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

Report No.: 70-1201/94-03

Licensee: B&W Fuel Company
Commercial Nuclear Fuel Plant
Lynchburg, VA 24505

Docket No.: 70-1201 (CNFP) License No.: SNM-1168

Facility Name: Commercial Nuclear Fuel Plant

Inspection Conducted: June 6-10, 1994

Inspector: Elizabeth B. Pharr 7/6/94
E. B. Pharr, Radiation Specialist Date Signed

Approved by: for C Bassett 7/8/94
E. J. McAlpine, Chief Date Signed
Radiation Safety Projects Section
Nuclear Materials Safety and Safeguards Branch
Division of Radiation Safety and Safeguards

SUMMARY

Scope:

This routine, unannounced inspection was conducted in the area of occupational radiation safety and included an examination of organization and staffing, audits, radiation protection training, procedures, external exposure control, internal exposure control, control of radioactive materials, surveys and monitoring, and the program for maintaining exposures As Low As Reasonably Achievable (ALARA).

Results:

The radiation protection (RP) program continued to function adequately to protect the health of occupational radiation workers and to promote the safe use of radioactive materials. The organization and staffing within the safety and licensing group continued to be appropriate, eventhough one temporary employee was lost during a recent reduction in force. Safety Review Board meetings and audits were conducted as required by procedures and the License Application. With one exception the licensee's program for providing radiation protection training appeared to be conducted in accordance with procedural and License Application requirements, and was appropriate for the level of work performed by licensee employees. All external and internal exposures, to date during the year, were within revised 10 CFR Part 20 limits.

Radiation and contamination surveys were performed appropriately. Additionally, ALARA awareness was incorporated into training, Radiation Work Permits (RWPs), operating procedures, and reviewed during program audits. One NRC-identified violation was identified for failure to require personnel to complete a practical factors demonstration during annual retraining for Radiation Worker Training and Controlled Area Access Training, as required by licensee procedures.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

C. Carr, Plant Manager
*W. Foot, Manager, Fuel Manufacturing
*T. Ford, Manager, Facilities
D. Gordon, Senior Health Physicist
*K. Knapp, Manager, Safety and Licensing
*G. Lindsey, Health Physicist
*L. Morrell, Compliance Officer
D. Sullivan, Supervisor, SERF-3

Other licensee employees contacted included engineers, technicians, and office personnel.

*Attended June 10, 1994 exit meeting

2. Organization and Staffing (83822)

The inspector reviewed the licensee's Health-Safety organization and staffing levels and noted that no significant changes had taken place since the previous inspection conducted August 30, - September 2, 1993 and documented in Inspection Report (IR) 70-1201/93-03. The inspector noted that since the previous inspection the section had lost a temporary employee who performed administrative and clerk functions. Otherwise, the Health-Safety Section continued to be comprised of a Senior Health Physicist, a Health Physicist, and a Compliance Officer, which reported directly to the Safety and Licensing Manager. Also, five Health-Safety Monitors continued to report directly to the Health Physicist.

During the onsite inspection the inspector did not identify any concerns with the organization or responsibilities of the Health-Safety staff. Based on discussions with licensee representatives and observation of activities, the inspector noted that at the time of the inspection HP staffing levels appeared adequate to support ongoing activities.

No violations or deviations were identified.

3. Audits and Appraisals (83822)

Section 2.3 of the License Application delineates Safety Review Board members and requires the Board to meet at least quarterly. During quarterly meetings the Board is required to review new or revised facilities, effectiveness of established controls, maintenance of ALARA criteria, as well as safety-related audit and inspection findings.

Section 2.7 of the License Application requires that an internal Health-Safety inspection program be maintained at the facility to ensure that plant activities are conducted safely and in accordance with license specifications. This internal program includes monthly safety

inspections conducted by Health-Safety personnel, informal daily inspections conducted by Health-Safety personnel, and independent audits. The independent auditors conduct semiannual nuclear safety, fire safety, and health physics inspections, consisting of physical inspections and records reviews for the industrial, nuclear, and radiological safety elements of plant activities.

The inspector reviewed minutes from Safety Review Board meetings conducted since October 1, 1993. Specifically, the inspector reviewed minutes from the December 9, 1993 and March 16, 1994 meetings. The inspector also noted that a meeting had been conducted during May 1994 but the minutes had not been formally documented at the time of the inspection. The inspector verified that, as required by the License Application, the Board was meeting at least quarterly and was reviewing facility projects, new and revised facilities, procedural changes, audit findings, quarterly and annual ALARA tracking and trendings, occupational safety experience, and action items, which were then assigned to a responsible manager for completion. Review of the meeting minutes also indicated that the Board had reviewed the status of efforts to prepare the facility and workers for new 10 CFR Part 20 implementation and subsequent compliance with and effects on plant operations due to the revised requirements.

