 77,000 CFM are being used on an interchangeable basis. The maximum value designated in AP.305-14 is given as 77,000 CFM, whereas, Section 9.7 of the FSAR and some discharge permits provides a value of 74,000 CFM. This observation was also brought to the licensee's attention.

(d) The Reactor Building Purge flow rate measurement device was reported as broken sometime prior to April 7, 1984. A Nonconformance Report (NCR) to replace the device was issued on July 11, 1984. The device did not get replaced. It was still inoperative at the time of this inspection. The inspector was informed that the flow rate measurement device may not be installed in a location (e.g. stack) which is representative of the parameters that the device was designed to measure. The staff stated that the device was installed upstream of the exhaust blower and filters. A review of P&ID revealed that the device was installed in the location identified by the licensee's staff. It appears that any leaks between the measurement device and stack may not be measured. This observation was brought to the licensee's attention. This item will be examined during a subsequent inspection. (85-28-08)

(e) The inspector noted that several (4 of 12) discharge/release permits contained math errors. None of the errors had any significant affect on the outcome of the releases. All of the discharge/release permits had received an internal review by a SCRA. The ineffectiveness of the licensee's review process with respect to this item was discussed at the exit interview.

Based on the examination, it appears that gaseous effluents were within 10 CFR Part 50, Appendix I design objectives.

No violations or deviations were identified.

5. Follow-up on Previous Inspection Findings

I. Enforcement Items

a. (Closed) Inspection Report 50-312/84-17 identified the licensee's failure to audit the performance, training, and qualifications of the entire facility staff as required by Technical Specifications, Section 6.5.2.8.(b), "Audits". The licensee's written response dated November 21, 1984, identified that appropriate corrective actions would be implemented by March 1, 1985. A discussion related to this item was held by the licensee's staff involved in implementing the corrective actions identified in the licensee's letter of November 21, 1984. A copy of licensee Audit Report No. 0-727 dated July 31, 1985, and the applicable checklists (MSRC #4&32) used to perform the audit were reviewed.

Minor discrepancies with the audit report were noted by the inspector even though the audit appeared to be consistent with TS, Section 6.5.2.8(b) requirements. The inspector noted that the audit indicated that all of the Chem-Rad Assistants (CRAs) met ANSI N18.1-1978 qualifications even though the licensee's Chemistry and Radiation Protection staff had informed the inspector that two CRA's still did not meet ANSI N18.1-1978 qualification. The inspector also noted that the audit failed to determine whether the current training program for the Chemistry and Radiation Protection group is in compliance with Technical Specifications, Section 6.4, "Training". The inspectors observations were discussed with the licensee's staff responsible for performing the audit and was also brought to the licensee's attention at the exit interview. The licensee's staff informed the inspector that an audit of the licensee's current training program would be accomplished for the purpose of verifying compliance with TS, Section 6.4. The inspector emphasized the need for improving the effectiveness of future audits. This matter is considered closed. (84-17-13).

II. Follow-up Items

a. (Closed) (50-312/85-12) Concerns related to the establishment of procedures for: (1) determining exposures resulting from personnel skin contamination occurrences, and (2) for providing instructions to radiation protection technicians in prescribing the placement of personnel dosimetry are discussed in paragraphs 3.d.3 and 5 of Inspection Report 50-312/85-12. The licensee's actions related to these concerns were examined and were found to be satisfactory. This matter is closed (85-12-01 and 85-12-02).

b. (Open) Follow-up (50-312/83-16) Paragraph 10 of Inspection Report 50-312/83-16 identified that a modification of Radwaste Service Area Ventilation system was in progress.

Based on discussion held with the licensee staff on October 28, 1985, the purpose for the modification was to enhance the exhaust ventilation system servicing the grade level of the auxiliary building. The licensee staff indicated that the unit will service the hot machine shop, decontamination room, waste compaction room, and the mezzanine area. The modifications have been completed. The staff stated that the system would be turned over to operations upon completion of the preoperational test program. This is currently being heldup because of a manpower shortage.

