



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
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ATLANTA, GEORGIA 30303-8931**

October 28, 2002

Tennessee Valley Authority
ATTN: Mr. J. A. Scalice
Chief Nuclear Officer and
Executive Vice President
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

**SUBJECT: SEQUOYAH NUCLEAR PLANT - NRC INTEGRATED INSPECTION REPORT .
50-327/02-04 AND 50-328/02-04**

Dear Mr. Scalice:

On September 28, 2002, the NRC completed an inspection at your Sequoyah Nuclear Plant, Units 1 and 2. The enclosed report presents the results of that inspection which were discussed on October 3, 2002, with Mr. Richard Purcell and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection no findings of significance were identified by the NRC. However, a licensee identified violation is listed in Section 4OA7 of this report. If you contest this non-cited violation, you should provide a response with the basis for your denial, within 30 days of the date of this inspection report, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region II; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at Sequoyah.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document

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Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Paul E. Fredrickson, Chief
Reactor Projects Branch 6
Division of Reactor Projects

Docket Nos. 50-327, 50-328
License Nos. DPR-77, DPR-79

Enclosure: NRC Inspection Report 50-327/02-04, 50-328/02-04
w/Attachment

cc w/encl: (See page 3)

cc w/encl:

Karl W. Singer
Senior Vice President
Nuclear Operations
Tennessee Valley Authority
Electronic Mail Distribution

James E. Maddox, Acting Vice President
Engineering and Technical Services
Tennessee Valley Authority
Electronic Mail Distribution

Richard T. Purcell
Site Vice President
Sequoyah Nuclear Plant
Electronic Mail Distribution

General Counsel
Tennessee Valley Authority
Electronic Mail Distribution

Robert J. Adney, General Manager
Nuclear Assurance
Tennessee Valley Authority
Electronic Mail Distribution

Mark J. Burzynski, Manager
Nuclear Licensing
Tennessee Valley Authority
Electronic Mail Distribution

Pedro Salas, Manager
Licensing and Industry Affairs
Sequoyah Nuclear Plant
Tennessee Valley Authority
Electronic Mail Distribution

D. L. Koehl, Plant Manager
Sequoyah Nuclear Plant
Tennessee Valley Authority
Electronic Mail Distribution

Lawrence E. Nanney, Director
TN Dept. of Environment & Conservation
Division of Radiological Health
Electronic Mail Distribution

County Executive
Hamilton County Courthouse
Chattanooga, TN 37402-2801

Ann Harris
341 Swing Loop
Rockwood, TN 37854

John D. White, Jr., Director
Tennessee Emergency Management Agency
Electronic Mail Distribution

Distribution w/encl: (See page 4)

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Distribution w/encl:
R. W. Hernan, NRR
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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos: 50-327, 50-328
License Nos: DPR-77, DPR-79

Report No: 50-327/02-04, 50-328/02-04

Licensee: Tennessee Valley Authority (TVA)

Facility: Sequoyah Nuclear Plant, Units 1 & 2

Location: Sequoyah Access Road
Soddy-Daisy, TN 37379

Dates: June 30, 2002 - September 28, 2002

Inspectors: R. Hagar, Acting Senior Resident Inspector
R. Telson, Resident Inspector
R. Carrion, Project Engineer
E. Testa, Senior Radiation Specialist (Sections 2OS3, 2PS1)
R. Hamilton, Health Physicist, (Sections 2OS3, 2PS1)

Approved by: P. Fredrickson, Chief
Reactor Projects Branch 6
Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000327-02-04, IR 05000328-02-04; Tennessee Valley Authority; 6/30/2002 - 9/28/2002
Sequoyah Nuclear Plant, Units 1 and 2; routine integrated report.

The inspection was conducted by resident inspectors, a project engineer, a senior health physicist, and a health physicist. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described at its Reactor Oversight Process website at <http://www.nrc.gov/NRR/OVERSIGHT/index.html>.

A. Inspector-Identified and Self-Revealing Findings

None

B. Licensee Identified Violation

A violation of very low safety significance which was identified by the licensee has been reviewed by the inspectors. Corrective actions taken or planned by the licensee appeared reasonable. The violation is listed in Section 4OA7.

Report Details

Summary of Plant Status: Unit 1 operated at or near 100 percent power for the entire inspection period. Unit 2 began the inspection period at 100 percent power. On July 12 2002 the unit automatically tripped due to the loss of start bus 2B. The unit was restarted on July 14, and reached full power the following day. The unit operated at or near full power for the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity and Emergency Preparedness

1R04 Equipment Alignment

.1 Partial Equipment Walkdowns

a. Inspection Scope

The inspectors conducted equipment alignment partial walkdowns to evaluate the operability of selected redundant trains or backup systems, listed below, following recent realignment or due to another train or system being inoperable or out-of-service. The walkdowns included a review of applicable operating procedures to determine correct system lineups and an inspection of critical components (e.g., power supplies and support systems) to identify any discrepancies that could affect operability of the redundant train or backup system. Documents reviewed are listed in the attachment.

- Alternate emergency diesel generators (EDGs) during period of unplanned inoperability for EDG 1A-A on August 6, 2002
- Alternate auxiliary feedwater (AFW) pumps during scheduled inoperability of AFW pump 2B-B
- Unit 1 trains A and B boric acid flow paths from the refueling water storage tank (RWST) to the centrifugal charging pumps during a scheduled inoperability of the boric acid blending system
- Unit 1 train B residual heat removal (RHR) following a failure of train A RHR pump suction valve 1-FCV-74-3 to close on demand during testing

b. Findings

No findings of significance were identified.

.2 Complete System Walkdown

a. Inspection Scope

The inspectors performed a complete system review of the component cooling system to verify correct system lineup was in accordance with plant procedures, drawings, and the UFSAR. Documents reviewed are listed in the attachment.

The inspectors examined system components and their configuration to identify any discrepancies between the existing system equipment lineup and the correct lineup. In addition, the inspectors reviewed descriptions of outstanding maintenance work orders on the system, to determine whether any condition described in those work requests could adversely impact the ability of the system to perform its functions. The inspectors also reviewed descriptions of outstanding design issues, to determine whether those issues could adversely impact the ability of the system to perform its functions.

The inspectors reviewed several problem evaluation reports (PERs) to verify that the licensee had properly identified and resolved component cooling system equipment alignment problems that could cause initiating events or impact mitigating system availability.

In addition, the inspectors reviewed a system status report on component cooling system, dated 5/31/02, to determine whether any identified conditions could adversely impact system operability and, if so, whether the licensee was appropriately addressing those conditions.

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope

The inspectors conducted tours of areas important to reactor safety, listed below, to evaluate conditions related to: control of transient combustibles and ignition sources; the material condition, operational status, and operational lineup of fire protection systems, equipment and features; and the fire barriers used to prevent fire damage or fire propagation. The inspectors also reviewed Procedure SPP-10.10, Control of Transient Combustibles, and/or pre-fire plans for these areas, as appropriate. Documents reviewed are listed in the attachment.

