

U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report Nos. 50-528/85-41, 50-529/85-35, 50-530/85-25, 70-2984-85-03

Docket Nos. 50-528, 50-529, 50-530, 70-2984

License Nos. CPPR-142, CPPR-143, SNM-1922, NPF-41

Licensee: Arizona Public Service Company
P. O. Box 21666
Phoenix, Arizona 85836

Facility Name: Palo Verde Nuclear Generating Station - Units 2 & 3

Inspection at: Palo Verde Site - Wintersburg, Arizona

Inspection Conducted: October 3-4 and 15-29, 1985 and in office inspection
October 7-11 and 30-31, 1985

Inspector: Conrad L Sherman
C. Sherman, Radiation Specialist

November 13, 1985
Date Signed

Approved By: G. P. Yuhas
G. P. Yuhas, Chief
Facilities Radiological Protection Section

11/13/85
Date Signed

Summary:

Inspection during the period of October 3-4 and 15-29, 1985 and in office inspection October 7-11 and 30-31, 1985 (Report Nos. 50-528/85-41, 50-529/85-35, 50-530/85-25 and 70-2984/85-03)

Areas Inspected: Routine unannounced inspection of Units 2 and 3 preoperational test program for radiation protection, staffing, and training. The following modules were inspected this period: 84525; 79502; 79501; 80521; 83524; 83525; 84522; 84523; 84524; 87100; 86740. This inspection involved 86 hours onsite and 56 hours in office inspection by one regionally based inspector.

Results: Of the areas inspected, no items of noncompliance or deviations were identified.

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DETAILS

1. Persons Contacted

Arizona Public Service (APS)

*D. Karner, Assistant Vice President, Nuclear Production
*W. Ide, Director, Corporate QA/QC
*O. Zeringue, Technical Support Manager
H. Doyle, Radiation Protection Supervisor, Unit 2
D. Kanitz, Quality Test Monitor
*J. Kirby, Transition Manager
R. Ozment, Startup Administration Manager
A. McCabe, Startup Manager Unit 2
J. Sherrin, QDRG Supervisor
J. Matteson, Transition QA/QC
R. Ferguson, Startup Compliance Coordinator
S. Penick, Quality Monitoring Supervisor
R. Fountain, Quality Monitoring Engineer
T. Shriver, Quality Systems and Engineering Manager
L. Spiers, Senior Quality Engineer
*F. Hopkins, Senior Nuclear Engineer
*F. Hicks, Training Manager
*P. Genca, Corporate Health Physics/Chemistry
*T. Hillmer, Radioactive Materials Control Manager
*T. Warren, Chemistry Supervisor, Unit 1
*R. Johnson, Chemistry Supervisor, Unit 2

T. Hodges, Radiological Environmental Scientist
*G. Perkins, Manager, Radiological Services
J. Cederquist, Manager, Chemical Services
*L. Brown, Manager, Radiation Protection and Chemistry
*C. Russo, Manager, Quality Audits and Monitoring
J. Mann, Corporate Health Physics Supervisor
K. Oberdorf, Radiation Protection Supervisor, Unit 1

*Denotes those individuals participating in the exit interview on October 29, 1985.

2. Radiological Environmental Monitoring (380521, 580521)

The following reports of audits of the REM Program (REMP) were examined.

- ° Audit of Environmental Monitoring and Radiological Protection Programs October 31, 1983
- ° Audit of Controls for Environmental Pollution (CEP) November 14, 1983
- ° Corporate Quality Assurance Audit of NUS Corporation August 26, 1985
- ° Audit of Controls for Environmental Pollution September 30, 1985

Audits were performed using written checklists, audit teams included individuals technically competent in the subject area, audits appeared adequate in depth and breadth. Corrective action reports were issued and responded to in a timely fashion. Management was informed of audit findings. This area was considered satisfactory.