The inspector observed that the personnel and equipment hatch on the grade level of the auxiliary building is normally maintained open to the outside environment. Section 9.7.1.2 of the FSAR states: "The path of ventilating air in the potentially radioactive contaminated areas is from the areas of low activity towards the areas of progressively high activity."

Discussions with the licensee's staff indicated that no checks are made to assure an inward flow is maintained adjacent to the personnel and equipment hatch opening. The licensee's staff assumes that a negative pressure is maintained because of system design. Tests to verify that air flow patterns have not changed since the system was last balanced are normally not performed by the licensee since they are not required by the Technical Specifications.

The inspector presented the open hatch as a potential unmonitored release pathway to the licensee representative. The licensee representative indicated that they would look into this matter.

The inspectors observations were brought to the licensee's attention. The need to complete the testing of this system in a timely manner was emphasized. (83-16-02, Open)

c. Testing of Air Cleaning Systems

(Closed) Follow-up item (50-312/84-27) Inspection Report 50-312/84-27, paragraph 5 identified that twenty-four open items were found by a licensee's in-depth audit of filter systems required by Section(s) 4.10, "Emergency Control Room Filtering System," 4.11, "Reactor Building Purge Exhaust Filtering System" and 4.12, "Auxiliary and Spent Fuel Building Filter Systems." The licensee audit report, 0-661, stated that complete compliance with the TS requirements was questionable.

A licensee event report 84-23 of January 29, 1985, described the findings of the audit. The LER provided the root causes of

the items identified and the corrective actions taken to bring the program into compliance with the TS.

An examination was conducted for the purpose of verifying that the licensee's corrective actions were accomplished and that the licensee's current program was consistent with the TS. Selective records related to this topic were examined.

The examination disclosed that the licensee has completed the corrective actions identified in the LER, personnel responsible for the program were trained, and procedures were revised and implemented to bring the program into compliance with the regulatory requirements.

A review of the procedure changes and of selected surveillance checks of the filter cleanup systems that were performed during the 1985 refueling outage indicated that the licensee's program appears to be consistent with the regulatory requirements. This matter is closed. (84-27-02)

No violations or deviations were identified.

6. Testing of Reactor Coolant Water Quality

LCO's and testing of the reactor coolant system activity is specified in TS, Section 3.1.4, "Reactor Coolant System Activity", and Table 4.1-3, "Minimum Sampling Frequency".

Records including reports of radiochemical analysis, gross activity, chloride, oxygen, and fluoride concentrations for the period October 1984 through September 1985 were examined. Additionally, samples and analyses of the borated water storage tank, core flood tank, spent fuel storage pool, and cooling tower blowdown were also reviewed.

All results were within the TS both as to limits and the test frequencies. The licensee's tests were normally performed at a frequency that exceeds the those specified in the TS.

No violations or deviations were identified.

7. Liquid Holdup Tanks

The inspector verified, through discussions with the licensee's staff and a review of appropriate records, that the quantity of liquids contained in Regenerate Holdup Tanks and Outside Temporary Tanks contained less than the 10 Curie limit prescribed in TS, Section 3.17.3.

No violations or deviations were identified.

8. Radioactive Effluent Releases-Liquids

The licensee's records of liquid waste releases for the period of October 1984 through September 1985 were examined for the purpose of determining compliance with Technical Specifications, Section 4.21, "Liquid

Effluents". Release permits and analytical records for the period between October 1984 and September 1985 were reviewed.

Concentrations of radioactive materials in liquid wastes were less than the Lower Level of Detection (LLD) values (excluding, Tritium) in Technical Specifications, Table 4.21-1.