- Control building Elev. 706 (cable spreading room and related areas)
- Control building Elev. 732 (main control room and related areas)
- Emergency raw cooling water structure (all elevations, all bays)
- Emergency diesel generator building
- Auxiliary building Elev. 690 (Units 1 and 2 corridor areas)
- Auxiliary building Elev. 734 (6.9kV shutdown board rooms A and B)

b. Findings

Introduction: An unresolved item was identified to document the inspectors' observations that the licensee had recently made two changes to the approved fire protection program and had not evaluated those changes against a license condition which states in part that changes to the approved fire protection program are allowed without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

Description: During a routine walkdown of risk-significant areas of Unit 2, the inspectors observed that the licensee had removed:

- all 6 installed fire hoses and racks from the Unit 2 reactor building (RB) lower containment,
- 19 of 24 hoses from the Unit 2 RB annulus, and
- 23 of 28 fire extinguishers from the Unit 2 RB annulus.

The inspectors noted that these changes had been made in accordance with Design Change Notice (DCN) D20840, Rev. A. Subsequent to the inspection period, the inspectors determine that similar changes had been made to Unit 1 using DCN-D20662.

In addition the inspectors determined that the licensee had changed the fire protection plan with respect to compensatory measures: the plan had previously required the licensee to post either a continuous or one-hour fire watch with backup suppression equipment whenever a required carbon-dioxide fire suppression system is inoperable, and the licensee had changed it to require only the establishment of backup fire suppression.

The inspectors noted that Sequoyah Unit 2 Facility Operating License Condition 2.C (13) states, in part, that the licensee may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire. The inspectors found that the licensee had not evaluated against that license condition, either the decision to remove fire hoses and fire extinguishers or the decision to not require fire watches. That is, the licensee had not explicitly determined whether these changes would adversely affect the ability to achieve and maintain safe shutdown in the event of a fire in the affected areas.

Analysis: The risk significance of these observations has not yet been evaluated.

Enforcement: Pending licensee evaluation of these changes against the license condition and subsequent NRC review of those evaluations, this issue is identified as Unresolved Item (URI) 50-327,328/02-04-01, Review Licensee Evaluation of Changes Made to the Approved Fire Protection Program.

1R11 Licensed Operator Requalification

a. Inspection Scope

The inspectors observed operators in the plant simulator respond to a simulated loss-of-coolant accident outside of the containment. The inspectors referenced Procedure ECA-1.2, [Loss of Coolant Accident] Outside Containment, and Simulator Guide OPL273S0230. The inspectors reviewed simulator evaluations for previously identified weaknesses and assessed the following operating crew attributes:

- clarity and formality of communication;
- ability to take timely action in the safe direction;
- prioritization, interpretation, and verification of alarms;

- correct use and implementation of procedures, including the alarm response procedures;
- timely control board operation and manipulation, including high-risk operator actions;
- oversight and direction provided by the shift manager, including ability to identify and implement appropriate Technical Specifications (TS) action such as reporting and emergency plan actions and notifications; and
- the group dynamics involved in crew performance.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness

a. Inspection Scope

The inspectors evaluated the licensee's appropriate handling of W-2 handswitch failures that prevented a manual start of emergency core cooling system (ECCS) pumps, in terms of:

- appropriate work practices,
- identifying and addressing common-cause failures,
- scoping in accordance with 10 CFR 50.65(b),
- characterizing reliability issues (performance),
- charging unavailability (performance),
- trending key parameters (condition monitoring),
- 10 CFR 50.65(a)(1) or (a)(2) classification and reclassification, and
- appropriateness of performance criteria for functions classified (a)(2) and/or appropriateness and adequacy of goals and corrective actions for functions classified (a)(1).

Documents reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation

a. Inspection Scope

The inspectors evaluated the work activities listed below, to verify that the licensee performed risk assessments in accordance with the applicable procedures when required, that the information used in those risk assessments was accurate and complete, and that the licensee recognized and/or entered (as applicable) the appropriate licensee-established risk category or band according to risk-assessment results and licensee procedures. During these inspections, the inspectors also reviewed Procedure SPP-7.1, Work Control Process, and Instruction 0-TI-DSM-000-007.1,

Equipment to Plant Risk Matrix, as necessary. Documents reviewed are listed in the attachment. The evaluated work activities included:

- De-energizing the 1B emergency raw cooling water (ERCW) power supply while the P-B ERCW pump was inoperable,
- Unit 2 reactor protection system Eagle logic rack 9 fan replacement requiring the pre-tripping of multiple protective instruments,
- Unit 1 boric acid system scheduled maintenance outage,
- Unit 1 train A RHR pump suction valve 1-FCV-74-3 failure to close during testing rendering RHR containment spray and train A RHR inoperable,
- Inoperability of emergency diesel generator 2B-B, and
- Start bus 2B alternate feeder circuit breaker 1412 post-maintenance test (PMT).

b. Findings

No findings of significance were identified.

1R14 Personnel Performance During Non-routine Plant Evolutions

.1 Unit 2 Automatic Reactor Trip Following Loss of the 2B Start Bus

a. Inspection Scope

The inspectors reviewed human performance associated with the loss of the 2B start bus and subsequent automatic reactor trip that occurred on July 12, 2002, while Unit 2 was operating at 100 percent power to determine what occurred and how operators responded to the event. The inspectors reviewed plant operating logs, plant computer information, and the associated PER, and conducted discussions with operations and engineering personnel. The inspectors also reviewed plant procedures, to determine whether the operators' response was in accordance with those procedures.

b. Findings

No findings of significance were identified.

.2 Notification of Unusual Event (NOUE) Following Unauthorized Site Entry

On September 13, the inspectors monitored personnel performance during a security event that was initiated by an unauthorized entry to the site by a contractor employee. That event included declaration of a NOUE which was terminated approximately 14 hours after the unauthorized entry. At the end of the inspection period, this event was still under NRC review. The event is also addressed in Section 40A3.2.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed PER/Functional Evaluation 02-009033-000, which evaluated the operability aspects of Calculation 67D530HCGMWL071387, R13, ERCW Op Modes. This calculation contained several incorrect and non-conservative temperature values for various modes of operation. The purpose of the review was to assess, as appropriate:

- the technical adequacy of the evaluation;
- whether continued system operability was warranted;
- whether other existing degraded conditions were considered as compensating measures;
- where compensatory measures were involved, whether the compensatory measures were in place, would work as intended, and were appropriately controlled; and
- where continued operability was considered unjustified, the impact on TS limiting condition for operation (LCO) and the risk-significance in accordance with the SDP.