The inspector reviewed independent audits of the facility's Health Physics (HP) activities which had been performed by personnel who did not have any direct responsibilities at the facility for the functions being reviewed. An audit during June 1993 was performed of the licensee's Employee Safety Training program by a health physicist from the Babcock and Wilcox Naval Nuclear Fuel Plant, with two audits being performed during December 1993 of the Radiological Contingency Plan and of general HP activities at the facility. The inspector noted that the independent auditors appeared qualified to perform the audits based on their background and experience. Although significant issues were not identified, identified deficiencies were reviewed by an appropriate level of plant management and appropriate corrective actions were identified and implemented by the Health-Safety group. The inspector was informed that another independent audit of the HP program was planned for the near future.

The inspector also reviewed audits which were performed weekly by Health-Safety personnel. The audits were performed to review plant safety status. The inspector noted that the audits routinely included reviews of housekeeping, storage of radioactive materials, posting, labeling, and work practices. Results of the audits were provided to the Safety and Licensing Manager with identified deficiencies requiring a response, regarding causal factors and corrective actions, by the responsible area manager. The inspector also discussed with Health-Safety Monitors their informal audits which were performed daily. These audits routinely included plant tours and monitoring of specific job evolutions to review general HP practices, with many minor deficiencies corrected on the spot. Any procedural or Radiation Work Permit (RWP) noncompliances which were identified were documented in a Radiological

Deficiency Report (RDR). Of the 17 RDRs identified at the time of the onsite inspection, six documented instances of personnel not complying with the appropriate RWP or procedure for activities in a Radiologically Controlled Area (RCA). The majority, nine RDRs, identified instances in which personnel exposures exceeded the procedural action limit of four Derived Air Concentration hours (DAC-hrs) in one day. RDRs were assigned to the responsible area manager or supervisor for response to indicate the source of the deficiency and the actions initiated to prevent recurrence. The inspector noted that the managers' responses to the RDRs were timely, required within five days of receipt, with corrective actions being appropriately reviewed for adequacy by the Senior Health Physicist.

The inspector noted that audits and meetings were conducted as required by the License Application and internal procedures. The inspector also noted that these auditing and self-assessment programs, including the RDRs, appeared to be beneficial in maintaining the overall effectiveness of the Health-Safety program.

No violations or deviations were identified.

4. Training (83822, 88010)

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 the Commission Regulations, individuals responsibilities, and the availability of radiation exposure data.

License Condition No. 9, of SNM-1168, requires that licensed material be used in accordance with statements, representations, and conditions contained in Part I of the application dated June 22, 1990 and supplements thereto.

AS-1101, Employee Safety Training, Revision (Rev.) 16, dated March 29, 1994, defines the criteria for each type of training provided to facility employees and visitors depending upon their work activities or access needs while onsite. Specifically, the procedure requires General Employee Training (GET) be provided to all persons granted unescorted access to the facility in order to familiarize the person with general operations and any safety hazards. Additionally, Radiation Worker Training (RWT) is presented to employees that work with radioactive materials or in RCAs, and Controlled Area Access Training (CAAT) is provided to all employees requiring unescorted access to RCAs. Successful completion of the training is demonstrated by employees completing a written exam with at least 75 percent correct and a demonstration of practical factors. Annual requalification is required for applicable employees.

During review of the licensee's training program the inspector reviewed course outlines for GET, RWT, and CAAT. Based on review of the outlines the inspector noted that the training material appropriately provided pertinent information as required by license specifications and internal procedures, to include radiological controls and safety, criticality safety, and emergency procedures. During review of personnel training records and discussions with licensee representatives, the inspector noted that GET was provided initially to all unescorted personnel at the licensee's facility, with an annual refresher required for those individuals which were not permanent employees at the facility. The inspector verified that RWT was provided to all personnel working with radioactive materials and to any employees working within RCAs, and that CAAT was also provided to all workers working in RCAs. The inspector reviewed the examinations for RWT and CAAT and found the questions indepth and appropriate to ensure an employee's knowledge of key training principles. The inspector reviewed training records for selected personnel working in the Pellet Loading Room (PLR), Service Equipment Refurbishment Facilities (SERF-1 and SERF-3), and Final Assembly, and noted that the workers had completed the examination with at least 75 percent correct. Based on review of training records, the inspector also determined that the licensee was appropriately requiring employees to participate in a practical factors demonstration during initial RWT and CAAT.