ANPP procedure 4N411.02.00, 'Radiation Protection Program Description' was examined. This procedure sets forth the Corporate Health Physicist responsibilities which include conduct of the REMP. Procedures 4N411.03.00, 'Review of Radiological Environmental Monitoring Programs'; 4N411.04.00, 'Meteorological Data Check - Weekly'; 4N411.07, 'Performance of the REMP' were also examined. With an organizational change from the site to corporate office for portions of the REMP, 4N411.07 will replace 4N411.03 to reflect the current situation.

The inspector verified that the REMP review was performed as required. A part of the requirement for this review was accomplished by the aforementioned corporate QA audits. The management Review Report, dated June 12, 1985 concluded that the program was satisfactory.

ANPP 4N411.07.00, Rev. 0, dated July 29, 1985 is a comprehensive document covering conduct of the REMP, land use census and Interlaboratory Comparison Programs. This program description covers responsibilities for the Manager, Nuclear Engineering, the Supervisor, Corporate Health Physics and the Supervisor, Radiation Protection Support. The program description appears consistent with licensee commitments and regulatory requirements.

The inspector verified by review of reports, data sheets, other records and discussion with cognizant individuals that programs described in the ER and FES are being implemented as listed below.

Air Sampling	12 locations	weekly
Ambient Radiation	45 locations	quarterly dose
Milk	7 dairies	monthly
Surface Water	2 sites	monthly
Ground Water	2 wells	quarterly
Drinking Water	4 wells	monthly
Food (vegetation)	17 samples (leafy)	monthly
	15 samples (citrus)	

The inspector compared the descriptions in the ER-OL and FES with the ANPP procedures and the REMP report data for 1984. Samples taken were generally consistent with the FES and ER. Minor differences were identified between the FES (NUREG-75/078) and the preoperational program described in the ER. These differences appear to be resulting from experience with the program and are acceptable. The program being implemented at the time of this inspection is consistent with the FES (NUREG-0841, February 1982) issued by NRC to support the operating license. The operational REMP which was implemented when Unit 1 began operation is described in the facility technical specifications. Implementation of this program will be examined as part of the routine inspection program.

Review of the 1984 annual report included examination of changes in the program, detection limits, EPA crosscheck results, sample collection problems and TLD data. The EPA cross check program summary showed that the licensee's contractor (Controls for Environmental Pollution) consistently reported values in good agreement with the EPA known values.

The inspector also observed collection of environmental air samples at stations surrounding the owner controlled area and examined TLD locations. The samples were collected consistent with the licensee's procedure. The radiological monitoring sample collection program was examined. The inspector reviewed procedures and sample collection data for 1985. Procedures were acceptable in detail and provided a measure of quality control. Data sheets were properly completed for air, milk, water and food products.

The inspector examined the report of the Arizona Radiation Regulatory Agency's 1983 NRC Environmental Verification Program Report for PVNGS transmitted to ANPP in January 1985. This report describes the split sample and TLD program results of measurements performed by ARRA under contract to NRC. The inspector examined the results to verify that reasonable agreement exists between the different measurement programs.

APS TLD data listed in the report is consistently higher than the ARRA data for the first two quarters of 1983, lower the third quarter and again higher during the fourth quarter. A comparison of means listed in the ARRA report showed the following differences for the four quarters: 3.6, 3.5, 3.6, 5 millirem.

APS Gross Beta analysis results were consistently lower than ARRA results at stations 7, 14, 15, 17, 21, 29 and 35. A review of the EPA cross check data on analysis performed by ARRA showed good agreement.

The inspector suggested that the licensee examine and attempt to resolve the differences in gross beta measurements (open, 50-529/85-35-01).

The licensee has an agreement with Arizona State University for Radiological Assessment Service for the period January 1985 to January 1988. Scope of services included in this contract are radiochemical analyses and radioactivity concentration measurements in biological and environmental media and TLD processing capabilities for personnel and environmental measurement. The agreement provides for participation in the NRC independent measurement program and other intercomparisons. This agreement provides assurance that the licensee will be able to expand their REMP in the event of an emergency. The ASU has established a series of Radiation Measurement facility procedures. These procedures cover the following topical areas:

- ° Administrative
- ° Instrument Calibration
- ° High Level Radiological
- ° Sample Collection
- ° Radiochemistry
- ° Personnel Training and Qualification

The agreement and procedures also address high level process samples and analysis under post-accident conditions. The procedures were considered adequate based upon a cursory review.