All liquid radioactive releases from the plant are made from the Regenerate Holdup Tanks (RHUT) to the retention basins. Releases beyond the site boundary are made from the retention basins. All RHUT releases are sampled and analyzed pursuant to TS, Table 4.21-1 and monitored with a Process Effluent Radiation Monitor (PERM) (R15020) as required by TS, Section 4.19, "Radioactive Liquid Effluent Instrumentation". There are no specific TS requirements governing the monitoring of retention basin releases with a PERM and for obtaining and analyzing of grab samples. However, the licensee has always obtained grab samples of retention basin releases and until February 1984 monitored basin releases with PERM R15017. PERM R15017 was used as a backup to PERM R15020; however, it is no longer in service.

The licensee is in the process of replacing it with a more sensitive dual channel system (R15017A and R15017B). The licensee's staff indicated that the replacement system installation would be completed by March 1986. The replacement system is designed to provide an isolation function. This item will be examined during a subsequent inspection. (85-28-11)

Licensee procedure AP.305-13, "Environmental Releases of Liquid Radioactivity" which was established for ensuring compliance with the regulatory requirements referenced above was reviewed. The licensee's liquid effluent releases appeared to be consistent with procedure AP.305-13 and what was reported in the licensee's 1985 Semiannual Effluent Release Report that was submitted to this office on September 26, 1985.

The examination disclosed that there were no significant unplanned/abnormal releases during the period of October 1984 through September 1985. All releases were sampled and monitored in accordance with the TS, Section 3.17.1. The alarm set point determinations for the liquid effluent monitors were accomplished in accordance with the licensee's Offsite Dose Calculation Manual (ODCM).

The review of grab sample analysis records disclosed that no releases containing detectable concentrations of fission or activation products were made in the period of January through September of 1985.

No violations or deviations were identified.

9. Gas Storage Tanks

The inspector verified, through discussions and a review of appropriate records, that the quantity of radioactive material contained in each storage tank were determined pursuant to TS, Section 4.24 and maintained below the limit prescribed in TS, Section 3.20. The review disclosed

that quantities contained in the licensee's storage tanks at any one time never exceeded a small fraction of the 135,000 Curies allowed by the TS.

No violations or deviations were identified.

10. Liquid and Gases Effluent Instrumentation

Selected records and procedures associated with the surveillance testing of radioactive liquid and gaseous effluent instrumentation were examined. A random sample of liquid and gaseous waste release permits were also examined to verify that the set points had been determined in accordance with the licensee's Offsite Dose Calculation Manual (ODCM). During a tour of the licensee's facilities, operation of effluent monitoring instrumentation was confirmed.

Technical Specifications, Section(s) 3.15, 3.16 4.0, 4.19 and 4.20 provide regulatory requirements for radioactive liquid and gaseous effluent instrumentation. The requirements and frequency for demonstrating the operability of instrumentation by the performance of instrument channel checks, source checks, instrument channel calibrations, channel tests, and establishing of alarm/trip setpoints are provided in the applicable TS Sections reference herein.

The following procedures were reviewed:

- I-602, "Area Radiation Monitor Calibration"
- I-603, "Liquid Radiation Monitor Calibration
- I-604, "Gas Radiation Monitor Calibration"
- I-605, "Radiation Monitor System Monthly Test"
- I-651A, "Steam Line Radiation Monitor"
- I-652, "Reactor Building WRGM"
- I-653, "Auxiliary Building Stack WRGM"
- I-654, "Radwaste Service Building Stack WRGM"
- SP200.2, "Daily Instrument Surveillance"
- SP200.3, "Weekly Instrument Surveillance"
- SP200.7, "Daily/Weekly Radiation Instrument Surveillances"
- I-011, "General Calibration Procedure"
- AP.165, "Radiation Monitoring System"