In accordance with AS-1101, applicable workers were required to annually repeat RWT and CAAT. The procedure also allowed personnel to bypass the training course provided that the examination was completed with at least 75 percent correct and a demonstration of practical factors was completed. The inspector noted that although personnel were annually completing the bypass examination, a practical factors demonstration was not performed. During discussions with licensee representatives the inspector was informed that since the Health-Safety group had introduced the bypass option for RWT and CAAT, it appeared that a demonstration of practical factors had been overlooked since routinely there were no formal classroom situations and personnel assembled simply to complete the bypass examination. The inspector informed licensee representatives that the failure to require a practical demonstration of self-frisking, use of anti-contamination clothing and dosimetry for employees during the annual RWT bypass training and the failure to require participation in a practical demonstration on use of the betamax wholebody frisking system, proper removal of anti-contamination clothing, and use of the RWP for employees during annual RWT and CAAT bypass training, in accordance with licensee procedure AS-1101, was a violation of License Condition 9 (VIO: 70-1201/94-03-01).

One NRC-identified violation for failure to provide practical factors demonstrations during annual RWT and CAAT bypass training in accordance with licensee procedures was identified.

5. External Exposure Control (83822)

10 CFR 20.1201(a) requires each licensee to control the occupational dose to individual adults, except for planned special exposures under 10 CFR 20.1206, to the following dose limits:

a. An annual limit, which is more limiting of: (i) the total effective dose equivalent (TEDE) being equal to 5 rems: or (ii) the sum of the deep-dose equivalent and the committed dose equivalent to any organ or tissue other than the lens of the eye being equal to 50 rems.

b. The annual limits to the lens of the eye, to the skin, and to the extremities, which are: (i) an eye dose equivalent of 15 rems; and (ii) a shallow-dose equivalent of 50 rems to the skin or to any extremity.

10 CFR 20.1208 (a) requires that the dose to the embryo/fetus not exceed 500 millirem during the entire pregnancy due to occupational exposure of a declared pregnant woman.

10 CFR 20.1502(a) requires each licensee to monitor occupational exposure to radiation and to supply and require the use of individual monitoring devices for adults likely to receive an annual dose in excess of 10 percent of the limits in 20.1201(a).

The inspector reviewed selected licensee procedures which established responsibilities and methods used to monitor and control external occupational radiation exposure. The inspector verified that the procedures had been appropriately updated, or were scheduled to be updated in the near future, to include revised 10 CFR Part 20 terminology and dose limits.

During discussions with licensee representatives the inspector was informed that the licensee provided beta/gamma monitoring thermoluminescent dosimeters (TLDs) to all workers who routinely handled or worked with radioactive materials. The vendor-supplied TLDs were routinely read on a quarterly frequency except for the SERF employees, whose TLDs were read monthly. Declared Pregnant Women (DPWs) were also provided TLDs which were read monthly during the extent of their declared pregnancy. Based on prior years survey and monitoring results, during 1993 and to date during 1994 the licensee had required that all personnel routinely assigned to work activities in the PLR wear extremity dosimetry during work evolutions in the PLR. The inspector also noted that workers prone to receiving extremity exposure during special operations were appropriately provided extremity dosimetry. The inspector further noted that personnel dosimetry requirements were appropriately specified on RWPs for each ongoing job evolution at the facility involving radioactive materials. Additionally, the inspector noted that during 1994 the licensee had one DPW, who terminated her employment with the licensee shortly after declaration. The inspector noted that the licensee had discussed with the employee the risks to the

embryo/fetus due to radiation exposure and her rights as a DPW. The inspector verified that the licensee had also provided monthly TLDs to the DPW to ensure they maintained the exposure to the embryo/fetus to 500 millirem (mrem) during the pregnancy.

The inspector reviewed 1993 external exposure data and noted that during the year 204 persons were monitored for whole body exposure using vendor-supplied TLDs. For those persons monitored 115 persons had no measurable exposure. 52 workers accumulated measurable exposures of less than 50 mrem. 26 workers had exposures ranging from 51 to 200 mrem, while 11 persons accumulated 201 to 500 mrem during the year. Based on review of exposure records, the inspector noted the maximum annual whole body exposure for 1993 to be 317 mrem. As anticipated, the maximum whole body exposures during the year were assigned to workers in the fuel assembly area. Maximum exposures to the skin and extremities were assigned to personnel working in the PLR. Review of selected records indicated that the maximum skin and extremity exposures for 1993 were 2212 mrem and 8901 mrem, respectively.