Based upon review of the REMP, audits of outside vendors, examination of procedures and reports, facilities of the licensee and cursory review of the ASU RMP procedures and discussion with cognizant licensee personnel, the inspector concluded that the REMP is adequate, capable of meeting NRC requirements and capable of performing under an expanded emergency operation.

No violations or deviations were identified.

3. Chemistry Systems (379502, 379501, 579501)

The inspector conducted an examination of policy, procedures and programs established to ensure that plant water systems are maintained and operated to ensure long-term integrity of the reactor coolant pressure boundary. This examination included a comparison of the licensee's programs to industry and NRC guidance in the water chemistry topical area.

The inspector examined an audit conducted in February of 1985, as required by technical specification 6.8.4.c and 6.8.4.e of the secondary water chemistry control program and the post accident sampling system. The audit was conducted over a period of one week by a team of six individuals. The audit appeared adequate in depth and breadth of coverage. The audit team included experienced auditors as well as an individual experienced in the special nature of the activity audited. Audited areas and findings were well documented. The audit identified that the laboratory analytical control (LAC) program was not fully implemented.

The inspector's examination indicated that at Unit 1, the LAC program was not fully implemented as of the time of this inspection. Specifically, the Unit 1 laboratory had stopped analyzing blind cross check samples provided by outside contractor organizations. Other items observed by the inspector related to implementation of the chemistry control programs are as follows:

- ° The licensee had not implemented a method of integrating the analytical blind, cross-check, spike and other control samples into the normal work flow.
- ° Out of service secondary chemistry instrumentation was not tagged or otherwise identified OOS.
- ° Calibration records on secondary chemistry inline instrumentation could not be located by chemistry personnel for the instrument selected by the inspector.
- ° The unit stopped performing maintenance on secondary in-line silica analyzers because of the manpower involved.

Previous inspections performed by the region have identified a staffing problem in the chemistry area. FSAR Chapter 13, figure 13.1-7 sheet 1 (amendment 14) identifies 40 employees and a minimum of 21 employees for chemistry exclusive of 6 supervisors and a manager. Licensee staff members have made the inspector aware of their concerns that they are inadequately manned. The above observations are indicators that may be considered symptomatic of a manning shortage.

The licensee's chemistry control program, procedure 74PR-9ZZ01 rev. 1 was examined. This program sets forth responsibilities of station management, station personnel, operations staff and chemistry section personnel. Included in the program are sections on operating philosophy, laboratory conduct and safety, laboratory analytical control, chemistry program evaluation, sampling and specification, sample frequencies, records, reports, reviews, laboratory procedures, system chemistry control and the use of outside laboratories. Implementing procedures are referenced.

The inspector examined the following implementing procedures:

- ° 74CH-9XC13 - 'Analytical Instrument Calibration Verification'
- ° 74CH-9XC10 - 'Analytical Control Sample Schedule'

Procedure 74CH-9XC13 is generally consistent with INPO CY-701 'Quality Control Program for Chemistry Instrumentation'. Procedure 74CH-9XC10 describes the use of standards, spikes, duplicates and replicates. This procedure does not specifically define the frequency for each type of control sample. Step 9.9 states that the frequency is implemented by section instructions. Review of implementation of this program will be examined in a future inspection as problems were identified as described above (open, 50-528/85-41-01).

Water chemistry criteria are contained in various industry guidance, the licensee's procedures and CESSAR sections 9.3.4.3.4, 'Chemistry and Purity Control' (reactor coolant), Table 9.3-1, 'Operating Limits', section 10.3.4.1, 'Chemistry Control Basis' (secondary coolant), Table 10.3.4-1, 'Operating Chemistry Limit - Secondary Steam Generator Water' and Table 10.3.4-2, 'Operating Chemistry Limits Feedwater.'

