



UNITED STATES
 NUCLEAR REGULATORY COMMISSION
 REGION II
 101 MARIETTA STREET, N.W.
 ATLANTA, GEORGIA 30323

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Report Nos.: 50-259/93-24, 50-260/93-24, and 50-296/93-24

Licensee: Tennessee Valley Authority
 6N 38A Lookout Place
 1101 Market Street
 Chattanooga, TN 37402-2801

Docket Nos.: 50-259, 50-260,
 and 50-296

License Nos.: DPR-33, DPR-52,
 and DPR-68

Facility Name: Browns Ferry 1, 2, and 3

Inspection Conducted: June 7-11, 1993

Inspector: Elizabeth S. Pharr
 E. B. Pharr

7/8/93
 Date Signed

Approved by: William H. Rankin
 W. H. Rankin, Chief
 Facilities Radiation Protection Section
 Emergency Preparedness and Radiological Protection Branch
 Division of Radiation Safety and Safeguards

7/8/93
 Date Signed

SUMMARY

Scope:

This routine, announced inspection was conducted in the area of occupational radiation safety and included an examination of: organization and staffing, audits and appraisals, training, external exposure control, internal exposure control, control of radioactive materials and contamination, surveys and monitoring, and maintaining occupational exposures ALARA. In addition, licensee response to a previously identified inspection finding was reviewed.

Results:

In the area inspected, no violations or deviations were identified. Overall, the inspector determined that the radiation protection program continued to adequately protect the health and safety of occupational radiation workers. Recent organizational changes have taken place, with staffing levels remaining relatively constant. A recent corporate review of the training program for Radiation Control technicians identified improvement items, which the inspector noted implementation of should prove beneficial to the program's effectiveness. External and internal exposures were maintained within regulatory and the licensee's administrative limits. The ALARA program continued to be effective in implementing dose reduction initiatives. This contributed to the licensee essentially meeting an aggressive outage exposure



goal. A previous NRC-identified violation, 50-259, 260, and 296/93-03-01, concerning inadequate labeling of radioactive material containers, was closed based on the inspector's review of the licensee's current program for control of radioactive material.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *S. Armstrong, Chemistry
- R. Coleman, Radiological Protection Supervisor
- *J. Corey, Manager, Radiological Controls
- B. Fike, Technical Training Instructor
- *D. Kehoe, Manager, Quality Control and Support
- *G. Knight, Corporate Radwaste Program Manager
- *M. Mitchell, Health Physicist, Radiation Control
- G. Moody, Manager, Technical Training
- *J. Ownby, Engineering Support Manager, Site Engineering
- *M. Rajertant, Manager, Technical Support
- *P. Salas, Manager, Site Licensing
- *J. Scalice, Plant Manager
- A. Sorrell, Manager, Radiation-Chemistry
- F. Spivey, ALARA Supervisor
- *P. Wagner, Manager, Maintenance
- L. Washington, Radiological Health Supervisor
- J. Wallace, Specialist, Compliance Licensing
- *R. Wells, Manager, Compliance Licensing

Other licensee employees contacted during the inspection included technicians, supervisors, and administrative personnel.

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- *T. Liu, Intern
- *J. Mundy, Resident Inspector
- *C. Patterson, Senior Resident Inspector
- *G. Schnebli, Resident Inspector

*Attended June 11, 1993 exit meeting

2. Organization and Staffing (83750)

The inspector reviewed and discussed with licensee representatives changes made to the radiological control (RadCon) organization since the last inspection of this area conducted February 8-12, 1993, and documented in Inspection Report (IR) 50-259, 260, 296/93-03. The inspector noted that since the previous inspection, a RadChem Manager had been appointed to supervise a combined organization consisting of the RadCon, Chemistry, and Environmental/Radioactive Waste Control groups. The inspector noted that, in response to the organizational changes, the Chemistry discipline was separated from the Operations group to enable the Operations Manager to concentrate on plant operations. Additionally, the Radioactive Waste Control function had been separated from the RadCon group to report to the Environmental Manager since the two disciplines shared many of the same regulations



and could thus optimize the use of workers. The inspector noted that for the RadCon discipline, the organization and staffing had remained relatively stable, in that the group continued to be staffed by approximately 110 technicians and supervisors. The inspector noted that the organizational changes did not adversely affect the program in that the RadCon Manager, who fulfilled Final Safety Analysis Report (FSAR) qualifications as the Radiation Protection Manager, had remained constant.

