UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W., SUITE 2900
ATLANTA, GEORGIA 30323-0199

DEC 15 1993

Report Nos.: 50-280/93-25 and 50-281/93-25

Licensee: Virginia Electric and Power Company
Glen Allen, VA 23060

Docket Nos.: 50-280, 50-281 License Nos.: DPR-32, DPR-37

Inspection Conducted: November 15-19, 1993

Inspectors: _____ 12/16/93
B. A. Parker Date Signed

_____ 12/16/93
E. B. Pharr Date Signed

Approved by: _____ 12/16/93
W. H. Rankin, Chief Date Signed
Facilities Radiation Protection Section
Radiological Protection and Emergency Preparedness Branch
Division of Radiation Safety and Safeguards

SUMMARY

Scope:

This routine, announced inspection was conducted in the area of occupational radiation exposure. Specific elements of the program examined included: organization and management control; audits and appraisals; training and qualification; external exposure control; internal exposure control; surveys, monitoring, and control of radioactive material; and maintaining occupational radiation exposure as low as reasonably achievable (ALARA).

Results:

One NRC-identified non-cited violation (NCV) was identified regarding the licensee's failure to supply a complete dose history to an individual upon request in accordance with 10 CFR 19.13(c). Overall, the licensee's radiation protection program was well supported by both corporate and station management and was functioning effectively to protect the health and safety of plant personnel and the general public. Control of contamination, housekeeping, and the ALARA program were considered program strengths.

REPORT DETAILS

1. Persons Contacted

D. Anderson, Shift Supervisor, Health Physics
W. Benthall, Supervisor, Licensing
*R. Bilyeu, Engineer, Licensing
*M. Biron, Supervisor, Radiological Engineering
W. Cook, Staff Engineer
B. Dorsey, Supervisor, Exposure Control
*D. Erickson, Superintendent, Radiation Protection
*D. Hart, Supervisor, Quality Assurance
*R. Hayes, Supervisor, Quality Assurance
*M. Kansler, Station Manager
*J. McCarthy, Superintendent, Operations
D. Miller, Supervisor, Health Physics Operations
L. Morris, Superintendent, Radwaste
*M. Olin, Supervisor, H.P. Technical Services
*J. Price, Assistant Station Manager, Licensing
R. Saunders, Assistant Vice President, Nuclear Operations
T. Steed, ALARA Coordinator
E. Smith, Jr., Manager, Quality Assurance
*F. Thomasson, Supervisor, Corporate Health Physics

Other licensee employees contacted during this inspection included: craftsmen, engineers, operators, contract personnel, and administrative personnel.

Nuclear Regulatory Commission

*M. Branch, Senior Resident Inspector

*Attended Exit Interview conducted on November 19, 1993.

2. Organization and Management Controls (83750)

The inspector reviewed the staffing of the radiation protection (RP) organization as related to lines of authority and noted that changes had been made since the previous inspection conducted March 29 - April 2, 1993, and documented in NRC Inspection Report (IR) 93-09. According to licensee representatives, organizational changes were made mainly for personnel development reasons and to better prepare for proposed staff reduction measures. The inspector verified that the changes did not adversely affect the licensee's ability to maintain control of the RP program and the licensee indicated that the proposed staff reductions would most likely be accomplished within the recommended timeframes through normal attrition. The inspector noted

that at the time of the inspection the licensee maintained an adequate level of staffing; however, the inspector reemphasized to the licensee the need to ensure that safety was not jeopardized if staffing levels drop as anticipated.

No violations or deviations were identified.

3. Audits and Appraisals (83750)

Technical Specification (TS) 6.1.C.2.h.4 requires that audits of facility activities be performed under the cognizance of the Management Safety Review Committee (MSRC) encompassing the performance of activities required by the Operational Quality Assurance Program to meet the criteria of Appendix B, 10 CFR Part 50, at least once per 24 months.

The inspector reviewed Radiological Protection Audit 93-08 conducted by the Quality Assurance (QA) department during the period July 7 - August 5, 1993. The audit encompassed a variety of areas within the RP program and utilized both performance and compliance based auditing techniques. The most significant finding identified by the auditors was apparent inattention to detail due to a number of minor administrative errors. The inspector noted the audit to be comprehensive with substantive findings, recommendations, and comments.