Secondary water chemistry requirements are set forth in TS 6.8.1 which states that the licensee shall establish, implement and maintain a secondary water chemistry program to include monitoring and control that is in conformance with the program discussed in section 10.3.4.1 of the CESSAR or another NRC approved program. Technical Specification 6.8.4.c sets forth the detailed programmatic requirements for the monitoring of secondary water chemistry. The program to control water chemistry referenced by TS 6.8.1.1 has been modified by NRC review and approval of licensee submittals in this area. The Palo Verde SSER supplement 7 and 8 describe NRC acceptance of revised condensate, feedwater and steam generator water standards that are consistent with the Electric Power Research Institute (EPRI) - Steam Generator Owners Group (SGOG) (EPRI-NP-2704-SR) guidelines and revised primary coolant, makeup and

demineralizer effluent limits that are consistent with the NSSS vendor recommendations.

The inspector selectively reviewed the changes and compared them to the licensee's procedures and the licensee's response to NRC Generic Letter 85-02, '...steam generator tube integrity' dated April 17, 1985. The licensee's response dated June 21, 1985, ANPP-32869, E. Van Brunt, Jr. (APS) to H. Thompson, Jr. (NRC) Attachment 1 contained a comparison of NRC secondary water chemistry limits guidance with the PVNGS/CESSAR proposed water chemistry. The frequencies for sampling and analyses in procedure 74CH9XC-16, 'Sampling and Analytical Schedule' section 9.2 were compared with Section 4.3 of EPRI-NP-2704-SR. The licensee's procedures are consistent with the EPRI document.

The inspector examined licensee procedure 74HF-1SS02, 'Pre-Core and Post-Core Chemistry Specifications and Analysis Frequencies'. This procedure implements the NSSS vendor guidance described in Chapter 9 of the FSAR and the EPRI-NP-2704-SR guidelines. The inspector compared procedures 74AC9ZZ04 and 74HF-1SS02 with technical specification 3/4.4.6, Reactor Coolant System Chemistry. The procedures are consistent with the TS limit for steady state and conservative with respect to the transient limit.

The chemistry specifications for secondary feedwater and blowdown identified in 74AC9ZZ04 are essentially consistent with EPRI-NP-2704-SR and also include additional guidance of Revision 1 to EPRI-NP-2704-SR. The secondary chemistry specifications are also consistent with the ANPP letter dated June 21, 1985. The inspector also examined actions implemented by 74AC-9ZZ04 as required by TS 6.8.4.C(5) and (6) and compared these actions to EPRI-NP-2704-SR and the June 21, 1985 letter. Action level definitions and values of action levels are consistent between the EPRI report and the licensee's procedure.

The water chemistry parameters set forth in 74AC9ZZ04 with respect to secondary water chemistry control are consistent with those approved by the NRC in various licensee submittals. Implementation of the water chemistry monitoring and control program will be examined as part of the routine operational inspection program.

The inspector discussed performance of auxiliary water systems, demineralizer replacement and regeneration policy, potential for ion breakthrough and contamination by regenerant chemicals with the chemistry technical support staff. The staff reported that the precore and post core tests at unit one showed that the condensate and reactor water cleanup systems perform in an acceptable manner. The licensee has taken steps to evaluate resin performance, use continuous condensate cleanup, perform external resin regenerations, test bulk chemicals for impurities and has established resin bed replacement criteria.

The licensee has also established a position within corporate health physics and chemistry to evaluate effectiveness of the chemistry control program. The licensee's inline instrumentation essentially meets the EPRI guidelines. The technical support section of the chemistry organization produces monthly trending reports.

Additional review of performance of the cleanup systems will be included in examination of the licensee's power ascension test program as part of the routine inspection program.

No violations or deviations were identified.

4. Licensee Event Reports

The following licensee event reports were examined and are considered closed.