The inspector informed licensee representatives that the RadCon organization and staffing levels continued to be appropriate and appeared to be functioning adequately to support ongoing activities. Additionally, the recent organizational changes within the Rad-Chem function did not appear to adversely affect the organization's ability to protect the health and safety of plant workers.

No violations or deviations were identified.

3. Audits and Appraisals (83750)

Technical Specification (TS) 6.5.1.6 requires that audits of plant activities be performed under the cognizance of the Plant Operations Review Committee (PORC) encompassing the conformance of plant operations to provisions contained within the TSs and applicable license conditions at least once per 12 months; and the Process Control Program (PCP) and implementing procedures at least once per 24 months.

The inspector reviewed Nuclear Quality Assurance audits of the RadCon program performed since the previous inspection conducted February 8-12, 1993, and documented in IR 50-259, 260, 296/93-03. The inspector reviewed the most recent Radiological Controls and Radioactive Material Management Audit, SSA93306, conducted at both the Sequoyah Nuclear Plant (SQN) and Browns Ferry Nuclear Plant (BFN) during the period from February 22, to April 14, 1993. The inspector noted that the assessment appeared to be well planned and documented. The assessment report was thorough with both strengths and improvement items being identified. Additionally, the inspector reviewed frequent observations of program effectiveness. These monthly assessments of Radiological Controls were also performed by the Nuclear Quality Assurance group. Those particular monthly assessments reviewed by the inspector included NQA-BF-93-017, NQA-BF-93-033, NQA-BF-93-046, NQA-BF-93-066, conducted during January, February, March, and April, 1993, respectively. The inspector noted that these assessments included plant walkdowns, work performance observations, procedural reviews, and housekeeping inspections. Identified weaknesses were brought to RadCon management's attention and were promptly corrected.

In addition, the inspector reviewed and discussed with licensee representatives Radiological Awareness Reports (RARs) documented during the period from October 1, 1992 to May 31, 1993. The inspector was informed that the RAR program was the licensee's method for identifying and correcting deficiencies and weaknesses related to the implementation



of the radiation protection program. For those selected RARs reviewed, the inspector noted the RARs appropriately documented minor procedural and Radiation Work Permit (RWP) compliance deficiencies, poor work practices, and ALARA concerns. The inspector noted that for more significant findings the licensee initiated Incident Investigation Reports or Problem Evaluation Reports to investigate and to determine appropriate actions for identified incidents. The inspector noted that the licensee took prompt and appropriate corrective actions for RAR findings. The inspector also noted that the licensee was trending RARs on a quarterly basis. This function tracked and identified negative trends related to apparent root causes, corrective actions taken, and the individual or work group which was accruing an excessive number of RARs, and thus identified any further actions needed to prevent recurrence. The inspector reviewed the two quarterly trendings for the RARs reviewed and noted that no adverse trends were identified.

The inspector informed licensee representatives that their programs for assessing implementation of various aspects of the RadCon program appeared to be effective in identifying items for improvement, concerns, and appropriate corrective actions.

No violations or deviations were identified.

4. Training and Qualifications (83750)

10 CFR 19.12 requires the licensee to instruct all individuals working in or frequenting any portions of the restricted areas in the health protection aspects associated with exposure to radioactive material or radiation, in precautions or procedures to minimize exposure, and in the purpose and function of protection devices employed, applicable provisions of Commission regulations, individuals' responsibilities, and the availability of radiation exposure data.