The inspectors referenced Procedure SPP-10.6, Engineering Evaluations for Operability Determination, as needed, during the course of these inspection activities. The inspected issue included the following:

- Erroneous temperatures in ERCW Calculation 67D530HCGMWL071387,
- Operability of the emergency gas treatment system for Unit 1 while both trains are aligned to Unit 2,
- The lift setpoint for the 2A safety injection header safety valve is lower than the expected pump discharge pressure,
- Failure of safety related auxiliary control air inside containment following a high-energy line break may result in containment overpressure, and
- The regulator settings for several safety-related valves are higher than the maximum values recommended in the corresponding vendor manual.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing

a. Inspection Scope

For the maintenance activities listed below, the inspectors reviewed work orders (WOs) and/or test records, and/or observed test activities, as appropriate, to assess whether:

- the effect of testing on the plant had been adequately addressed by control room and/or engineering personnel;
- testing was adequate for the maintenance performed;
- acceptance criteria were clear and adequately demonstrated operational readiness consistent with design and licensing basis documents;

- test instrumentation had current calibrations, range and accuracy consistent with the application,
- tests were performed as written with applicable prerequisites satisfied;
- jumpers installed or leads lifted were properly controlled;
- test equipment was removed following testing; and
- affected equipment was returned to the status required to perform their safety functions.

The inspectors reviewed the following activities:

- A post-maintenance test failure on July 31, following installation of a new Siemens Model 8HKR-50-120-130 circuit breaker in the ERCW motor control center board, as authorized by DCN E20913;
- Measurement of cable insulation resistance and the pump start performed in accordance with WO 02-006954-001, following replacement of a section of the power cable for the P-B ERCW pump;
- Starting and running EDG 2B-B in accordance with O-PI-SXV-082-204.B, Diesel Starting Air Valve Test for DG Set 2B-B, Time Frame B, following adjusting the time delays on several relays and changing the setpoints on several pressure switches;
- Valve SQN-1-VLV-062-1055B, boric acid pump cross-connect valve post-maintenance operability test and boric acid flow path valve position verification;
- Replace main control room (MCR) air handling unit (AHU) B-B temperature controller 0-TC-311-39 with like replacement and calibrate; and
- Spontaneous closure of start bus 2B alternate feeder circuit breaker 1412 and Unit 2 automatic reactor trip following breaker PMT.

In addition, to consider licensee problem identification and resolution in this area, the inspectors reviewed several PERs related to these inspections. Documents reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors witnessed surveillance tests and/or reviewed test data, described below, of selected risk-significant systems, structures, and/or components (SSCs) conducted using the surveillance instructions listed in the attachment, to assess whether the SSCs met Technical Specification Surveillance Requirements, the UFSAR, and licensee procedure requirements, and to determine if the testing effectively demonstrated that the SSCs were operationally ready and capable of performing their intended safety functions. The inspected tests included the following:

- Safety injection pump 2B-B performance test on July 16, 2002
- Component cooling system (CCS) pump 2B-B performance test and CCS pump discharge check valve quarterly closing test on July 18, 2002

- Visual inspection of Unit 1 ice condenser upper doors on August 7, 2002
- Unit 2 reactor trip instrumentation functional test (SSPS B-train) on August 14, 2002
- Motor driven auxiliary feed water pump 2B-B ASME Section XI performance test on August 15, 2002
- Setpoint verification and calibration of time-delay relays for selected components in the ERCW system on August 28, 2002
- Unit 1 RHR discharge piping vent on August 7, 2002

b. Findings

Inspector-identified issues were added to the scope of Unresolved Item (URI) 50-327/01-06-02, Residual Heat Removal System Venting Methodology.

Prior to the Unit 1 RHR discharge piping vent surveillance test on August 7, the inspectors verified that this test was one of ten surveillance tests used to satisfy Technical Specification (TS) Surveillance Requirement (SR) 4.5.2.b.1, which requires the licensee to demonstrate that ECCS subsystems are OPERABLE at least once per 31 days by verifying that the ECCS piping is full of water by venting the ECCS pump casings and accessible discharge piping high points.

The inspectors observed that during this test, the licensee opened vent valves on various ECCS pump casings and accessible discharge piping high points until flow through those valves was a steady stream of water, and then closed the valves. The inspectors noted that, rather than demonstrating that the piping was full of water, this practice effectively removed from the piping any gas that may be in the immediate vicinity of the vents. The inspectors also noted the following:

- The surveillance procedures did not require the licensee to assess the as-found condition of the ECCS piping.
- The surveillance procedures did not contain any qualitative or quantitative acceptance criteria that could be used to determine whether the TS had been met.
- The surveillance procedures did not include venting of discharge piping in the ECCS “piggy-back” mode between the low-head ECCS pump and the intermediate-head ECCS pump.

During the test, the inspectors observed that the licensee monitored RHR pump flow while the recirculation valve was being opened, and from the pump flow data subsequently inferred a measure of gas present in the piping. However, the inspectors noted that those monitoring and analysis activities were not described in any procedure, and that the surveillance procedure did not include consideration of the analysis results.

The inspectors found that the licensee periodically examined the ECCS piggy-back piping using ultrasonic testing techniques, in accordance with a procedure that was not a surveillance procedure. However, the inspectors noted that the surveillance procedure did not include consideration of results from those examinations.

For the reasons noted above, the inspectors consider that the licensee’s surveillance tests did not clearly demonstrate the operability of the ECCS piping. However, the inspectors also consider that the issues identified above did not represent an immediate

operability concern, because using other methods, the licensee determined that not enough gas had accumulated to threaten ECCS operability.

Because the issues identified above are similar to those issues identified in a previous URI, they have been included in the scope of URI 50-327/01-06-02, Residual Heat Removal System Venting Methodology. The URI will remain open pending NRC review of the licensee's implementation of TS SR 4.5.2.b.1.

1EP6 Drill Evaluation

a. Inspection Scope

The inspectors observed the licensee's orange team perform an emergency plan drill on August 28, 2002. The inspectors evaluated drill conduct and the adequacy of the licensee's drill critique to identify weaknesses and deficiencies. The inspectors reviewed the drill scenario and plan, and observed drill performance in the technical support center (TSC). The inspectors also attended the TSC post-drill critique.

b. Findings

No findings of significance were identified.

2. **RADIATION SAFETY**

Cornerstones: Occupational Radiation Safety & Public Radiation Safety

2OS3 Radiation Monitoring Instrumentation and Protective Equipment

.1 Radiation Monitoring Instrumentation

a. Inspection Scope

During the week of August 19-23, 2002 the inspectors reviewed the material condition of selected Unit 1 area radiation monitors (ARMs) and continuous air monitors (CAMs). The inspectors walked down all accessible area radiation monitors and continuous air monitors in the Unit 1 auxiliary building. Local readouts on the installed area radiation monitors were compared with measurements made with NRC survey instruments. The inspectors observed the control room displays of process and area radiation monitors. The inspectors reviewed calibration documentation from the Unit 1 reactor building CAMs and ARMs. Inspectors also reviewed design calculations for various process monitors and primary vendor calibrations.