The inspector also reviewed the licensee's most recent QA assessment of RP completed in October 1993. This assessment was performance-based utilizing checklists and a rating system to assess a number of RP areas. The rating system ranged from 1.00 for "fully acceptable" to 4.00 for "unacceptable," and the overall rating from the assessment averaged out to be 1.17. This was up slightly from a similar assessment performed in January 1991 that gave an overall rating of 1.30. Within the most recent assessment, the lowest rated category was Dosimetry Processing and Control at 1.83. No specific subcategories within any of the categories assessed received a rating of greater than 2.5.

Additionally, the inspector reviewed the licensee's internal program for self-identification of weaknesses related to the RP program and the appropriateness of corrective actions taken. Specifically, the inspector reviewed 1993 Deficiency Reports (DRs) related to the RP function and Radiation Problem Reports (RPRs) initiated during 1993. Both systems were utilized by the licensee to document, investigate, and track items of concern. The inspector was informed that the DR system was a plant-wide system for identification of concerns, while the RPRs were utilized mainly by the RP organization to identify applicable concerns. The inspector noted that nine DRs had been identified and assigned to the RP group for investigation and corrective action during the period January 1 - September 30, 1993, while approximately 90 RPRs had been initiated through October 10, 1993. The inspector reviewed selected DRs and RPRs from this period

and noted that the licensee was identifying substantive items of concern and was appropriately following through with corrective actions to prevent recurrence. The inspector also noted that each reporting system received an appropriate level of management oversight for their applicable threshold level. The inspector noted that the threshold for DR and RPR initiation appeared appropriate, in that more safety significant issues were assigned to and tracked for closure through the DR system. The licensee's efforts in these self-identification programs appeared appropriate, with no adverse performance trends being noted.

Overall, the licensee had effective auditing and assessment functions actively reviewing the RP program.

No violations or deviations were identified.

4. Training and Qualification (83750)

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

During the onsite inspection, the inspector reviewed the licensee's program for providing training to both general plant workers and Health Physics (HP) technicians. The inspector was informed that licensee employees received Nuclear Employee Training (NET) prior to beginning work activities, and were required to complete an abbreviated retraining annually. The inspector noted that topics presented in NET included industrial safety, the emergency plan, plant security, workers' rights, basic radiation theory and the biological effects of radiation exposure, Radiation Work Permit (RWP) compliance, and access control, to include the proper use of Digital Alarming Dosimeters (DADs). Additionally, the inspector noted that NET also included a basic introduction to revised 10 CFR Part 20 terminology, exposure limits, and philosophy changes, with emphasis on respirator reduction and reasons for this reduction.

The inspector also discussed with licensee representatives and reviewed the training program for HP technicians. The inspector noted that the initial HP Technician Development Program was prefaced by 17 weeks of general foundational-level training which included topics related to communications, mathematics, classical physics, chemistry, electricity, and nuclear physics. This training program was designed to provide appropriate academic backgrounds for technicians entering the Development Program. After successfully completing the written examinations with at least 80 percent correct for each foundational training topic, the employees were then admitted to the Development

Program. The inspector reviewed the Technician Development Program and noted that it was a three year program, divided into seven six-month steps. Each step included classroom training, independent study, and on-the-job training. The inspector also noted that each step contained task performance evaluations, which qualified the technician to perform independent tasks. The inspector reviewed the seven step curriculums and noted that training topics and performance evaluations included items related to basic HP theory, radiological surveys, airborne radioactivity control, instrumentation, respiratory protection, routine and special HP coverage, count room operations, environmental monitoring, plant systems, dosimetry, radioactive material and contamination control, RWPs, and ALARA program. The inspector noted that in addition to completing performance evaluations the technicians were also required to successfully complete written examinations following each step.

The inspector also reviewed continuing training presented to the HP technician staff since January 1, 1993. The inspector noted that the licensee's annual continuing training program consisted of a minimum of 96 hours. The inspector was informed that the licensee had scheduled approximately 104 hours of continuing training for the technicians during 1993. The inspector also noted that each training session required completion of a comprehensive written examination with at least 70 percent correct, as well as satisfactory demonstration of applicable tasks as presented during the training week. The inspector reviewed training outlines and noted that the material included review of industry events, lessons learned from prior outages, job coverage in high risk exposure areas, emergency response, implementation of the revised computer system, and revised 10 CFR Part 20, specifically to address procedural changes resulting from the revisions. The inspector was informed that HP and training personnel met annually to determine training needs for the upcoming training year and to review specified tasks to determine the need for retraining and requalification to the task, due to task and/or program revisions or deficient field performance.