The inspector reviewed the licensee's program for providing radiation protection training to licensee employees. The inspector noted that initial GET consisted of approximately 16 training hours, while GET retraining was approximately six hours in duration. The inspector noted that both initial GET and the annual retraining required successful completion of a practical factors demonstration. The inspector was informed that the licensee had recently implemented a bypass examination in lieu of the six hour annual retraining course. The inspector noted that failure of the bypass exam resulted in the worker having to be requalified in initial GET. The inspector was also informed that the GET bypass did not include completion of practical factors. The inspector discussed this issue with licensee representatives and was informed that the licensee had performed an evaluation and determined that practical factors was not necessary for individuals to complete GET retraining. The inspector was also informed that the licensee was constantly monitoring worker practices in the field, and would continue to do so, to determine whether poor radiological work habits were increasing and would warrant the need for inclusion of practical factors in the GET bypass program.



The inspector reviewed the lesson plans for initial GET and the annual refresher training and noted that the training material appropriately included an introduction to revised 10 CFR Part 20 terminology, definitions, and regulatory limits. As well, plant security, emergency preparedness, industrial safety, recent industry events, use of electronic dosimeters (EDs), and use of the Radiation Exposure System (REXS) for RWP entry/exit were included in the training. The inspector informed licensee representatives that GET appeared to be thorough and well prepared and appropriate for informing plant workers as required by 10 CFR 19.12.

The inspector reviewed quarterly continuing training presented to the RadCon technicians. The inspector noted that typically two to three days of continuing training were offered each quarter. The inspector noted that the training material included review of industry events and exposure concerns, various plant systems, emergency response, and an overview of 10 CFR Part 20 revisions and how these revisions would apply to plant radiation protection activities. The inspector also noted that the training was scheduled to address procedural changes resulting from the Part 20 revisions.

The inspector also discussed with licensee representatives their methods for receiving and incorporating feedback and plant needs into the training programs. The inspector was informed that GET revisions usually resulted from Incident Investigation Reports of plant incidents, NRC findings, and Radcon Curriculum Review Committee (CRC) meetings. The inspector noted that the CRC met at least quarterly to specifically review radiation protection training and sometimes resulting in changes to GET. The CRC also tracked actions recommended by the committee to improve and enhance the training. Additionally, the inspector reviewed an audit report of the RadCon training program as performed by a corporate review team. The inspector noted that the audit was thorough in scope and was performed by well-qualified and knowledgeable auditors. The inspector reviewed CRC meeting minutes during the period from January to June 1993 and noted that program improvement items from the corporate audit were being tracked for completion and implementation. The inspector informed licensee representatives that implementation of these improvement items should be beneficial in enhancing the overall effectiveness of the RadCon training program.

The inspector informed licensee representatives that their training program for both general employees and licensee RadCon technicians appeared to be comprehensive and no concerns were noted with the training material.

No violations or deviations were identified.

5. External Exposure Control (83750)

10 CFR 20.101 requires that no licensee shall possess, use or transfer licensed material in such a manner as to cause any individual in a restricted area to receive in any period of one calendar quarter a total

occupational dose in excess of 1.25 rems to the whole body, head and trunk, active blood forming organs, lens of eyes, or gonads; 18.75 rems to the hands, forearms, feet and ankles; and 7.5 rems to the skin of the whole body.

10 CFR 20.101(b)(3) requires the licensee to determine an individual's accumulated occupational dose to the whole body on an NRC Form 4 or equivalent record prior to permitting the individual to exceed the limits of 20.101(a).

10 CFR 20.202 requires each licensee to supply appropriate personnel monitoring equipment to specific individuals and require the use of such equipment.

The inspector reviewed and discussed the licensee's dosimetry program with licensee personnel. The inspector was informed that the licensee utilized the Panasonic UD-802 thermoluminescent dosimetry (TLD) system. The TLD was composed of four chips, two lithium borate elements and two calcium sulfate elements. The inspector was informed that a TLD analysis algorithm, based on energy levels detected, corrected the measured values to report deep and shallow dose. Algorithms were also used to determine neutron exposure. The TLDs were processed onsite by the dosimetry group, and the inspector noted that the licensee was NVLAP accredited, as a satellite unit of TVA, in all eight dosimetry categories.