Several handheld survey instruments were selected for inspection. The instruments were examined for physical condition, battery condition, calibration due date, functional check dates, and as applicable, high voltage or zero adjust. The inspectors also reviewed the most recent calibration documentation for these instruments. Licensee personnel were interviewed to determine instrument selection criteria, procedures for instruments that failed source or calibration checks and licensee actions for instruments determined to be significantly out-of-calibration.

On July 10-12, the inspectors evaluated portable survey instrument calibrations performed at the Western Area Radiological Laboratory. Licensee procedural guidance and current calibration records for four types of portable radiation instruments were reviewed and evaluated. Measurement accuracies for recently calibrated frisker, ion chamber, GM telescan, and electronic dosimeter instrumentation awaiting transfer to reactor sites were evaluated through exposure of the equipment to known radiation fields/sources and comparing instrument readouts with expected values. The alarm setpoint of an electronic dosimeter also was tested.

License procedures and activities related to radiation monitoring instrumentation were evaluated for consistency with Technical Specifications and 10 CFR 20.1501(b). Licensee's instrumentation related procedures, reports and records reviewed during the inspection are listed in the attachment.

b. Findings

No findings of significance were identified.

.2 Self-Contained Breathing Apparatus (SCBA) Maintenance and User Testing

a. Inspection Scope

The inspectors selected and examined one SCBA on the fire truck, two SCBAs in the fire operations ready-issue area, and three SCBAs in the auxiliary building. A total of five SCBA face pieces, six regulators and 12 compressed air bottles were examined, including a newer lightweight carbon composite bottle. The equipment was visually inspected for physical condition and indication of the hydrostatic testing markings. The inspectors reviewed training certificates for the two persons responsible for direct maintenance and repair of the devices at the TVA Nickajack facility. The inspectors also reviewed the maintenance procedure for inspecting and repair of the units and the training procedure for SCBA users.

The inspectors evaluated licensee procedures and activities related to SCBAs against the TS and 10 CFR 20.1703. The licensee's SCBA related procedures, reports and records reviewed during the inspection are listed in the attachment.

b. Findings

No findings of significance were identified.

.3 Problem Identification and Resolution

a. Inspection Scope

The audits, self assessments and PERs related to radiation monitoring instrumentation which were selected for detailed evaluation are listed in the attachment. The inspectors assessed the licensee's ability to identify, characterize, prioritize, and resolve the identified issues.

b. Findings

No findings of significance were identified.

2PS1 Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems

.1 Radioactive Effluent Treatment and Monitoring Systems

a. Inspection Scope

The inspectors reviewed the licensee's most recent Radioactive Effluent Release Report which delineated the quantities of radionuclides released in liquid and gaseous effluents during calendar year 2001 and the radiation doses to the public resulting from those releases. The inspectors evaluated the report to determine whether it included the information and data required to demonstrate conformance with applicable regulations. The inspectors also reviewed the recent changes to the Offsite Dose Calculation Manual (ODCM), and evaluated whether those changes were technically justified and consistent with the regulatory guidance.

The inspectors toured the plant and assessed major radioactive effluent process and monitoring equipment against descriptions documented in the Updated Final Safety Analysis Report (UFSAR) and the ODCM. During the tours, the inspectors observed 25 effluent monitoring instruments to evaluate their material condition, and to determine whether they were in service as specified by the ODCM. For three effluent monitors (1-RM-90-400A, 1RM-90-400B, 2-RM-90-160A), the inspectors compared the Control room readout with the local panel readout.

The inspectors attended the pre-job briefing and observed the Unit 1 performance of Procedure 1-SI-IFT-090-106.0, Functional Test of Containment Building Lower Compartment Air Monitor.

During tours, the inspectors directly observed the radioactive processing equipment and compared functionally abandoned equipment against system drawings.

Release permits and associated data for a liquid and gaseous effluent release were reviewed and evaluated. The inspectors reviewed the most recent calibration data for effluent monitoring instruments O-R-90-225, 1-RM-90-400, O-R-90-122, O-R-90-133, O-R-90-140, and O-R-90-118. Results of inter-laboratory comparisons made during CY 2001 and the first two quarters of CY 2002 were reviewed and evaluated.

Licensee procedures and activities related to plant effluents were evaluated for consistency with the TS; the ODCM; UFSAR Chapter 9.0, Radioactive Waste Control Systems; 10 CFR 20.1302, 10CFR 50.36(a), Appendix I to 10 CFR 50; Regulatory Guide (RG) 1.109, Calculation of Annual Doses to Man from Routine Releases of Reactor Effluents for the Purpose of Evaluating Compliance with 10 CFR Part 50, Appendix I, Revision (Rev.) 1; RG 4.15 Quality Assurances for Radiological Monitoring Programs (Normal Operations)-Effluent Streams and Environment, February 1979, Rev. 1; and NUREG-0133 Preparation of Radiological Effluent Technical Specifications

for Nuclear Power Plants, Rev. 1. Licensee plant effluent related procedures, reports, records, and prints reviewed during the inspection are listed in the attachment.

b. Findings

No findings of significance were identified

.2 Problem Identification and Resolution

a. Inspection Scope

The inspectors evaluated in detail the audit and PERs related to radioactive effluent monitoring listed in the attachment. The inspectors assessed the licensee's ability to identify, characterize, prioritize, and resolve the identified issues.

b. Findings

No findings of significance were identified.

2PS3 Radiological Environmental Monitoring Program (REMP)

.1 Radiological Environmental Monitoring Program (REMP) Implementation

a. Inspection Scope

The environmental monitoring program guidance and implementing activities were inspected during the week of August 19-23, 2002. The inspection consisted of direct physical observation of sample stations, sample collection, sample preparation, review of the Annual Environmental Operating Report for 2001 and documentation, and interviews with licensee personnel.

On August 20, the inspectors observed the routine weekly collection of five airborne particulate and iodine samples and the collection of a milk sample. The observed sample collection locations were LM-2, PM-9, PM-2, PM-3, and RM-2. The inspectors observed the material condition of one water composite sampler at the City of Dayton Municipal Water Intake, five air samplers and five co-located rainfall composite sampling devices. Environmental thermo-luminescent dosimeters (TLDs) in the vicinity of the air sampling stations, were checked for material condition and appropriate identification. TLDs examined included WSW-2A, SW-2, W-3, N-4, and co-located TLDs: Sequoyah NNE-4 and Watts Bar SW-3.

Air flow calibration records were reviewed for samplers LM-2 and PM-9. The inspectors independently determined the sampling locations using a handheld global positioning system (GPS) instrument. The inspectors compared the GPS locations with licensee measurements, the ODCM specified locations, and the Annual Radiological Environmental Operating Report.