The inspector reviewed training records for selected HP technicians and noted successful completion of NET, initial technician training, to include both foundational-level training and the Development Program training, continuing training, and appropriate qualification to applicable tasks. Overall, the inspector found the radiation protection training provided to both general employees and HP technicians to be thorough and well prepared and appropriate for informing plant workers as required by 10 CFR 19.12.

No violations or deviations were identified.

5. External Exposure Control (83750)

a. Program Implementation

10 CFR 20.101 requires that no licensee 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 rem to the whole body, head and trunk, active blood forming organs, lens of the eyes, or gonads; 18.75 rem to the hands, forearms, feet and ankles; and 7.5 rem to the skin of the whole body.

10 CFR 20.202(c) requires, in part, that dosimeters be processed and evaluated by a dosimetry processor holding current accreditation from the National Voluntary Laboratory Accreditation Program (NVLAP) for the types of radiation for which the individual is monitored.

During the onsite inspection, the inspector discussed the dosimetry program with cognizant licensee representatives. The inspector noted that the licensee continued to use the Panasonic UD-802 thermoluminescent dosimetry (TLD) system. Each dosimeter utilized four TLD chips, two lithium borate and two calcium sulfate phosphors. Based on differing filter media, correction factors, and response ratios, the licensee's algorithm determined the type of radiation detected by the TLD and subsequently determined the dose equivalent at specified tissue depths. The inspector was informed that the licensee's algorithm calculated dose equivalents at seven milligrams per square centimeter (mg/cm^2) for skin dose, 300 mg/cm^2 for lens of the eye dose, and 1000 mg/cm^2 for deep dose. The inspector was also informed that the minimum TLD sensitivity for each element response was 10 millirem (mrem). The inspector also noted that the licensee was NVLAP accredited in all eight dosimetry categories for use of the TLD system.

The inspector also noted that the licensee used DADs primarily for daily dose tracking, with approximately 1400 active DADs being kept onsite for routine exposure monitoring. The inspector noted that the number of problems associated with DADs, which were captured by the RPR system, was very low considering the thousands of entries made into the Radiologically Controlled Area (RCA). The inspector was informed that the licensee typically expected the DAD dose to be one to five percent higher than the TLD dose. The inspector noted that since 1991 the licensee had steadily improved their DAD to TLD ratio so that the year-to-date total for 1993 should fall within the one to five percent range with the DAD dose slightly exceeding the TLD record dose.

During discussions with licensee representatives, the inspector was informed that the Panasonic TLD was capable of and accredited for measuring beta and neutron exposure. However, the inspector noted that beta doses due to personnel contaminations and noble gas exposure were calculated using other methodologies. The inspector reviewed personnel contamination reports for the period January 1 - October 30, 1993, and noted a hot particle event which required calculation of skin dose. The inspector noted that the resultant exposure was significantly less than the 75 microcurie-hour (uCi-hr) enforcement threshold, and final exposure assigned to the worker was 2.836 rem to the skin. The inspector also reviewed 1993 exposure records for selected individuals which had been associated with entries into the containment building at power. The inspector verified that the licensee was implementing appropriate radiological surveillances and methodologies so as to calculate and record individual skin doses due to noble gas exposures and whole body doses due to neutron exposures. During discussions with licensee representatives, the inspector was informed that during recent years the radioactivity levels due to noble gases had not met the threshold to require determination of applicable skin doses. The inspector was also informed that since April 1, 1993, the licensee had made the determination to assign neutron doses based on individual TLD results rather than calculations, unless there was (1) a large variance between the two, and (2) there was reason to believe the calculated dose was more representative or was much more conservative. The inspector noted that the licensee had recently purchased neutron bubble dosimetry to verify their TLD results and had an almost one-to-one ratio between the bubble dosimeter and the TLD results, with the calculated neutron exposures exceeding these results by approximately 65 percent. The inspector did not note any concerns regarding the licensee's technical methods for performing the associated exposure assessments, and personnel exposures were appropriately updated to the individual exposure history files. The inspector verified that for those records reviewed all external doses were within regulatory limits.