The definition of an "Instrument Channel Calibration" provided in Section 1.5.4 of the TS states the following: "An instrument channel calibration is a test, and adjustment (if necessary), to establish that

the channel output responds with acceptable range and accuracy to known values of the parameter which the channel measures or an accurate simulation of these values. Calibration shall encompass the entire channel, including equipment actuation, alarm, or trip and shall be deemed to include the channel test." TS, Table 4.20-1 requires that the sampler monitor flow rate measurement devices for the reactor building purge vent, auxiliary building stack, and radwaste service area PERMs be calibrated every two years. A discussion with the licensee's staff and a review of the method used for accomplishing the calibration of these devices disclosed that the calibrations performed by the licensee's staff on June 24, 1985 did not quantitatively compare the measured flow rate to a known value. The inspector was informed that the calibration technique employed by the licensee only verifies that the high and low alarm setpoints provide an electronic signal at selected points corresponding to scale values. The alarm points are set with an electronic signal. The actual value of the flow indicated at the alarm setpoints were not verified. The licensee's staff stated that they have not established a method for comparing the flow that the channel measures to known values. The inspector informed the licensee that failure to verify the values of the parameter (flow) which the channel measures was an apparent violation. (85-28-09)

The examination also disclosed the following:

- Surveillance procedures for accomplishing the Instrument channel calibrations of the System and Monitor Flow Rate Measurement Devices for the instrumentation identified TS, Table 4.20-1 were not developed at the time of this inspection.

- The high alarm set point value recorded on the control room air and ventilation intake radiation monitor monthly surveillance checklist for February 1985 was listed as 100K cpm. The high alarm set point value provided in procedure I-165 for this monitor is listed as 10,000 cpm. The licensee's staff indicated it was an obvious error. The inspector noted that the error had gone undetected during a review of the checklist that was conducted on February 25, 1985.

- A monthly surveillance check of the gland seal steam exhaust monitor was not performed during the month of June 1985 as required by procedure I-65. The missed surveillance had not been detected by a licensee review conducted on June 26, 1985.

The above observations and the violation involving the failure to properly calibrate the PERMs flow rate devices were brought to the licensee's attention at the exit interview.

11. Radioactive Materials Sources

Technical Specifications, Section 4.15, "Radioactive Materials Sources" provides the regulatory requirements for performing leakage tests of radioactive material sources.

An examination of the licensee's program for assuring compliance with TS, Section 4.15 was conducted. Accountability and leak test records related

to this topic were reviewed. The inspector found that the licensee's radioactive materials leak test program was implemented consistent with the regulatory requirements.

No violations or deviations were identified.

12. Secondary System Activity

The inspector verified that the Iodine-131 activity in the secondary side of the steam generators was maintained below the limits specified in Technical Specifications, Section 3.10. Section 3.10 states that the reactor shall not remain critical if Iodine-131 activity exceeds 0.2 uCi/cc.

A review of applicable records disclosed that Iodine-131 levels in the secondary side were maintained below limits specified in the TS.

No violations or deviations were identified.

13. Facility Tour

Tours of the licensee's facilities were conducted on four different occasions during the inspection. Licensee representatives were assigned to accompany the NRC inspectors during the tours. The following observations were made:

a. Radioactively contaminated material wrapped in herculite was observed to be hanging over the edge of the a cooling tower's water catch basin. The spray from the cooling tower that sprayed over the contaminated material, drained directly into the water catch basin.

b. An accumulation of what appeared to be an over abundance of radioactive waste is currently being stored adjacent to both cooling towers. The waste consisted of a contaminated 5000 gallon water trailer, solidified secondary resins, and main steam line reheater parts generated from the 1983 refueling outage.

c. Inconsistencies in posting of high radiation areas on the -20 foot level of the auxiliary building were observed. None of the inconsistencies were in noncompliance with Technical Specification, Section 6.13.1, "High Radiation Areas" or 10 CFR 20.203(c), "High Radiation Areas".

d. The information provided on radiation area postings installed at the mezzanine level of the auxiliary building were in disagreement with one another. Two of three signs installed indicated the radiation levels ranged from 2 to 20 millirem per hour (mrem/hr), while a third sign stated the radiation levels ranged from 2 to 99 mrem/hr.