The inspector noted that the licensee was utilizing the REXS to track exposure for all workers entering the RCA. The licensee used the REXS to track workers' Radiation Work Permit (RWP) entries, and to keep a real-time update of cumulative dose based on ED, for High Radiation Area (HRA) entries, or Self-Reading Dosimeter (SRD) readings. The inspector noted that the cumulative real-time dose as tracked by REXS complemented the official TLD dose records.

The inspector also reviewed the 1993, to date, exposure records for selected individuals. The inspector noted that the maximum quarterly and year to date exposures were 751 millirem (mrem) and 1526 mrem, respectively. During discussions with licensee representatives, the inspector was informed that both the licensee's quarterly and yearly administrative whole body exposure limit was 1000 mrem. Once a radiation worker exceeded 700 mrem during a quarter or for the year, the dosimetry group notified the individual and requested that a dose extension be requested if the individual would likely exceed the 1000 mrem administrative limit. If the worker's exposure reached 950 mrem before the individual requested a dose extension, then the worker's dosimetry would be pulled, which would restrict any further work in the Radiologically Controlled Area (RCA). The inspector noted that the licensee had granted approximately 100 exposure extensions since January 1, 1993. The inspector discussed with licensee representatives that this number was fairly high as compared to previous years. However, the licensee stated that in 1993 their administrative limit had decreased to 1000 mrem and they had also completed a Unit 2

outage. The inspector reviewed exposure records for selected individuals with dose extensions and noted that the need for an extension was justified and verified that a completed Form-4 was on file with the individual having the necessary remaining lifetime exposure to exceed the quarterly regulatory limit. The inspector noted that most dose extensions were to 1500 mrem, but none exceeded 2000 mrem.

The inspector concluded that for those selected records reviewed, the licensee monitored external exposures adequately and all were within 10 CFR Part 20 limits. Additionally, during facility tours the inspector noted plant workers properly wearing dosimetry and properly using the REXS to track their RWP entries and accumulated dose readings.

No violations or deviations were identified.

6. Internal Exposure Control (83750)

10 CFR 20.103(a)(3) requires, in part, that the licensee, as appropriate, use measurements of radioactivity in the body, measurements of radioactivity excreted from the body, or any combination of such measurements as may be necessary for timely detection and assessment of individual intakes of radioactivity by exposed individuals.

10 CFR 20.103(c)(2) permits the licensee to maintain and implement a respiratory protection program that includes, at a minimum: air sampling to identify the hazard; surveys and bioassays to evaluate the actual exposures; written procedures to select, fit, and maintain respirators; written procedures regarding supervision and training of personnel and issuance of records; and determination by a physician prior to the use of respirators, that the individual user is physically able to use respiratory protective equipment.

The inspector reviewed records of whole body counts performed by the licensee since January 1, 1993. The inspector noted that 44 positive whole body counts had been identified during this period. In accordance with Radiation Control Instruction (RCI) 8.1, Internal Dosimetry Program Implementation, Revision (Rev.) 10, dated April 29, 1993, the licensee regarded any analysis with a result greater than a Minimal Detectable Activity (MDA) to be positive. The inspector also noted that positive results identified by the licensee's fast-scan counter were routinely verified and quantified by the chair counter. Additionally, in accordance with RCI 8.1, the licensee used ICRP-2 and ICRP-10 methodologies to calculate Maximum Permissible Concentration-hours (MPC-hrs) and critical organ dose equivalents when count results exceeded five and ten percent of the Maximum Permissible Organ Burden (MPOB), respectively. For those records reviewed, the inspector noted that the maximum result was 10.93 percent of the MPOB, with a calculated internal dose of 7.5 MPC-hrs and 54 mrem. The inspector also verified that the licensee appropriately updated the individuals' exposure records to reflect the calculated doses.