The inspector also reviewed 1994 exposure data for selected individuals and noted that the maximum deep dose equivalent, eye dose equivalent, skin dose equivalent, and extremity dose during the first quarter was 120 mrem, 273 mrem, 814 mrem, and 2242 mrem, respectively. The inspector further noted that these exposures were assigned to an individual working in the PLR. The inspector verified that the vendor was reporting the exposures at the appropriate tissue depth.

The inspector noted that the licensee appropriately monitored personnel external exposures and that all of the assigned exposures reviewed were within regulatory limits.

No violations or deviations were identified.

6. Internal Exposure Control (83822)

10 CFR 20.1204 states that for purposes of assessing dose used to determine compliance with occupational dose equivalent limits, the licensee, when required to monitor internal exposure, shall take suitable and timely measurements of concentrations of radioactive materials in air, quantities of radionuclides in the body, quantities of radionuclides excreted from the body, or combinations of these measurements. When specific information on the behavior of the material in an individual is known that information may be used to calculate the Committed Effective Dose Equivalent (CEDE).

10 CFR 20.1502(b) requires each licensee to monitor the occupational intake of radioactive material and assess the committed effective dose equivalent to adults likely to receive, in one year, an intake in excess of 10 percent of the applicable Annual Limit on Intake (ALI) in Table 1, Columns 1 and 2 of Appendix B to 10 CFR 20.1001-20.2401; and minors and declared pregnant women likely to receive, in one year, a committed effective dose equivalent in excess of 0.05 rem.

The inspector reviewed selected licensee procedures which established responsibilities and methods used to control, monitor, and evaluate internal occupational radiation exposure. The inspector verified that the procedures had been appropriately updated, or were scheduled for revision in the near future, to include revised 10 CFR Part 20 terminology and dose limits. The inspector also reviewed the licensee's programs for evaluating and controlling internal exposures to include air sampling, lung counting, and urinalysis to verify implementation of the revised requirements in accordance with new 10 CFR Part 20.

During the onsite inspection, the inspector noted that the licensee continued to implement an air sampling program comprised of static air samplers and lapel, breathing zone, air samplers, both of which were changed at the end of each working shift. The inspector further noted that the licensee continued to require 100 percent lapel sampling for all work in the RCA. Personnel performing monitoring or supervisory functions, however, were not required to wear lapels. The inspector noted that personnel sampling requirements were appropriately specified on RWPs, in that personnel performing actual work activities were required to wear lapel samplers. Internal exposures were routinely assigned based on lapel sampler results. Internal exposures were also routinely based on uranium and cobalt-60 concentration limits. Licensee procedures, however, provided guidance on performing surveys and followup analysis to determine the limiting isotope in situations when cobalt-60 concentrations were not limiting. Additionally, the licensee continued to require employees who worked routinely with radioactive materials to participate in the bioassay program to confirm internal dose evaluations based on air sample results. Urinalysis and lung counts were performed for those workers exposed to insoluble uranium, and whole body counts were performed for workers working with mixed fission products (MFPs). Action levels were also established to require various actions based on bioassay results in excess of these established limits.

The inspector reviewed internal exposure data for 1993 and noted that the maximum annual internal exposure was approximately 33 Maximum Permissible Concentration hours (MPC-hrs), and was assigned to an individual assigned to activities in the PLR. The inspector noted that this individual, as well as other monitored personnel, did not exceed any regulatory limits for MPC-hours during the year. The inspector further noted that during 1993 and 1994, to date, personnel working in the PLR, in general, were assigned the maximum exposures. During the first quarter of 1994 the maximum assigned exposure was 104.5 Derived Air Concentration hours (DAC-hrs), with the maximum daily assignment being 17.4 DAC-hrs. Based on first quarter air sample results, the inspector noted that the average quarterly exposure for plant personnel exposed to insoluble uranium was 11 DAC-hrs. The inspector also noted that for personnel involved in SERF activities during the first quarter all exposures were less than one DAC-hr. Following review of static air sampler results during the period from January 1, to April 30, 1994, the inspector noted that rarely did a shiftly air sample exceed 30 percent of the DAC, the level at which the licensee posted an airborne area.

Those periods in which the 30 percent DAC action level was exceeded were normally resultant of special work evolutions.