<u>LER No.</u>	<u>Subject</u>	<u>Office/Site Review</u>
85-041	Testing Essential ESF Filters	Site
85-044	Failure to Take Sample Within Time Limit	Office
85-037	Sample Destroyed by Moisture	Site
85-052	PASS Material Deficiency	Office
85-036	Plant Vent Sample Not Isokinetic	Office
85-031	Control Room ESF Actuation	Office
85-033	Control Room ESF Actuation	Office
85-032	Incorrect Sample Lineup	Office
85-27	Control Room ESF Actuation	Office

With respect to 85-041, the inspector reviewed and discussed with the cognizant engineer, the basis for concluding that the condition identified did not impact the safety of the plant.

No violations or deviations were identified.

5. Material License Unit 2 (87100)

Special Nuclear Material license SNM-1922 authorized possession of U-235 fuel, U-235 for neutron detectors and Plutonium-Beryllium startup sources for units 2 and 3. The inspector verified that licensee conditions 10, 12, 13, 14, 15 and 16 were satisfied. The inspector also reviewed the radiation protection program, facilities, instrumentation, procedures and dosimetry programs associated with Unit 2. The licensee's programs and implementation were found acceptable.

No violations or deviations were identified.

6. Audits of Startup Testing Activities

The inspector examined the following Quality Test Monitoring Reports performed on generic and preoperational testing activities on the GR and SQ systems (gaseous radioactive waste and radiation monitoring systems).

ST-85-4046	ST-85-2803	ST-85-2667
ST-85-4041	ST-85-2783	ST-85-2666
ST-85-3982	ST-85-2769	ST-85-2387
ST-85-3896	ST-85-2779	ST-85-3135
ST-85-2385	ST-85-3266	ST-85-3062
ST-85-3085	ST-85-3080	ST-85-3023

ST-85-3006	ST-85-2896	ST-85-2987
ST-85-2962	ST-85-2864	ST-85-4561

The reports examined covered the period January to September, 1985.

No violations or deviations were identified.

7. Internal Exposure Control (383525)

The inspector reviewed licensee's program to ensure that internal radiation exposure can be effectively controlled and that individual intakes of radioactive material can be assessed. The licensee's program has been previously verified in conjunction with the unit one inspection program and partially examined in previous NRC inspections at Unit 2.

Based on discussion, review of procedures and equipment, the inspector concluded that the Unit 2 staff appears ready to implement the program established.

The inspector noted that air sample results will have to be manually manipulated to determine MPC fraction until additional equipment is obtained. The inspector suggested development of a form to aid in this calculation.

No violations or deviations were identified.

8. External Exposure Control (383524)

The inspector examined progress of the Unit 2 radiation protection organization in preparation for operation of Unit 2. The following have been established:

- instrument stock consistent with FSAR
- decontamination facility stocked
- daily dose tracking using self-reading dosimeter
- radiation work permit issue procedures
- dose rate maps (in progress)
- reasonable progress in completion of technician qualification
- preparation to perform startup radiation surveys

The inspector noted that the Radiation Exposure Management (REM) System described in the FSAR (12.5.2.2.7) is not operational. The licensee is relying on compensatory measures to provide exposure tracking and management. The licensee is taking steps to provide a replacement for this system. The cognizant NRR personnel were advised of this situation.

The inspector was informed by the licensee that antimony (122 and 124) isotopes are showing up in reactor coolant. These have been traced to use of that material in reactor coolant pump bearings. These isotopes are expected to be a significant contributor to occupational dose over the life of the facility. The licensee is taking steps to deal with the effect of this unexpected additional radionuclide source.

Based on previous inspection findings (50-529/85-12), discussion with individuals, review of procedures and inspector observations, the inspector concluded that this area is satisfactory and that the Unit 2 staff appears ready to implement the radiation protection program.

No violations or deviations were identified.