During discussions with licensee representatives, the inspector was informed that several of the positive whole body counts resulted from the licensee's reduction in respirator usage during the current year. The licensee also noted an increase in facial contaminations since reducing respirator usage, which resulted in an increase in whole body counts performed to determine if the contamination had resulted in an intake of radioactive material. The inspector was also informed that during selected tasks implementation of engineering controls, in lieu of respirators, were not as successful as expected. Although the licensee experienced an increase in personnel contaminations and radioactive material uptakes, the inspector noted that the respiratory protection program was effectively implemented and assessments of internal exposures were appropriately performed and documented.

The inspector reviewed the implementation and adequacy of the respiratory protection program. The inspector reviewed the technical procedure for the program and determined the procedural guidance to be appropriate. For selected individual records reviewed, the inspector noted that training, fit-tests, and medical qualifications were current as required by procedure.

No violations or deviations were identified.

7. Operational and Administrative Controls (83750)

a. Radiation Work Permits

The inspector reviewed selected RWPs for appropriateness of the radiation protection requirements based on work scope, location, and conditions. The inspector reviewed routine RWPs associated with current routine work activities, and special RWPs related to inspection and repair of a drywell leak during a Unit 2 forced outage, radiography activities in support of the Unit 3 Reactor Water Cleanup (RWCU) System pipe replacement, and radiography support for the Unit 3 Recirculation System pipe replacement. The inspector noted and reviewed initial survey results for initiation of the special RWPs. The inspector also noted that the RWPs were being appropriately initiated and terminated based on job scope. For the RWPs reviewed, the inspector noted that radiological concerns were appropriately addressed in that appropriate protective clothing, respiratory protection, and dosimetry were required. During facility tours the inspector observed the adherence of plant workers to RWP requirements and discussed the RWP requirements with plant workers at the job site. The inspector found the workers to be knowledgeable of RWP requirements and their responsibilities to comply with those requirements.



The inspector found the licensee's program for RWP implementation to adequately address radiological protection concerns, and to provide for proper control measures.

No violations or deviations were identified.

b. Termination Reports

10 CFR 20.408(b) and 20.409(b) require, in part, that when an individual terminates employment with the licensee, or an individual assigned to work in a licensee's facility but not employed by the licensee completes the work assignment, the licensee furnish a report of the individual's exposure to radiation and radioactive material incurred during the period of employment or work assignment to the Commission and to the individual involved, or his designee.

The inspector discussed with licensee representatives, computer software changes and procedural revisions made in response to instances documented in RARs and in IR 50-259, 260, 296/92-13 in which NRC and terminated plant employees did not receive termination letters within the time period required by 10 CFR 20.408 and 20.409. The inspector reviewed records for selected employees which had terminated work activities at the licensee's facility since January 1, 1993 and verified that all had been issued a termination letter within the applicable time period. The inspector noted that these changes appeared to be effective in improving communications between responsible groups and thus effective in providing for timely issuance of termination letters.

No violations or deviations were identified.

c. Notices to Workers

10 CFR 19.11(a) and (b) require, in part, that the licensee post current copies of 10 CFR Part 19, Part 20, the license, license conditions, documents incorporated into the license, license amendments and operating procedures, or that a licensee post a notice describing these documents and where they can be examined.

10 CFR 19.11(d) requires that a licensee post Form NRC-3, Notice to Employees. Sufficient copies of the required forms are to be posted to permit licensee workers to observe them on the way to or from licensee activity locations.

During tours of the licensee's facility the inspector verified that Form NRC-3 and notices referencing the appropriate 10 CFR Part 19 and Part 20 and licensee documents were posted in accordance with the applicable regulation. Specifically, the inspector noted that the documents were posted at the east and

west entrances to the licensee's protected area. The inspector determined that the forms were posted in adequate locations to be viewed by all personnel on their way to licensed activities.

No violations or deviations were identified.