The inspector reviewed third and fourth quarter 1993 and first quarter 1994 bioassay data for selected individuals assigned as Health-Safety Monitors, selected individuals assigned to the PLR and included in the routine uranium bioassay program, and selected workers assigned to SERF areas and included in the routine MFP bioassay program. The inspector verified that the individuals were being included in the appropriate bioassay program, were prescribing to the appropriate counting frequency, and that all bioassay results reviewed by the inspector were less than the licensee's action limits.

Following review of the licensee's program for monitoring and controlling workers' internal exposures, the inspector determined that the licensee monitored internal doses adequately and all were within 10 CFR Part 20 limits. Based on review of area air sample data and individual lapel sampler data, the inspector determined that the licensee was appropriately evaluating workers' exposure to airborne materials, performing MPC-hr calculations during 1993 and DAC-hr calculations during 1994, and assigning appropriate internal exposures based on lapel results.

No violations or deviations were identified.

7. Respiratory Protection Program (83822)

10 CFR 20.1703(a)(3) requires that if the licensee uses respiratory protection equipment to limit intakes pursuant to 10 CFR 20.1702, the licensee will implement and maintain a respiratory protective program that includes: air sampling sufficient to identify the potential hazard, permit proper equipment selection, and estimate exposures; surveys and bioassays to evaluate the actual exposures; written procedures to select, fit, maintain, test, and issue respirators; written procedures regarding supervision and training of personnel, monitoring; recordkeeping; and determination by a physician prior to initial fitting of respirators, and at least every 12 months thereafter, that the individual user is physically able to use respiratory protective equipment.

The inspector reviewed and discussed with licensee representatives the implementation and adequacy of the respiratory protection program. The inspector noted that the licensee continued to require annual respiratory protection training and an annual medical examination to ensure that personnel were qualified to wear respiratory protective devices. Following review of the licensee's training course outlines, the inspector noted that the training material appropriately addressed control of airborne radioactivity, air sampling, types of respiratory protective devices, criteria for qualification, and steps to take in emergency situations. The inspector also noted that since the full-face negative pressure respiratory protective devices received limited use at the facility, personnel were qualitatively fit-tested using a challenge

atmosphere each time they were issued a respirator. For selected individual records reviewed the inspector noted that training, including written examinations, and medical qualifications were current as required by the applicable procedures.

No violations or deviations were identified.

8. Operational and Administrative Radiological Controls (83822)

a. Radiation Work Permits (RWPs)

The inspector reviewed selected RWPs issued in association with various activities in the PLR and SERF areas for appropriateness of the HP requirements based on work scope, location, and conditions. Based on radiological survey data and work category the RWP specified appropriate monitoring devices, including specific dosimetry, lapel samplers, or respiratory protective devices. The inspector also verified that appropriate controls were specified in the RWP to maintain exposures ALARA.

No violations or deviations were identified.

b. Surveys

10 CFR 20.1501(a), in part, states that each licensee shall make or cause to be made, surveys that (1) may be necessary for the licensee to comply with the regulations in this part; and (2) are reasonable under the circumstances to evaluate the extent of radiation levels; concentrations or quantities of radioactive material; and the potential radiological hazards that could be present.

During facility tours the inspector independently verified postings, labelings, and radiation and contamination levels in various areas of the facility, including outside storage areas. The inspector verified survey results against the appropriate licensee records of current radiation and contamination surveys. The inspector also verified that selected surveys were performed at the appropriate frequency and that survey results were below those action limits as specified by the applicable procedures. In addition, the inspector verified that the licensee was performing smear surveys of respirators after usage to determine if the worker needed to perform a nasal smear due to the inside of the respirator being contaminated. The inspector also noted that as required by the applicable procedure the licensee performed contamination surveys, visual inspections of respirators following cleaning, and discarded air purifying cartridges after each respirator use.

No violations or deviations were identified.

c. Sealed Sources

Section 6.1 of the License Application requires that nonexempt sealed sources will be tested for leakage at intervals not exceeding six months. Any results greater than 0.005 microCuries (uCi) or more of removable contamination should be reported.

The inspector reviewed and discussed with licensee personnel 1993 and 1994, to date, semiannual sealed source leak tests. The inspector verified that sealed sources kept onsite were leak tested as prescribed by procedure. The inspector also noted that for those records reviewed all results were recorded appropriately, with no high test results identified.

No violations or deviations were identified.

d. Facility Tours

During facility tours the inspector verified that postings and labelings were appropriate as indicated by the latest area survey maps. The inspector also determined that these postings and labelings were consistent with the licensee's procedures and License Application. Additionally, the inspector verified that survey instrumentation and air sampling equipment in use within the facility was operable, with a current calibration.