On July 10-12, the inspectors evaluated instrument calibration and analytical quality control procedures for REMP sample analyses performed at TVA's Western Area Radiological Laboratory. Records for efficiency calibrations of gamma spectroscopic detector Number (No.) 141 performed during December 1996 and October 1999 were reviewed. Records for quality control checks performed on July 9, also were reviewed

and evaluated. The inspectors independently calculated and assessed the current I-131 lower limit of detection (LLD) for gamma spectroscopic analysis of charcoal filters. Results of inter-laboratory comparisons for typical REMP sample types during calendar year 2001 and 2002 were reviewed and evaluated.

Licensee procedures and activities related to environmental monitoring were evaluated for consistency with TS, UFSAR and ODCM. The licensee's environmental monitoring related procedures, reports and records reviewed during the inspection are listed in section 2PS3 of the report attachment.

b. Findings

No findings of significance were identified

.2 Meteorological Monitoring Program

a. Inspection Scope

On August 22, 2002, the inspectors walked down the meteorological tower and its supporting instrumentation and observed the physical condition of the equipment. The inspectors compared system generated data with the data provided by the plant computer to various locations including the control room, and with the inspectors' observations of wind direction and speed. The inspectors assessed system reliability and data recovery. Meteorological tower siting was evaluated based on near field obstructions, ground cover, proximity to the plant, and distance from terrain that could affect the representativeness of the measurements. The inspectors reviewed the calibrations and trouble reports for selected meteorological tower sensors used during the previous year.

Licensee procedures and activities related to meteorological monitoring were evaluated for consistency with the TS, the ODCM, UFSAR Section 2.3 Meteorology, and ANS/ANSI 3.11-2000 Determining Meteorological Information at Nuclear Facilities.

b. Findings

No findings of significance were identified.

.3 Unrestricted Release of Materials from the Radiologically Controlled Area (RCA)

a. Inspection Scope

Radiation protection program activities associated with the unconditional release of materials from the RCA were reviewed and evaluated. During the period of August 19-23, 2002, the inspectors directly observed surveys of potentially contaminated materials released from the RCA using the small article monitor (SAM)-11 equipment and the release of personnel using the personnel contamination monitors (PCM-1). To evaluate the appropriateness and accuracy of release survey instrumentation, radionuclides identified within recent waste stream analyses were compared against current calibration and performance check source radionuclides

types. Current calibration and performance check data were reviewed and discussed. The licensee's 10 CFR 61 waste stream characterization analyses for resin, filters and dry active wastes were reviewed and the relative proportion of hard to detect nuclides was estimated. In addition, licensee guidance to evaluate survey requirements for hard-to-detect radionuclides was reviewed and discussed.

The licensee practices for monitoring for unconditional release of materials from the RCA were evaluated against 10 CFR Part 20 and applicable procedures.

b. Findings

No findings of significance were identified.

.4 Problem Identification and Resolution

a. Inspection Scope

Four radioactive materials control PERs were evaluated and are listed in the attachment.

b. Findings

No findings of significance were identified.

8. SAFEGUARDS

Cornerstone: Physical Protection

3PP3 Response to Contingency Events

The Office of Homeland Security (OHS) developed a Homeland Security Advisory System (HSAS) to disseminate information regarding the risk of terrorist attacks. The HSAS implements five color-coded threat conditions with a description of corresponding actions at each level. NRC Regulatory Information Summary (RIS) 2002-12a, dated August 19, 2002, "NRC Threat Advisory and Protective Measures System," discusses the HSAS and provides additional information on protective measures to licensees.

a. Inspection Scope

On September 10, 2002, the NRC issued a safeguards advisory to reactor licensees to implement the protective measures described in RIS 2002-12a in response to the Federal government declaration of threat level "orange." Subsequently, on September 24, 2002, the OHS downgraded the national security threat condition to "yellow" and a corresponding reduction in the risk of a terrorist threat.

The inspector interviewed licensee personnel and security staff, observed the conduct of security operations, and assessed licensee implementation of the threat level "orange" protective measures. Inspection results were communicated to the region and headquarters security staff for further evaluation.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

40A1 Performance Indicator Verification

Cornerstone: Initiating Events

Unplanned Scrams per 7,000 Critical Hours, Scrams with Loss of Normal Heat Removal, and Unplanned Power Changes per 7,000 Critical Hours.

a. Inspection Scope

The inspectors reviewed monthly operating reports and licensee event reports (LERs) for the period April 2001 through June 2002, to verify the accuracy and completeness of the data associated with these Performance Indicators (PIs). The inspectors also reviewed the licensee's corrective action program to determine whether any problems with the collection of PI data had occurred and if resolution was satisfactory.

b. Findings

No findings of significance were identified.

40A3 Event Follow-up

.1 Unit 2 Automatic Reactor Trip

On July 12, 2002, following a Unit 2 automatic reactor trip from 100 percent power in response to the unplanned loss of the 2B 6.9-KV start bus, the inspectors evaluated plant status, mitigating actions, and the licensee's classification of the event, to enable the NRC to determine an appropriate NRC response. Following this event, the licensee identified that operators of both units had failed to verify operability of the alternate off-site power supply. The enforcement aspects of this finding are discussed in Section 40A7.

.2 Notification of Unusual Event (NOUE) Following Unauthorized Site Entry

On September 13, 2002, the inspectors monitored the licensee's response to a security event that was initiated by an unauthorized entry to the site by a contractor employee. That event included declaration of a NOUE which was terminated approximately 14

hours after the unauthorized entry. At the end of the inspection period, this event was still under NRC review.

40A6 Meetings, including Exits

On October 3, 2002, The inspectors presented the inspection results to Mr. Richard Purcell, Site Vice President, and other members of licensee management. The inspectors asked the licensee whether any of the material examined during the inspection should be considered proprietary. No proprietary information was identified.

40A7 Licensee Identified Violations

The following finding of very low significance was identified by the licensee and is a violation of NRC requirements which meets the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600 for being dispositioned as a non-cited violation (NCV).

<u>NCV Tracking Number</u>	<u>Requirement Licensee Failed to Meet</u>
50-327,328/02-04-01	Technical Specification 3.8.1.1.a Action a. requires that, with one offsite A.C. circuit of the required A.C. electrical power sources inoperable, the remaining offsite A.C. circuit be demonstrated OPERABLE by performing SR 4.8.1.1.1.a. within one hour and at least once per 8 hours thereafter. Contrary to this, from 10:23 PM until 11:55 PM on July 12, 2002, the licensee failed to perform SR 4.8.1.1.1.a. as required when one offsite A.C. Circuit of the required A.C. electrical power sources became inoperable. This NCV was identified in the licensee's corrective action program as PER 02-008493-000 (Green).