8. Surveys, Monitoring, and Control of Radioactive Material and Contamination (83750)

10 CFR 20.201(b) requires each licensee to make or cause to be made such surveys necessary for the licensee to comply with the regulations and are reasonable under the circumstances to evaluate the extent of radioactive hazards that may be present.

a. Control of Radioactive Material

10 CFR 20.203 specifies the posting, labeling and control requirements for radiation areas, high radiation areas, airborne radioactivity areas and radioactive material. Additional requirements for control of high radiation areas are contained in the plant's Technical Specifications.

10 CFR 20.203(f) requires, in part, each container of licensed material containing greater than Appendix C quantities to bear a durable, clearly visible label identifying the radioactive contents and providing sufficient information to permit individuals handling or using the containers, or working in the vicinity thereof, to take precautions to avoid or minimize exposures.

During a previous inspection, IR 50-259, 260, 296/93-03, the inspector determined that the licensee was inadequately labeling containers in a Radioactive Materials Storage Area. The inspector noted that in response to the violation for inadequately labeling radioactive containers the licensee implemented a requirement into Radiological Control Instruction, RCI-1.1, Field Operations Implementing Procedure, Rev. 16, dated April 15, 1993, to perform an item-by-item verification of proper labeling of containers, that are exposed to weather in storage areas established exterior to permanent plant structures, every other month. The procedure retained the requirement that all radioactive material storage areas be inspected quarterly to determine if they were still needed, the integrity of the posted areas, and to ensure compliance with licensee procedures.

During plant tours, the inspector observed appropriate housekeeping and contamination control practices. The inspector noted that the licensee's posting and control of radiation areas, high radiation areas, airborne radioactivity areas, contamination areas, radioactive material areas, and the labeling of radioactive material was adequate. Additionally, the inspector reviewed survey records and verified that the licensee was performing



quarterly surveys of radioactive materials areas and bi-monthly checks of labels on radioactive material containers stored in outside storage areas. The inspector informed licensee representatives that their current program for ensuring the integrity of radioactive labels on outside storage containers appeared to be effective.

The inspector also observed and discussed with responsible licensee personnel release of items from the RCA. During discussions with personnel responsible for releasing items, the inspector noted that the individuals were knowledgeable of procedural requirements that restricted the release of tools, equipment, personal hand-carried items, or personnel which exceeded contamination release limits of 100 counts per minute (cpm). The inspector was informed that the individuals contacted RadCon, who initiated a Personnel Contamination Report (PCR) or decontamination efforts, whenever personnel or articles for release exceeded contamination levels of 100 cpm. The inspector observed appropriate licensee personnel performing surveys for release, and noted that items surveyed and released did not exceed procedural limits. As well, all items surveyed for release were documented in Release Logs.

Additionally, the inspector reviewed PCRs documented by the licensee during fiscal year 1993 (FY 1993) and noted that approximately 90 PCRs were initiated during the period. The inspector noted that the licensee had experienced an increase in PCRs during the forced outages during 1992 and during the scheduled refueling outage during 1993, due to the licensee's reduction in respirator usage during the period. The inspector further noted, however, that airborne and contamination surveys were appropriately performed by RadCon technicians to ascertain radiological working conditions, radiological controls were appropriately established in RWPs, and the licensee appropriately reviewed and followed up on documented PCRS. The inspector also noted that although PCRs had increased during outages the licensee had maintained PCRs below their established goals of 0.9 PCRs per 10,000 RWP hours for FY 1993 and 5 PCRs per 10,000 outage RWP hours. The inspector selectively reviewed the PCRs and no problems were identified.

No violations or deviations were identified.

b. Radiation Detection and Survey Instrumentation

During facility tours, the inspector noted that survey instrumentation and air sampling equipment in use within the RCA were operable and displayed current calibration stickers. The inspector further noted that in accordance with RCI 11.1, Calibration of Portable Air Sampling Equipment, Rev. 10, the licensee calibrated each low volume air sampler to a flow rate of 60 liters per minute (lpm). The inspector reviewed air sampling



data, as recorded on Airborne Radiation Sheets, and noted that for selected routine low volume air samples, flow rates of 60 lpm were appropriately used in calculations of airborne radioactivity. For high volume air sample data, the inspector noted that flow rates were based upon rotometer readings applied to a graph incorporating calibration correction factors. The inspector reviewed high volume air sample data and also noted appropriate use of flow rates in airborne radioactivity calculations.