e. On September 25, 1985, an auxiliary operator was observed on the resin transfer solidification pad. The general area radiation levels on the pad ranged from 2.5 to 50 mrem/hr while average contamination levels ranged from 200 to 2000 disintergrations per minute per 100 square centimeters (dpm/100 cm^2). Maximum

contamination levels of greater than 1E6 dpm/100 cm^2 were denoted in the area from licensee surveys. The individual was not equipped with a pocket ionization chamber as required by the RWP 85-782 and licensee procedures AP.305, Article 2, "Responsibilities of Workers," AP.305-2, "Radiation Dosimetry:Internal and External" and AP.305-3, Direct Reading Pocket Dosimeter Assignment and Use." The RWP under which the individual was signed in on was not applicable to the resin solidification pad and therefore the the individual did not have the correct anti-contamination clothing as specified on the only applicable RWP, e.g. No. 85-743. The individual wore a lab coat, rubber gloves, and rubber shoe covers. As a minimum RWP 85-743 required coveralls, cloth hood, cotton and rubber gloves, plastic and rubber shoe covers, and a low range pocket dosimeter.

f. On September 26, 1985, a utility worker signed in on RWP 85-743 was observed in the same area as the individual discussed in the above paragraph. This individual was not equipped with the proper clothing (e.g. lacking a cloth hood) specified on the RWP. The assigned radiation protection technician did not have a copy of the RWP present at the work site and he was not fully aware of the radiation protection requirements specified on the RWP. The technician stated he may have informed the worker that a hood was not required because he thought the RWP did not require one be worn.

g. On October 9, 1985, a security guard was observed on the -20 foot level of the auxiliary building without the rubber shoe covers required by the RWP 85-738 he had signed in on. The guard apparently forgot to don shoe covers before entering the contaminated area. Contamination levels were similar to the levels identified in item (e) above.

The above observations were brought to the licensee's attention during the inspection and at the exit interview. The licensee's staff took immediate action to reposition the contaminated radioactive waste away from the water spray and to correct the information denoted on the mezzanine posting. The Plant Manager expressed his concern about the RWP violations. A copy of a recent licensee memo (September 4, 1985) was reviewed. The topic discussed was "Misuse of Radiation Work Permits". The memo pointed out each workers and supervisors responsibilities for becoming aware of and ensuring compliance with instructions provided on RWPs.

The inspector emphasized the importance of determining the disposition of the large volume of radioactive waste that was observed during the tour and for assuring consistency in the posting of radiation areas. The inspector informed the licensee the observations of September 25, 26 and October 9, 1985, were an apparent violation of Technical Specification 6.11, "Radiation Protection Program" which states in part: "Procedures for personnel radiation protection shall be approved, maintained, and adhered to for all operations involving radiation exposure" (85-28-10). The inspector pointed out that the types of procedures referenced in paragraph (e) above were established for assuring compliance with 10 CFR Part 20.

14. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance (e.g. violations) or deviations. Unresolved items disclosed in previous inspections are discussed in paragraph 3.

15. Exit Interview

The inspectors met with the licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on September 27 and October 11, 1985. The scope and findings of the inspection were summarized.

The violations and deviations discussed in paragraphs 10, 13, and 3 and the status of unresolved items discussed in paragraph 3 were brought to the licensee's attention.

The inspector stated that the findings indicated that there was a breakdown of their communication and commitment tracking systems.

The inspector informed the licensee that several common weaknesses were observed in each of the areas examined. The common weaknesses identified were as follows:

a) Failure to track and implement commitments.

b) Lack of closely supervised work.

c) Failure of management to verify goals, commitments and work assignments are being met or implemented.

d) Inadequate review of documentation (e.g., NRC Inspection Reports, Instrument calibration data, gaseous effluent permits, nonconformance reports.

e) Failure to complete work projects in a timely manner. (e.g., PASS, replacement of the broken flow measurement device, installation of PERM R15017A and R15017B, Completion of Modifications to Rad Service Building).