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

T. Carson, Maintenance Manager
R. Drake, Maintenance and Modifications Manager
E. Freeman, Operations Manager
J. Gates, Manager, Business & Work Performance
C. Kent, Radcon/Chemistry Manager
D. Koehl, Plant Manager
M. Lorek, Assistant Plant Manager
D. Lundy, Site Engineering Manager
R. Purcell, Site Vice President
W. Raines, Manager, Western Area Radiological Laboratory
R. Richie, Chemistry Manager
P. Salas, Licensing and Industry Affairs Manager
K. Stephens, Security Manager
J. Valente, Engineering & Support Services Manager
J. Vincelli, RadCon Manager

NRC

R. Bernhard, Region II Senior Reactor Analyst
W. Rogers, Region II Senior Reactor Analyst

ITEMS OPENED AND CLOSED

Opened

50-327,328/02-04-01 URI Review Licensee Evaluation of Changes Made to the Approved Fire Protection Program (1R05).

Opened and Closed

50-327,328/02-04-01 NCV Failure to demonstrate the remaining offsite A.C. circuit as operable when one offsite A.C. Circuit of the required electrical power sources became inoperable (4OA7).

Discussed

50-327/01-06-02 URI Residual Heat Removal System Venting Methodology (1R22).

LIST OF DOCUMENTS REVIEWED

1R04 Equipment Alignment

- PER 02-009247-000, EDG Engine 1 declared inoperable following apparent turbocharger leak, high vibration, and abnormal noise
- Drawing CCD 1,2-47W859-1, Mechanical Flow Diagram Component Cooling System, Revision 48
- Drawing CCD 1-47W859-2, Mechanical Flow Diagram Component Cooling System, Revision 30
- Drawing CCD 2-47W859-3, Mechanical Flow Diagram Component Cooling System, Revision 30
- UFSAR section 9.2.1, Component Cooling System
- PER 01-000431-000, Temperature Recorder 0-TR-70-162 is scaled too high.
- PER 02-002534-000, Work performed on the 1B CCS pump motor took 4 hours longer than scheduled.
- PER 02-006648-000, Data that describe differential pressure across a CCS heat exchanger show an increasing trend.

1R05 Fire Protection

- Fire Protection Pre-Fire Plan No. CON-0-732-00, Control Building Elevation 732
- Fire Hazards Analysis Calculation, SQN-26-D054/EPM-ABB-IMPFA, Control Building Elevations 706 and 732
- 0-SI-FPU-026-181.F, Fire Hose Service Hydrostatic Test - Triennial
- 0-SI-FPU-026-191.0, Fire Hose Station Inspection
- 0-SI-FPU-013-625.0, Fire Detection Panel 0-L-625 Test
- SI-236.6, Functional Test of Fire Protection Report Required Detectors in Panels 0-L-613, -614, -615, -616, -617, -618, and 0-L-620
- Fire Hazards Analysis Calculation, SQN-26-D054/EPM-ABB-IMPFA, Fire Areas FAE-001, -002, and -003, ERCW Pumping Station Elevations 688.5, 704.0, 720.0, 692, 699, 685
- Fire Protection Pre-fire Plan Nos. ERCW-0-720-00, -704-00, and -688-00, Rev. 2
- Drawing 1,2-47W494-9 and -10, Fire Protection Compartmentation-Fire Cells Plan El. 688.0, 704.0, and 720.0
- Drawing 1,2-47W850-26A, Connectivity Diagram Fire Protection System

1R12 Maintenance Effectiveness

- PER 02-008088-000, Apparent failure of RCCA L-11 to properly insert on May 31, 2002 reactor trip from 71 percent power
- July 10 maintenance rule expert panel meeting agenda, attachments, and minutes
- W-2 handswitch failure 10-point (a)(1) plan

1R13 Maintenance Risk Assessments and Emergent Work Control

- LER 50-327/2002-02, Unit 2 Automatic Reactor Trip Resulting from a Failure of a Breaker Causing an Undervoltage Condition on Two Reactor Coolant Pumps and Failure to Perform a Technical Specification Required Action.
- PER 02-008460-000, Unit 2 Reactor Trip and Loss of Start Bus 2B, and related attachments.
- Procedure 0-TI-SXX-000-004.0, Maintenance Rule Performance Indicator Monitoring, Trending, and Reporting - 10CFR50.65, Rev. 13.
- SPP-7.1, Work Control Process, Rev. 2

1R19 Post-Maintenance Testing

- Procedure SPP-6.3, Pre/Post Maintenance Testing (PMT)
- SI-266.1.1, Inspection of I.T.E. 7.5HK-500 6900V Breakers and Siemens 6900V Vacuum Breakers, Rev. 22
- WO No. 02-008236-000, Remove ABB 7.8HK Breaker S/N 47035-A1-11-1B from 6.9KV Shutdown Board 1B-B Compartment 22 and Install a New Siemens Model 8HKR-50-120-130 in its Place as Authorized by DCN E20913.
- 0-MI-EBR-202-000.0, Siemens 6900V Vacuum Breaker Inspection
- SI-266.1.1, Inspection of I.T.E. 7.5HK-500 6900V Breakers and Siemens 6900V Vacuum Breakers
- WO No. 02-000292-000, Clean and repair body to bonnet leak on valve SQN-1-VLV-062-1055B, Boric Acid Pump Cross-connection.
- 0-MI-MVV-000-029.0, Hand Operated Grinnell or Saunders Type Diaphragm Valve Maintenance, Rev. 8.
- Tagout 1-TO-2002-0001, Clearance 1-62-0399-W/W
- 0-TI-PMT-000-000.0, Pre - Post-maintenance Testing Matrices, Rev. 10
- 0-SI-SFT-311-001.B, Control Room Air-Conditioning System Train B, Rev. 1
- 0-SO-30-1, Control Building Heating, Air Conditioning and Ventilation, Rev. 24
- WO No. 02-001206-000, Investigate to Determine Cause of Any Problems; Replace SQN-0-TC-311-0039 on Main Control Room
- LER 50-327/2002-02, Unit 2 Automatic Reactor Trip Resulting from a Failure of a Breaker Causing an Undervoltage Condition on Two Reactor Coolant Pumps and Failure to Perform a Technical Specification Required Action.
- PER 02-008460-000, Unit 2 Reactor Trip and Loss of Start Bus 2B, and related attachments.
- Procedure 0-TI-SXX-000-004.0, Maintenance Rule Performance Indicator Monitoring, Trending, and Reporting - 10CFR50.65, Rev. 13.
- WO No. 02-006840-00, Investigate Using MI-10.4 Why Breaker Closed Going to Test Position. Correct Problem Found Using MI-10.4.
- 0-GO-10, Electrical Apparatus Operation, Rev. 14.
- MI-10.4, 6900V Breaker Inspection, Revision 45
- SQ981391PER, During a refueling outage, an unplanned reduction in Reactor Coolant System boron concentration occurred when unborated water leaked through two Grinnell valves

- PER 00-009865-000, During post-outage filling and venting of Chemical and Volume Control System discharge piping, a significant amount of water leaked by a Grinnell valve
- PER 01-003658-000, Following preventive maintenance on Grinnell valves associated with the waste gas decay tanks, several of the valves did not isolate when placed in the closed position.