No violations or deviations were identified.

9. Program for Maintaining Exposures As Low As Reasonably Achievable (ALARA) (83750)

10 CFR 20.1(c) states that persons engaged in activities under licenses issued by the NRC should make every reasonable effort to maintain radiation exposures as low as reasonably achievable. The recommended elements of an ALARA program are contained in Regulatory Guide 8.8, Information Relevant to Ensuring that Occupational Radiation Exposure at Nuclear Power Stations will be ALARA, and Regulatory Guide 8.10, Operating Philosophy for Maintaining Occupational Radiation Exposures ALARA.

The inspector reviewed the licensee's current exposure goal as compared to actual cumulative exposure. The inspector noted that the licensee's goal for FY 1993 was 954 person-rem. At the time of the onsite inspection the licensee had accrued approximately 790 person-rem, based on TLD (October 1, 1992 to March 31, 1993) and SRPD (April 1, 1993 to June 10, 1993) data, with approximately three months remaining in the fiscal year. The inspector determined that this goal was appropriate for the workscope, including a scheduled 119 day refueling outage. The inspector also noted that for this refueling outage the licensee set an aggressive goal of 455 person-rem and actually accumulated approximately 495 person-rem during the 127 day outage.

The inspector discussed with licensee representatives several dose reduction initiatives during the fiscal year which were effective in maintaining cumulative exposures ALARA. Those initiatives included chemical decontamination of the Unit 2 RWCU, Recirculation, and Residual Heat Removal (RHR) systems, which significantly reduced contact and general area dose rates, and use of EDs, video cameras, surrogate tour systems, and disk cameras for remote monitoring and reduction of walkdown doses. The licensee estimated that chemical decontamination efforts in Unit 2 resulted in a maximum average decontamination factor of 70 and 6, for contact and general area dose rates, respectively. Based on these dose rate reductions the licensee estimated savings of approximately 260 person-rem during the Unit 2 outage. Additionally, the inspector was informed that successful coordination between craft groups, RadCon planners, and an engineering group, dedicated to implementation and installation of temporary shielding during the

outage, was effective in maintaining outage exposures ALARA. The inspector noted that these initiatives appeared to be beneficial in maintaining fiscal year and outage exposures essentially as projected.

The inspector was also informed of ALARA efforts during the recent outage for designated planners from the work group responsible for specific outage tasks to provide for ALARA planning prior to and throughout the job evolution. The inspector informed licensee representatives that successful implementation of this effort should prove to be a strength to the ALARA program as each work group takes ownership for specifically maintaining their exposures ALARA.

No violations or deviations were identified.

10. Review of Previously Identified Inspection Findings (92702)

(Closed) VIO 50-259, 260, 269/93-03-01: Multiple examples of failure to properly label radioactive material as required by 10 CFR 20.203(f).

During a previous inspection, IR 50-259, 260, 296/93-03, the inspector determined that the licensee was inadequately labeling containers in a Radioactive Materials Storage Area. During the onsite inspection, the inspector reviewed a program developed by the licensee to correct the identified inadequacy. This review is documented in Paragraph 8.a.

The inspector informed the licensee that this item would be considered closed based on the identified improvements and continued actions within this program area, as documented in Paragraph 8.a.

11. Exit Meeting

At the conclusion of the inspection on June 11, 1993, an exit meeting was held with those licensee representatives indicated in Paragraph 1 of this report. The inspector summarized the scope and findings of the inspection and indicated that no apparent violations or deviations were identified. The licensee did not indicate any of the information provided to the inspector during the inspection as proprietary in nature and no dissenting comments were received from the licensee.

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