9. Radiation Monitoring System (384523, 384524)

This area was examined in depth during the Unit 1 preoperational inspection program. Unit 2 uses essentially the same equipment and similar test procedures. The licensee's operating organization has accepted the Unit 2 system prior to completion of the preoperational tests described in the FSAR. Final tests will be combined with the initial surveillance (channel calibration and channel functional test). The licensee will complete the testing prior to the time each monitor will be required by technical specifications. Non-technical specification monitors will be tested and made operational according to a licensee developed schedule.

The licensee appears to have taken an aggressive approach towards resolution of problems associated with the Unit 1 RMS. This approach should provide a beneficial effect towards completing the Unit 2 system. The licensee was advised by the inspector that substantial completion of the test program before low power license issuance would be desirable. This matter was discussed with cognizant NRR representatives.

No violations or deviations were identified.

10. Liquid and Liquid Waste (384523)

The inspector examined portions of the construction turnover and startup turnover packages, including walkdowns for liquid radwaste subsystems LR-01, LR-02, LR-03, LR-04 and LR-05. Also examined were portions of the preoperational test packages and the test results report for the LR subsystems. Based upon examination of these documents, observations of the Unit 2 liquid radwaste systems and discussion with cognizant individuals, the inspector concluded that the systems were built and are being tested as described in the FSAR and that procedures have been written and approved for testing and operation of these systems.

Final examination of completed tests will be performed when the licensee completes the test program. Testing of processing and effluent radiation monitors is described elsewhere in this report.

No violations or deviations were identified.

11. Gaseous Waste System (384524)

The inspector examined portions of the construction turnover and startup turnover packages for the GR-01 subsystem. The inspector examined the installed system and discussed the test program with cognizant personnel. Based upon this and previous inspections, the inspector concluded that the system has been installed and is being tested in accordance with the

FSAR. Procedures have been established and approved for testing and operations of this system.

Final examination of test results will be performed when the test program is complete. Portions of the HVAC systems test programs were also examined. This examination consisted of review of test procedures, discussion of test results, system walkdowns and observation of filter performance testing by a contractor.

No violations or deviations were identified.

12. Solid Waste System (384522)

The solid waste system was examined to verify that the system has been installed, built and tested as described in the FSAR. Problems with the system design have been identified at Unit 1. These problems have affected system operability and the licensee has had to use a solidification contractor to process waste. Completion of the Unit 2 test program and operability of the system may be delayed until the design problems can be resolved.

The process control program and programs for classification of waste pursuant to 10 CFR 61 are as used in Unit 1.

No violations or deviations were identified.

13. Quality Assurance (QA) in Effluent Monitoring

QA requirements for effluent monitoring are set forth in facility technical specifications. The licensee implements this specific requirement as part of their overall quality assurance program. Corporate ANPP procedure 7N414.03.00, 'Quality Classification for Structures, Systems, Components, Spare Parts and Activities' defines in section 4.4, 'Important to Safety' (ITS) as any item identified in attachment 6. Attachment 6 states that radiation protection and chemistry equipment and services, limited to the REM system, RMS system and calibration standards are ITS. The operational quality assurance criteria manual (OQACM), Appendix I identifies quality assurance criteria to be applied to ITS items. Sections 3.0, 6.0 and 8.0 identify Radwaste, Radiation Protection Equipment and Operational Phase Activities, respectively and specify what criteria apply to each of these areas. The licensee has chosen to apply criteria 4, 5, 10, 11, 12, 14, 15 and 16 to radiation protection equipment and criteria 3, 4, 5, 7, 10, 14, 15, 16, 17 and 18 to operational phase activities.

Facility Technical Specification (TS) 6.5.3.5(K) requires that audits be performed under the cognizance of the Nuclear Safety Group (NSG) of activities required by the OQACM to meet the provisions of regulatory guide 1.21 Rev. 1 and 4.1 Rev. 1 every 12 months. In addition TS 6.8.1(j) states that a QA Program (QAP) for effluent and environmental monitoring using the guidance of regulatory guides 1.21 Rev. 1 and 4.1 Rev. 1 be established, implemented and maintained.

In review of the above documents (ANPP 7N414.03.00 and OQACM), the inspector did not note the specific mention of the QAP for effluent and environmental monitoring. This matter was discussed with cognizant licensee personnel including the corporate level QA Manager and at the exit interview.