1R22 Surveillance Testing

- 2-SI-SXP-063-201.B, Safety Injection Pump 2B-B Performance Test
- 2-SI-SXP-070-201.B, Component Cooling Pump 2B-B Performance Test
- 0-SI-SXV-070-201.0, CCS Pump C-S Discharge Check Valve (0-70-504) Quarterly Closing Test
- 1-SI-OPS-074-128.0, Unit 1 RHR Discharge Piping Vent, Rev. 10
- 0-SI-MIN-061-004.0, Ice Condenser Top Deck Doors, Rev. 2
- SI-90.82, Reactor Trip Instrumentation Functional Test (SSPS), Rev. 30
- 2-SI SXP-003-201.B, Motor Driven Auxiliary Feed Water Pump 2B-B Performance Test, Rev. 7
- 1-SI-EDC-202-220.B, Setpoint Verification and Calibration for Time Delay Relays Associated with Automatic Load Sequence Timer, Rev. 9

2OS3 Radiological Monitoring Instrumentation)

- Sequoyah Nuclear Plant - Updated Final Safety Analysis Report Chapter 12 Radiological Control Instruction, RCI-4, Respiratory Protection Program, Revision (Rev.) 41
- Procedure, RCDP-8, Radiological Instrumentation/Equipment Controls, Rev. 1 TVAN Standard Programs and Processes, SPP-5.1, Radiological Controls, Sections 3.7-3.9, Rev. 4
- Surveillance Instruction, 1-SI-ICC-090-271.0, Calibration of Upper Inside Containment Post Accident Hi Range Area Monitor 1-R-90-271, Rev. 6
- Surveillance Instruction, 1-SI-ICC-090-106.0, Channel Calibration of Containment Building Lower Compartment Air Monitor 1-R-90-106, Rev. 8
- Surveillance Task Sheet, 0-PI-ICC-090-011.0, Calibration of Containment Spray RHR Pump Area Monitor 0-R-90-11, Completed 4/24/01
- Surveillance Task Sheet, 1-PI-ICC-090-008.0, Calibration of Auxiliary Feedwater Pump Area Radiation Monitor 1-R-90-8, Completed 4/20/02
- Surveillance Task Sheet, 1-PI-ICC-090-001.0, Calibration of Spent Fuel Pit Area Radiation Monitor 1-R-90-1, Completed 2/5/02
- Surveillance Task Sheet, 0-PI-ICC-090-005.0, Calibration of Spent Fuel Pit Pumps Area Radiation Monitor 0-R-90-5, Completed 3/21/01
- Surveillance Task Sheet, 0-PI-ICC-090-009.0, Calibration of Waste Evaporator Condenser Tank Area Radiation Monitor 0-R-90-9, Completed 3/14/02
- Surveillance Task Sheet, 1-PI-CEM-043-487.0, Sentry Post Accident Sampling System Operability Verification and Calibration, Completed 6/1/01
- Surveillance Task Sheet, 1-PI-CEM-043-487.0, Sentry Post Accident Sampling System Operability Verification and Calibration, Completed 10/5/01

- Surveillance Task Sheet, 1-PI-CEM-043-487.0, Sentry Post Accident Sampling System Operability Verification and Calibration, Completed 11/29/01
- Surveillance Task Sheet, 1-PI-CEM-043-487.0, Sentry Post Accident Sampling System Operability Verification and Calibration, Completed 3/5/02
- Calibration Data Sheet, 2-SI-ICC-090-273, Calibration of Lower Containment Post Accident High Range Area Monitor, Rev. 3, 4/19/02
- Calculation: B 87 010821 006, Demonstrated Range for Sequoyah Nuclear Radiation Monitors, SQN 2, 8/11/01
- Calculation: B 87 900124 006, Demonstrated Range for Sequoyah Nuclear Radiation Monitors, SQN 1, 8/20/96
- Calculation: B87 901101 005, Calibration Factors for the Main Steam Line Radiation Monitors, 8/22/96
- Primary Calibration Report for Model RD-56B Detector Moving Filter Particulate Detector Document Number 0360-8915, 9/21/92
- Sorrento Electronics Calibration Report for Model RD-56 Moving Filter Particulate Detector, E-115-789 (Rev.3), September 1980
- General Atomic Calibration Report on Model RD-33 Offline Gamma Detector for Liquid Effluents, E-199-352(Rev.2), December 1980
- Sorrento Electronics Calibration Report on Model RD-53 Offline Gamma Detector for Liquid Effluents with 1-1/2 in.-Diam X 1-in. Thick NaI (TI) Crystal, E-115-904 Rev. A, September 1997
- Sorrento Electronics Calibration Report for Model RD-52 Offline Beta Detector, E-115-647(Rev.6), June 1986
- Sorrento Electronics Supplement to Calibration Report RD-52 Offline Beta Detector for High Temperature RD-52HT Offline Beta Detector, E-115-647 Supplement 1 (Rev. 2) February 1993
- Sorrento Electronics Calibration Report RD-72 Wide Range Gas Monitor High and Mid-Range Detectors, E-255-961, Rev. 4, June 1986
- Database Printouts, SCBA Regulators (Kit No., Regulator Serial No., Alarm Serial No., Flow Test Date, Next Flow Test Due Date, Overhaul Date, Next Overhaul Due date, Reg Type, Comments), dated 4/9/02
- Database Printout, SCBA Cylinder Expiration Dates (ID No., Manufacture Date, Expiration Date), dated 11/8/01
- Database Printout, SCBA Cylinders (Serial number, Manufacturers date, Last Hydro, Hydro due date, comments), dated 4/9/02
- Copies of MSA BMR Certified C.A.R.E. Technicians Training Certificates for two individuals
- Lesson Plan HPT063.002, Self Contained Breathing Apparatus (SCBA) Training, 1/19/01
- Laboratory Services Calibration Procedures (LSCP)-0027, Rev. 7, Calibration Procedure for the Ludlum 177/177-1
- LSCP-0049, Calibration Procedure for Bicorn Model RSO-5, RSO-50, and RSO-500 Survey Meters, Rev. 7
- LSCP-0090, Calibration Procedure for Xetex Telescan Model 330A, Rev. 1
- LSCP-0078, Calibration Procedure for the MG DMC-90, 100, and 2000-Computer, Rev. 9 Assisted
- LSCP-1000, As Found Calibration Check, Rev. 7
- Calibration records for the following portable radiation monitoring instrumentation:

Ludlum 177 frisker, No. 522469, calibrated 5/16/02; Bicron RSO-5 ion chamber, No. 561243, calibrated 6/18/02; Xetex Telescan 330A extendible GM probe, No. 841911, calibrated 7/8/02; and MG DCM-2000 electronic dosimeter, No. 170605, calibrated 6/26/02

