



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

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Report No.: 70-1201/89-08

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

Docket No.: 70-1201

License No.: SNM-1168

Facility Name: Commercial Nuclear Fuel Plant

Inspection Conducted: October 16-19, 1989

Inspector: A. Gooden 11-21-89
Date Signed

Approved by: W. Rankin 11-21-89
Date Signed
 W. Rankin, Chief
 Emergency Preparedness Section
 Emergency Preparedness and Radiological
 Protection Branch
 Division of Radiation Safety and Safeguards

SUMMARY

Scope:

This routine, unannounced inspection was conducted in the area of emergency preparedness. Open items from the Operational Safety Assessment Team inspection (February 1987, Inspection Report No. 70-1201/87-02) were reviewed, and several aspects of the emergency preparedness program were reviewed to determine the program's state of readiness for responding to emergencies. This included a review of the fire protection program.

Results:

Within the area inspected, a deviation was identified for failure to establish a formal annual review and approval of the Radiological Contingency Plan (RCP) by August 1, 1987, as committed to in a Commercial Nuclear Fuel Plant letter to the NRC dated June 1, 1987 (Paragraph 8). The inspection disclosed strengths (procurement of a mechanized fire cart for use by the fire brigade, and the documentation of audits and inventories along with the corrective actions taken in response to identified deficiencies) and an area requiring attention (emergency response training). Licensee management was responsive to the NRC findings and indicated that items would be reviewed for taking the appropriate actions. The assessment results appear to indicate that the licensee's emergency preparedness program is maintained in a state of readiness for responding to emergencies.

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REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *R. Alto, Plant Manager
- *E. Coppola, Manager, Quality and Safety
- *D. Ferree, Manager, Fuel Operations
- *J. Ford, Manager, Fuel Manufacturing
- *K. Lester, License and Control Administrator
- G. Lindsey, Health-Safety Foreman
- *B. Pugh, Manager, Production and Materials Control
- *K. Shy, Health Physicist

Other licensee employees contacted during this inspection included security force members, and administrative personnel.

*Attended exit interview

2. Offsite Support Agencies (88050)

A member of the licensee's staff was interviewed regarding the coordination of emergency planning with offsite support groups, B&W Naval Nuclear Fuel Division (NNFD), and B&W NNFD-Research Lab (NNFD-RL). According to Section 8.2 of the RCP, agreements are reviewed every two years and updated if necessary. Agreements were last updated in August 1987. At the time of the inspection, an agreement letter with the Concord Rescue Squad had been executed, and the remaining agreement letters were expected to be executed. The inspector reviewed a memorandum dated August 22, 1989, that outlined the resources and assistance to be provided by each facility (NNFD, CNFP, and NNFD-RL) in the event of an emergency. In accordance with Section 7.2 of the RCP, a memo dated January 31, 1989, documented an annual tour provided on October 26, 1988 for personnel from the Concord Volunteer Fire Department.

No violations or deviations were identified.

3. Emergency Plans, Procedures, Facilities, and Equipment (88050)

As discussed in two previous inspection reports (70-1201/88-04 and 70-1201/88-11), changes to the RCP dated April 11, 1988, were included as Chapter 8 of the license renewal application. At the time of the inspection, the review process remained incomplete. Therefore, the inspector's evaluation of the licensee's program is in accordance with the commitments of the existing RCP. The inspector selectively examined emergency kits, procedures and equipment from the following locations: 1) Emergency Building, 2) Mechanized fire cart, 3) First aid office, 4) Muster area (locker No. 5), and 5) The Guard Office. All radiation

survey instruments were within calibration and a successful battery and source check were obtained. With one exception, the inspector noted that the randomly selected items for inventory were available in quantities as listed on the equipment inventory sheets. The exception involved a low volume air sample which was removed from service for maintenance repairs. All respiratory equipment was available in required quantities, and the bottle indicators registered as full.

Documentation was provided to the inspector covering the period December 1988 thru September 1989 to confirm that the required monthly and quarterly emergency equipment audits were being done in accordance with Procedure No. AS-1130 (CNFP Emergency Equipment Maintenance Procedure). Deficiencies and actions taken in response to deficiencies were well documented by personnel performing the audits. The inspector reviewed maintenance records for the emergency lighting and backup power source for the evacuation alarms. According to documentation covering the period September 1988 thru September 1989, audits were conducted at the frequency specified in the procedure. The required maintenance and system status were properly documented for the backup power source and alarms.

During the equipment and facility walkdown, the inspector noted no impediments to an orderly evacuation. Evacuation routes were clearly identified with colorful evacuation signs and arrows indicating the various exit locations to the muster area (assembly point).

The inspector reviewed documentation that showed the emergency call list was being updated on a periodic basis and distributed to key management at B&W CNFP, in addition to key locations at NNFD and NNFD-RL. The most current update was dated September 28, 1989. Regarding changes to the Emergency Procedure (AS-1106), a revision dated March 31, 1989, was approved on April 5, 1989, and distributions made to copy holders within nine days of the approval date. Distributions were timely and in accordance with the distribution matrix.