The inspector reviewed 1993 exposure records for selected individuals and noted that the maximum quarterly cumulative doses were 195 mrem to the whole body, due to gamma and neutron exposure, and 2.959 rem to the skin of the whole body, in part due to the 2.836 rem hot particle dose to the individual's knee. The inspector also reviewed third quarter DAD results and noted that approximately 95 percent of the DAD doses were less than 100 mrem, with only two doses exceeding 500 mrem of which 666 mrem was the maximum. During tours of the RCA, the inspector noted that the DADs were calibrated semiannually, as required, and that personnel were wearing DADs and TLDs properly.

During plant tours, the inspector noted that high radiation areas (HRAs) were locked as required and other entry controls were in place as necessary. In addition, HRA keys were adequately controlled by RP and no major problems were noted.

No violations or deviations were identified

b. Licensee-Required Reports

10 CFR 20.408(b) and 10 CFR 20.409(b) require that the licensee make a report to the Commission, and notify the individual involved of the radiation exposure of each individual who has terminated employment. The report is to be furnished within 30 days after the individual's exposure is determined by the licensee or 90 days after the date of termination of employment or work assignment, whichever is earlier.

10 CFR 19.13(c) requires that, at the request of a worker formally engaged in licensed activities controlled by the licensee, the licensee furnish to the worker a report of the worker's exposure to radiation or radioactive material for each year the worker was required to be monitored. This report is to be furnished within 30 days from the time the request is made, or within 30 days after the individual's exposure is determined by the licensee, whichever is later.

The inspector reviewed exposure records for selected personnel which had terminated work activities at the licensee's facility since January 1, 1993, to include vendor personnel employed during the Spring outage. The inspector verified that all those selected had been issued a termination letter within the applicable time period. The inspector noted that the licensee's program was effective in providing for timely issuance of termination letters.

The inspector also reviewed licensee records to verify that, as upon request, individuals were receiving accurate and timely reports of their radiation exposure while involved in licensed activities at the licensee's facility. The inspector noted one case in which an individual had made such a request and the licensee had failed to provide the individual his radiation exposure in its entirety. During review of the incident, the inspector noted that individual exposures monitored by the licensee during the period 1986 to present were recorded in personnel files, while records dating prior to 1986 were stored on microfiche. For the particular individual of concern, the inspector noted that the licensee failed to provide complete and accurate exposure records, since the licensee's report to the individual did not include his exposure history for the period from April 1979 to September 1981. The inspector

informed licensee representatives that the failure to provide a complete and accurate exposure history to a former worker upon request was a violation of the requirements specified in 10 CFR 19.13(c).

During discussions with licensee representatives, the inspector noted that what appeared to have happened in this particular instance was that the individual composing the former worker's exposure history failed to survey microfiched records, on which the individual's records prior to 1986 were stored. During interviews with dosimetry personnel responsible for composing such exposure histories, the inspector noted that all were aware of the need to review both filed and microfiched exposure records so as to provide individuals with complete and accurate exposure histories. The inspector reviewed other workers' requests for exposure histories, and noted that complete exposure histories were provided as required. The inspector noted that the licensee's failure to provide accurate exposure reports in accordance with 10 CFR 19.13(c), as discussed above, appeared to be an isolated incident due to administrative oversight. The licensee committed to review the incident and the procedure for providing reports to former workers to determine if there was a more generic concern and to determine if their procedure could be enhanced, or formalized written guidance be provided so as to prevent future administrative oversights. Based on the limited safety significance and the licensee's commitment to further review the issue and determine actions to prevent recurrence, the inspector informed licensee representatives that this NRC-identified violation would be considered non-cited since the criteria specified in Section VII.B of the Enforcement Policy were met (NCV 50-280, 281/93-25-01).

One NCV for the failure to provide a complete and accurate exposure history to a former worker upon request was identified.

c. Resin Transfer Observations

During the inspection, the inspector observed as the licensee transferred spent resins from Unit 1 resin beds in the Auxiliary Building to the Decontamination Building for dewatering and processing for disposal. The inspector noted that RP personnel maintained effective control during the actual transfer evolution by restricting access to the basement level of the Auxiliary Building where transient high radiation levels could occur as the resins flowed through the pipework. The inspector also noted the licensee's good use of

communications and video monitoring during the transfers (see Paragraph 8). The inspector noted no problems with the actual transfer, although the evolution was temporarily stopped by the Control Room due to an unanticipated drop in the Volume Control Tank (VCT) level during the resin transfer.