During tours of the fuel fabrication and SERF areas the inspector noted personnel appropriately wearing their dosimetry on the front of the body between their neck and belt, and storing their TLDs in designated storage areas when leaving the facility. The inspector also observed personnel appropriately using their lapel samplers. Samplers were appropriately positioned, were functioning properly when in use and charging during break periods, and were properly handled, so as to ensure that a representative sample was obtained. In addition, the inspector also observed proper use and removal of protective clothing, as well as proper personal monitoring upon exiting the RCAs.

No violations or deviations were identified.

e. Wet Weather Stream

During the onsite inspection, the inspector discussed with licensee representatives their recent efforts in characterizing the contamination present and removing maximum levels of residual contamination in their wet weather stream. During discussions with licensee representatives the inspector was informed that the facility's former liquid waste pathway was discharged to this wet weather stream. Due to peculiarities of the terrain, much of the waste was spread over the ground. Initial sampling showed levels of several hundred picocuries per gram (pCi/gm) of activity in the soil. By 1991 the licensee had conducted a characterization

survey of the area and had developed an action plan for cleanup of the contaminated soil from the wet weather stream. Following this characterization survey the licensee attempted to cleanup the most significantly contaminated areas. During recent months the licensee had again sampled the previously determined maximally contaminated areas to more accurately characterize the spreading, or lack of spreading of contamination in the wet weather stream area. The inspector was informed at the time of the onsite inspection that by the end of June, the licensee expected to have completed the cleanup of those sampled areas which exceeded the soil contamination limits for decommissioned sites. The inspector further noted that the licensee implemented guidance from NUREG/CR-5849, "Manual for Conducting Radiological Surveys in Support of License Termination" in determining appropriate survey methods and for determining the area of contaminated soil in the wet weather stream that exceeded the provided limit for activity. Additionally, SECY Paper 81-576, dated October 5, 1981 provided the current guideline value of 30 pCi/gm as the limit for uranium in soil for license termination.

No violations or deviations were identified.

f. Notice to Employees

10 CFR 19.11(a) and (b) require, in part, that the licensee post current copies of 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 may 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 licensed activity locations.

During facility tours the inspector verified that Form NRC-3 and notices referencing the appropriate 10 CFR Parts 19 and 20, and licensee documents were posted in accordance with the applicable regulation. Forms were posted in adequate locations to be viewed by personnel on their way to or from licensed activities.

No violations or deviations were identified.

9. Program for Maintaining Exposures As Low As Reasonably Achievable (ALARA) (83822)

10 CFR 20.1101(b) requires that each licensee use, to the extent practicable, procedures and engineering controls based upon sound radiation protection principles to achieve occupational doses and doses to members of the public that are as low as reasonably achievable (ALARA).

During review of various ongoing operations at the licensee's facility the inspector noted various mechanisms by which the licensee maintained exposures ALARA. RWPs and operating procedures incorporated explicit HP controls so as to maintain exposures ALARA, training provided to facility radiation workers included the ALARA concept, and the licensee's auditing programs frequently reviewed RWPs, facility operations, and facility modifications to ensure that ALARA practices were utilized to reduce facility exposures. Additionally, personnel monitoring results and inplant radiological conditions were included in the quarterly and annual ALARA Report which was reviewed by the SRB to determine any trends and lessons learned so that implementation would be beneficial to reducing exposures at the facility.

Overall, the licensee's annual cumulative personnel exposure had declined during 1993 as compared to 1992. Completion of fuel rod downloading projects during the early part of 1993 was the contributing factor, along with the fact that no production work was completed during the fourth quarter of 1993. To date, during 1994 the licensee's quarterly ALARA reports continued to indicate that personnel exposures were maintained ALARA, with contamination and radiation survey results being maintained below licensee action limits.

No violations or deviations were identified.

10. Exit Meeting

The inspector met with licensee representatives indicated in Paragraph 1 at the conclusion of the inspection on June 10, 1994. The inspector summarized the scope and findings of the inspection, including the violation. The inspector also discussed the likely informational content of the inspection report with regard to documents or processes reviewed by the inspector during the inspection. The licensee did not identify any such documents or processes as proprietary. Dissenting comments were not received from the licensee.

Item Number	Description and Reference
70-1201/94-03-01	VIO - Failure to comply with procedural requirements for providing practical factors demonstrations during annual RWT and CAAT bypass training (Paragraph 4).