No violations or deviations were identified

4. Training (88050)

This area was examined to determine if the licensee was providing training in accordance with the RCP. The inspector reviewed Section 7.2 of the RCP and the Implementing Procedure (AS-1101 Employee Safety Training) for a description of the training program.

Annual training was provided during the Calendar Year 1988 to personnel assigned to the Fire Brigade and Radiation Monitoring Teams in accordance with the RCP. Members of the Fire Brigade Team had attended training during April, May, and August of 1989. The referenced training involved Self Contained Breathing Apparatus (SCBA), Confined Space, and Fire Brigade Management. During October and November 1988, a combined total of 32 hours training was provided the CNFP Fire Brigade involving internal structural fire fighting. During Calendar Year 1988, members of the

Radiation Monitoring Team received Radiation Worker and Emergency Procedure Training. Members of the Radiation Monitoring and Fire Brigade Team were certified for respirator use during Calendar Year 1989 in accordance with Section 7.2 of the RCP. A cognizant member of the licensee's staff disclosed that additional training for Calendar Year 1989 other than drill participation had not been planned at this time. The inspector discussed Section 7.2 of the RCP which detailed the emergency response training for Radiation Monitoring, Fire Brigade personnel, and an annual tour for local fire support personnel. In addition, Health-Safety Procedure AS-1101 (Employee Safety Training) implements Section 7.2 of the RCP by addressing the training program requirements (frequency of training, groups trained, type of training, etc.). However, when questioned by the NRC inspector regarding the formalization of a training program and description of such training for other emergency organization personnel (eg. key management, accident assessment personnel, security, etc.), a member of the licensee's staff indicated such training provisions did not exist. Notwithstanding an NRC approved Plan, the inspector discussed the absence of a formalized training program addressing the entire emergency organization as inconsistent with the guidance and criteria discussed in NUREG-0762 (Standard Format and Content for Radiological Contingency Plans for Fuel Cycle and Material Facilities). The licensee committed to conducting an evaluation of the adequacy of the current training program for the entire emergency organization and upgrade the RCP to better address emergency response training. The inspector informed the licensee that this item would be tracked as an Inspector Followup Item (IFI).

IFI 70-1201/89-08-01: Evaluate the current training program for the entire emergency organization and include upgrades to the RCP (Section 7.2) to better address this training.

Since the last inspection, two individuals were recently hired to the normal organization with responsibility involving the emergency preparedness program. The two positions involved the License and Control Administrator, and the Manager, Quality and Safety. The License and Control Administrator reported for duty during May 1989; and the Manager, Quality and Safety reported for duty the week of the inspection (October 1989). Procedure AS-1101, Employee Safety Training, requires all new employees to complete training as outlined in Exhibit A to procedure. Included in this training are emergency procedures, evacuation routes, emergency organization, evacuation alarms, and emergencies not requiring evacuation. Based on the review of documentation and a discussion with a member of the licensee's staff, the inspector was informed that training was complete for the License and Control Administrator. The Manager, Quality and Safety had been scheduled for training, but documentation for completion of training was not available in that the week of the inspection was the first week of assignment in this position. The reporting chain for emergency preparedness is the Manager, Quality and Safety. The License and Control Administrator has responsibility for the RCP review and maintenance. In the emergency organization, personnel filling the position Manager, Quality and Safety, serves as the Emergency

Officer, and the License and Control Administrator serves as the Evacuation Officer in the emergency response organization. Changes to either of the aforementioned positions would not appear to decrease the effectiveness of the emergency preparedness program. Personnel with the responsibility for decision-making regarding protective action recommendations, accident assessment, off-site interface, day to day responsibility for the planning effort (eg, training, equipment maintenance, etc.), and overall management authority for emergency preparedness remains unchanged.

No violations or deviations were identified.

5. Tests and Drills (88050)

This area was reviewed to determine if the licensee was conducting drills in accordance with Section 7.3 of the RCP. The annual emergency drill involving the entire emergency organization had not been conducted at the time of the inspection. The initial plans by the licensee were to conduct the annual drill during October 1989 for consistency with the RCP and previous drill. However, a key player during past exercises was promoted to manage another organization within the B&W Company. As a result of the selection process for a replacement, the licensee requested and the NRC granted approval, for a change in the exercise date from October 1989 to December 7, 1989.

The annual plant evacuation drill was conducted on October 4, 1989. According to documentation, the licensee identified deficiencies and the corrective actions to resolve deficiencies. One item specifically that was noted during the drill, and had been resolved at the time of the inspection, involved the audibility of the evacuation alarm inside a building (S-2) currently under construction. The inspector noted that following the drill, the licensee installed speakers to provide coverage in the area of construction. Documentation was also provided to the inspector to show on June 9, 1989, a site evacuation alarm familiarization drill was conducted to test the audibility of alarms in various plant locations. No problems were noted.

No violations or deviations were identified.

6. Fire Protection (88050)

The inspector discussed this program area with a licensee representative and reviewed appropriate documentation. The Fire Brigade Team were comprised of six members. With one exception, personnel currently assigned to the team were members during a previous inspection. The new member of the team, previously assigned as a Radiation Monitoring Team member, was provided training during April and May 1989 for assignment to Fire Brigade Team.