Following the successful transfer of resin, continuous air monitors (CAMs) located in the Auxiliary and Decontamination Buildings began alarming, causing some temporary evacuation of the affected areas until the problem was assessed by RP. The licensee responded quickly to the alarms and found that copious amounts of gas containing the short-lived particulates cesium-138 and rubidium-88 (average half-life approximately 17 minutes) were released into the Auxiliary Building sometime during and/or immediately following the resin transfer. This indicated that primary coolant had somehow become involved during the slurrying of the resin and was venting inside the plant at some point.

After investigation, it was determined that the VCT level drop noted above occurred when a valve located on a bypass line between the VCT and the resin slurry line (Valve 1-CH-21) failed to isolate the VCT and "leaked by." The bypass line that leaked had a higher pressure than the pressure created when Valves 1-CH-23 and 1-CH-57 on the resin transfer system were opened to start the appropriate slurry; therefore, instead of slurry water being pulled from the Primary Grade (PG) tank (demineralized water) as desired, primary coolant was pulled from the VCT. In the Decontamination Building, the slurried resin immediately began dewatering and the water was pumped back to the Auxiliary Building to the Low-Level Waste Tanks for holding. These tanks vent directly to the floor drains. Consequently, gases from the primary coolant slurry were emitted into the Auxiliary Building through the floor drains and dispersed throughout the building from the basement level and upward. CAMs in the Auxiliary Building began alarming and the Control Room received a vent/vent alarm. As a result of the vent/vent alarm, the Control Room placed the Decontamination Building on filtered exhaust, which in turn created a negative pressure within that building. Subsequently, CAM alarms began in the Decontamination Building as some of the gases were apparently pulled from the Auxiliary Building through the pipe chase and into the Decontamination Building.

No personnel contaminations resulted from the gas event; however, one individual that had been working in the Decontamination Building during the resin transfer and subsequent gas event was unable to clear the personnel contamination monitor upon exiting. The individual was detained until the short-lived radioactive gases trapped mainly

in his clothes and hair decayed away, and was released after approximately one hour. No problems were noted with the licensee's methods or procedures, as well as the licensee's evaluation of the event.

No violations or deviations were identified.

6. Internal Exposure Control (83750)

10 CFR 20.103(a)(1) states that no licensee shall possess, use, or transfer licensed material in such a manner as to permit any individual in a restricted area to inhale a quantity of radioactive material in any period of one calendar quarter greater than the quantity which would result from inhalation for 40 hours per week for 13 weeks at uniform concentrations of radioactive material in air specified in 10 CFR Part 20, Appendix B, Table 1, Column 1.

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.

The inspector reviewed the licensee's program for assigning and tracking Maximum Permissible Concentration-hour (MPC-hr) exposures based on airborne radioactivity measurements. The inspector was informed that internal exposure assignments were calculated primarily based on general area air sampling or on the more recent use of lapel samplers. During discussions with licensee representatives and review of records from the period January 1 - October 15, 1993, the inspector noted that the threshold for calculating exposures, 25 percent of the MPC, was rarely exceeded. The inspector also noted that during the resin transfer incident, as discussed in Paragraph 5.c, the maximum air sample result was 47 percent of the applicable MPC. The inspector verified that the exposure of the individual discussed in Paragraph 5.c who was unable to immediately clear the contamination monitor was based on the air sample result and was properly calculated, documented, and tracked. The individual's internal exposure from the event was very low, evaluated to be less than one MPC-hour.

The inspector also reviewed selected licensee procedures which provided guidance as to when to perform special bioassays, for bioassay evaluation, and for subsequent calculation of internal exposures. The inspector noted that special bioassays were required to be performed for facial contamination events exceeding 1000 disintegrations per minute (dpm) or detection of positive nasal swabs. As of November 17, 1993, the licensee had experienced 99 personnel contamination events (PCEs) in 1993. The inspector reviewed selected PCE reports and noted that approximately one-fifth of the PCEs were facial contaminations. Most of these were attributable to worker error and did not indicate any adverse trends. For the cases

reviewed, special whole body analyses were conducted in accordance with procedural requirements, and all calculated uptakes were less than five percent of a maximum permissible organ burden (MPOB). Since the whole body count results did not exceed the licensee's threshold of five percent of the MPOB, equating to 25 percent of the MPC, calculations of an MPC-hr assignment were not required.