- Accuracy evaluations were conducted for the following instruments: Bicron Survey-50 frisker No. 838757, Bicron RSO-5 ion chamber No. 534138, Xetex Telescan 330A extendible GM probe, No. 841911, and MG DCM-2000 electronic dosimeter, No. 166927

Problem Evaluation Reports

- PER 01-006354-000, Lapel Air sampler Malfunctioned.
- PER 01-006713-000, Shepherd Irradiator S/N 8107 Failed Weekly Interlock Test.
- PER 01-007174-000, 1 Short Battery Life on Electronic Dosimeters.
- PER 01-010789-000, Electronic Dosimeter Unresponsive and Locked Up Reading Zero
- PER 01-011462-000, Five Out of 14 Pocket External Alarms for Electronic Dosimetry Received Back From M.P. Instruments Would Not Pass pre operational Check
- PER 02-005597-000, Area Radiation Monitors in Unit 2 Pipe Chase Found Unplugged.

Audits and Self-Assessments

- Self Assessment No. CRP-ERMI-01-004, Environmental Radiological Monitoring and Instrumentation, 8/20-9/17/2001
- Self Assessment Report, SQN-RP-01-002, Air Sampling, 01/22/2001-02/09/2001
- Self Assessment Report, RP-00-003, Radiological Control Survey Instrumentation and Equipment, August 1, 2000

2PS1 Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems

- Annual Radioactive Effluent Release Report - January through December 2001
- Offsite Dose Calculation Manual, Rev. 46
- Sequoyah Nuclear Plant Safety Analysis Report, Section 9 (Radioactive Waste Control System)
- 1-SI-ICC-090-106.0 Channel Calibration of Containment Building Lower Compartment Air Monitor, Rev. 8
- SI-401 Steam Generator Blowdown Continuous Release
- O-SI-CEM-077-410.4, Waste Gas Decay Tank Release, Rev. 11
- O-SI-CEM-030-415.0, Gaseous Effluent Requirements, Rev. 16
- O-SI-CEM-040-421.0, Turbine Building Sump Discharge Radioactivity Determination and TBS or ERCW Inoperable Radiation Monitors, Rev. 9
- O-SI-CEM-030-410.1, Containment (Lower Compartment) Vent to Auxiliary Building Exhaust, Rev. 12
- O-SI-CEM-030-407.2, Radioactive Gaseous Effluent Particulate and Iodine Dose Rates From Shield and Auxiliary Building Exhausts (Weekly/Special) and Condenser Vacuum Exhausts (Special), Rev. 0
- 1-SI-ICC-090-112.0, Channel Calibration of Containment Building Upper Compartment Air Monitor, Rev. 4

- 1-SI-ICC-090-271.0, Calibration of Upper Inside Containment Post Accident HI Range Area Monitor, Rev. 6
- Liquid Waste Effluent Batch Release May 27-30, 2002
- Containment (Lower Compartment) Vent to Auxiliary Building Exhaust March 5-12, 2002

Problem Evaluation Reports

- 02-005597-000 Two Radcon Area Radiation Monitors located in the 690 U2 Pipe Chase found unplugged dated May 19, 2002
- 02-009753-000 2-Rm-90-106 10 minute trend not clearing dated August 21, 2002

Audits and Self-Assessments

- Self-Assessment RP-00-003, Radiological Control Survey Instrument & Equipments May 1-12, 2000
- Self-Assessment RP-01-002, Air Sampling, January 22 to February 2001
- Audit Report No. SSA0102, Plant Support Functional Area Audit, July 27, 2001

System Prints

- CCD NO: 1,2-47W830-1 Mechanical Flow Diagram Waste Disposal System dated February 16, 1989
- CCD NO: 1,2-47W830-2 Mechanical Flow Diagram Waste Disposal System dated July 6, 1988
- CCD NO: 1,2-47W830-3 Mechanical Flow Diagram Waste Disposal System dated July 6, 1989
- CCD NO: 1,2-47W830-4 Mechanical Flow Diagram Waste Disposal System dated July 6, 1989
- CCD NO: 1,2-47W830-6 Mechanical Flow Diagram Waste Disposal System dated December 8, 1988

2PS3 Radiological Environmental Monitoring Program

- Sequoyah Nuclear Plant - Updated Final Safety Analysis Report Chapter 2
- Sequoyah Nuclear Plant - Offsite Dose Calculation Manual
- Sequoyah Nuclear Plant - Annual Radiological Environmental Operating Report -2001
- Radiological Control Instruction, RCI-1, Radiological Control Program, Section 7.3, Rev. 62
- Radiological Control Instruction, RCI-3 Attachment 3, Area TLD Monitoring Program, 9/11/01
- Calibration Data Sheet, Radiological Environmental Monitoring Air Sampler Gas Meter, LM-2, 10/9/01
- Calibration Data Sheet, Radiological Environmental Monitoring Air Sampler Gas Meter, PM-9, 10/9/01
- QC-04, Rev. 8 Gamma Efficiency Calibration of Germanium Detectors
- QC-01, Rev. 5, Germanium Spectroscopy System Energy Calibration and Count Reproducibility Check

Problem Evaluation Reports

- PER 01-011422-000, Drum containing approximately 25 gallons of waste oil found to contain minimally detectable levels of Co-60
- PER 02-004225-000, Minor contamination of employees shoes detected by PM-7 portal monitor
- PER 02-008589-000, A hot tool room flashlight (painted with magenta paint) was found in clean tool room
- PER 01-006155-000, A CAUTION RADIOACTIVE MATERIAL tag was found on a hot water heater in a trailer at Bull Run Steam Plant

Audits and Self-Assessments

- Self Assessment No. CRP-ERMI-01-004, Environmental Radiological Monitoring and Instrumentation

4OA1 Performance Indicator Verification

- NEI 99-02, Regulatory Assessment Performance Indicator Guide, Rev. 2
- Sequoyah PI database
- Monthly operating reports and LERs associated with reactor trips and unplanned power reductions

4OA3 Event Follow-up

- LER 50-327/2002-02, Unit 2 Automatic Reactor Trip Resulting from a Failure of a Breaker Causing an Undervoltage Condition on Two Reactor Coolant Pumps and Failure to Perform a Technical Specification Required Action.
- PER 02-008460-000, Unit 2 Reactor Trip and Loss of Start Bus 2B, and related attachments.

4OA7 Licensee Identified Violations

- LER 50-327/2002-02, Unit 2 Automatic Reactor Trip Resulting from a Failure of a Breaker Causing an Undervoltage Condition on Two Reactor Coolant Pumps and Failure to Perform a Technical Specification Required Action.
- PER 02-008460-000, Unit 2 Reactor Trip and Loss of Start Bus 2B, and related attachments.