During the inspection period the licensee representatives took the position that the QA program was applied to the effluent and environmental area because:

- ° audits and monitoring activities were conducted;
- ° procedures were reviewed by quality assurance personnel;
- ° surveillance tests are performed under the QA program;
- ° equipment repair and rework are under the QA program.

In order to determine if the licensee's programs met the TS requirements without specific descriptions in the QA program documents the inspector compared the licensee's program to the QA requirements of RG 1.21 Rev. 1, June 1974 and RG 4.1 Rev. 1, April 1975.

Regulatory Guide 1.21, 'Measuring, Evaluating and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light-Water Cooled Nuclear Power Plants, Section C, 'Regulatory Position', 11, 'Accuracy of Measurement' contains a description of TS required quality assurance activities.

Section 11.a describes how error estimates should be performed. The PVBGS semiannual effluent report provides total error estimates and describes the methodology for calculating the total percent error. Errors listed are as follows:

Fission Gas	46%
Iodines	52%
Particulates	24%
Tritium	40%

These high error estimates are due to measurement of low concentrations of effluents currently being released.

Section 11.b, 'Quality Control' states that blind duplicate and cross checks should be applied to the analytical process and that quality controls should be applied to the entire sample collection procedure.

The laboratory analytical control program is applied to effluent release samples. Procedure 74CH-9XC13 provides for calibration of counting instrumentation. Station procedure 75AC-9ZZ02, 'Gaseous Radioactive Effluent Release Administrative Control' describes administrative controls and responsibilities to ensure applicable limits are not excluded. This procedure controls the 'release permit' process and implements specific TS requirements. Procedures referenced by 75AC-9ZZ02 include 75RP-9ZZ64, 'RMS Radioactive Sample Collection'. This procedure provides for sample protection, noting volume of sample, minimum volume requirements and a data sheet for logging the sample

number. The air sample data sheet provides for review of analysis by a second individual. The procedure provides an adequate degree of specificity.

Section 11.C, 'Calibrations' of RG 1.21 sets forth the following:

- ° Individual procedures for calibrating monitors and measuring equipment
- ° Calibrations should be performed using standards traceable to the NBS
- ° Calibrations should be performed at regular intervals

Review of licensee procedures, discussion with individuals, and review of records provides a basis for determining that these requirements have been met.

The requirements of appendices A&B to R.G. 1.21 were examined. The inspector verified that selected requirements were met by examination of procedures and discussion with personnel.

The quality control program set forth in Regulatory Guide 4.1 rev. 1, section C.2(d), 'Quality Control' specifies similar requirements to RG 1.21 for environmental samples. ANPP procedure 4N411.03.00, 'Review of Radiological Monitoring Programs' provides for an annual review of the program using the detailed guidance of regulatory guide 4.15, 'Quality Assurance for Radiological Monitoring Programs (Normal Operations) - Effluent Streams and the Environment.

Regulatory guide 4.15 provides detailed guidance on implementation of the quality requirements of R.G. 1.21 and 4.1. While not a specific regulatory requirement, this document sets forth essential elements of a quality assurance program. In review of the licensee's program, the inspector noted that many of the elements set forth in the regulatory position (c) are implemented in the licensee's program. The inspector also noted that these same elements are not set forth in any program document or top-tier procedure for effluent monitoring. The advisability of including the guidance of RG 4.15 into a program document and including instructions to clearly connect these activities with the activities described as ITS and clear delineation of these activities in the OQACM was discussed with representatives of Quality Systems Engineering, Technical Support and at the exit interview.

Based upon the review described above, and the quality systems engineering staff descriptions of the QA program, the inspector believes the quality assurance program requirements of T.S. 6.5.3.5(k) and 6.8.1(j) are satisfied.

No violations or deviations were identified.

14. Exit Interview

The scope and findings of the inspection were discussed on October 29, 1985 with the individuals denoted in paragraph one of this report.