Based on the above, the inspector concluded that the licensee was appropriately monitoring and documenting internal exposures, with none reviewed exceeding the 40 MPC-hr control limit requiring an additional evaluation.

No violations or deviations were identified.

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

The licensee continued to effectively control contamination at the source. The licensee's goal for 1993 was to maintain 98.5 percent (135,000 square feet (ft^2)) of the RCA as clean and free of contamination above 1,000 disintegrations per minute per 100 square centimeters (1,000 dpm/100 cm^2). As of November 17, 1993, only 1.04 percent (1,425 ft^2) of the RCA was contaminated and the licensee expected to end the year with even less contaminated area.

The inspector noted during tours of the plant that very few catch containments were needed as a means of controlling contamination. As of November 17, 1993, only 19 containments were in use throughout the plant. Control of contamination and housekeeping in general were noted to be excellent by the inspector and conveyed to the licensee as strengths to the overall program.

No violations or deviations were identified.

8. Program to Maintain Occupational As Low As Reasonably Achievable (ALARA) (83750)

10 CFR 20.1(c) states that persons engaged in activities under licenses issued by 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 Exposures ALARA.

The licensee's total collective dose goal for 1993 was originally 595 person-rem; however, due to the overall success of the Unit 2 outage early in the year, the licensee revised the goal to 395 person-rem. Currently, the licensee's collective dose for the year was an actual 381 person-rem compared to a projected 382 person-rem for that

point in the schedule. Licensee representatives indicated that the goal might be slightly exceeded due to some forced outage steam generator work being performed in Unit 2 near the end of the year.

The licensee's 1994 goal was set at 642 person-rem. This accounted for two outages during the year, both of which will include 10-year in-service inspection (ISI) work.

The inspector reviewed a number of dose reduction initiatives employed by the licensee. These included a video camera and radiation detector setup at the resin slurry line viewport to allow remote visual and detector readout verification that slurries were properly flowing and flushing. The licensee continued to actively pursue methods for eliminating source term including hotspot flushing and early boration/shutdown chemistry. As of November 17, 1993, the licensee was tracking 48 hotspots, only 10 of which actually met the licensee's hotspot definition of 1000 milliRoentgen per hour (mR/hr) or greater on contact and fives times general area. Hotspots were tracked in a monthly report and flushed whenever possible. The resin transfer discussed in Paragraph 5.c was performed in order to provide fresh beds so better "delithiation" can occur, in an effort to improve the results of early boration and shutdown chemistry.

The licensee continued to identify effective uses of shielding, including water shields, temporary lead blankets and bricks, and permanent shielding on operating systems. Distance was also used to effectively reduce exposure. For example, a scaffold was built around a 20 R/hr hotspot (contact, 2 R/hr at one foot) in the Unit 2 residual heat removal (RHR) system to keep workers out of high radiation fields during forced outage steam generator work. During normal outages, the piping and hotspot were shielded, but in this case it was more ALARA to build a barrier to restrict access to it.

Respirator reduction continued to effectively reduce overall worker dose. In 1992, the licensee utilized 10,520 respirators, whereas, as of October 31, 1993, only 2,958 had been used in 1993. No significant increase in internal exposures was noted and engineering controls were utilized to complement the reduction in respirator usage.

The inspector noted that the ALARA program continued to be a strength to the licensee's overall program. Strong management support and heavy worker involvement contributed to the continued successes in the area of ALARA.

No violations or deviations were identified.

9. Exit Meeting

The inspector met with licensee representatives denoted in Paragraph 1 at the conclusion of the inspection on November 19, 1993. The inspector summarized the scope of the inspection findings including

the NCV listed below. The licensee did not identify any documents or processes as being proprietary, and no dissenting comments were received from the licensee.

Item Number	Status	Description and Reference
50-280, 281/93-25-01	Open	NCV - Failure to provide a complete and accurate exposure history to a former worker upon request (Paragraph 5.b).