The inspector reviewed Procedure AS-1116, CNFP Fire Protection Equipment Control, for a description of the fire protection maintenance program. According to procedure, audits of the fire protection system involve weekly and/or monthly inspections of the fire extinguishers, sprinkler system, and fire valves. On an annual basis, fire hydrants are inspected. Audit records reviewed for the period January 1989 to September 1989 indicated that audits were conducted at the required frequency. This included documentation to show that fire hose and extinguishers were hydrostatically tested during the calendar year 1989. Any problems identified during the maintenance checks were promptly corrected.

No violations or deviations were identified.

7. NRC Information Notice (92717)

The inspector discussed with licensee representatives their response to Information Notice No. 89-46, Confidentiality of Exercise Scenarios, dated May 11, 1989. The inspector was informed that the exercise details for the drill scheduled for December 7, 1989, were being developed and reviewed by three non exercise participants to ensure confidentiality of the details. Alternates for personnel involved in the scenario development will fill the primary positions in the emergency organization. Example, the Plant Manager's alternate will respond as the Plant Manager to the postulated accident. The one exception for the December 1989 exercise involves the Evacuation Officer's role. The annual plant evacuation drill was conducted during October 1989. Consequently, an evacuation will be simulated, and not included as an exercise objective. Therefore, the primary nor alternate for this position will be participating as a player, but may serve as an observer and provide input to the scenario development.

8. Action on Previous Inspection Findings (92701)

- a. (Closed) IFI 70-1201/87-02-27: Including additional occurrences under NOUE classification which would warrant upgraded offsite awareness.

The revised RCP dated April 11, 1988, submitted for approval as part of the license renewal request during calendar year 1988, did not include additional occurrences for the NOUE classification (eg. transport of an injured, contaminated victim to an offsite medical facility). However, a discussion with the License and Control Administrator including a review of proposed changes for the next RCP revision, disclosed additional occurrences for the NOUE classification was planned. Consequently, the item was closed based on the licensee's commitment to revise the RCP and Emergency Procedure AS-1106 by January 1990 to include additional occurrences under the NOUE classification. Licensee representatives were informed that this item would be considered an IFI for review during a subsequent visit.

IFI 70-1201/89-08-02: Revise by January 1990 the RCP and Emergency Procedure to include additional occurrences under the NOUE classification.

- b. (Closed) IFI 70-1201/87-02-29: Developing and using a standard message form to facilitate transmission of emergency information to offsite organizations.

RCP implementing procedure AS-1106, Revision 12, dated March 31, 1989 entitled "Emergency Procedure" contained as an exhibit an emergency notification call list. Revision 12 to Exhibit J added the standard message form as page 3 entitled Report of Plant Emergency to Offsite Authorities. Exhibit J contained the subject information.

- c. (Closed) IFI 70-1201/87-02-30: Providing for a quarterly review and update of emergency telephone numbers and personnel assignments in the Emergency Procedure.

Exhibit A to Emergency Procedure AS-1106, list the key emergency response personnel and their alternates along with work and residence telephone numbers. The licensee maintained a computerized tracking system which generated commitment dates for performing a quarterly update to the emergency call-list. At the time of the inspection, the most current listing was dated September 28, 1989. The inspector reviewed superseded copies of the emergency roster to verify that frequent updates were made.

- d. (Closed) IFI 70-1201/87-02-33: Including in the emergency procedure the various site and offsite emergency center locations.

Section 3.0 to Emergency Procedure AS-1106 had been revised to include alternate emergency centers in the event the primary center became inaccessible or uninhabitable.

- e. (Closed) IFI 70-1201/87-02-36: Including in Exhibit C to the Emergency Procedure the actual state protective response level/EPA protective action guides as they relate to sheltering and evacuation recommendations.

Revision 12 to the Emergency Procedure AS-1106 (dated March 31, 1989) included the addition of Exhibit L containing the EPA protective action guides and protective actions for nuclear incidents.

- f. (Closed) IFI 70-1201/87-02-45: Providing for a formal annual review of the RCP and providing for management concurrence and approvals on its revisions.

A review and discussion with members of the licensee's staff disclosed that a formalized program governing the RCP review and approval by management had not been implemented. The failure to implement such program was attributed to the departure of the

individual responsible for implementing this program, and the plant tracking system was not assigned a commitment for performing this task. The failure to provide a formal annual review and approval of the RCP by August 1, 1987, as committed to in a Commercial Nuclear Fuel Plant letter to the NRC dated June 1, 1987, was identified as a deviation (DEV).

DEV 70-1201/89-08-03: Failure to establish a formal annual review and approval of the RCP.

- g. (Closed) IFI 70-1201/87-02-46: Performing an independent audit of the emergency preparedness program to include an evaluation of offsite interfaces, capabilities and equipment, RCP and procedures, and assignment of responsibility on a periodic basis. According to licensee documentation (dated August 1, 1987) and a discussion with a member of the licensee's staff, this item was reviewed for applicability and a decision made that the current audit and drill program is sufficient to assess the emergency preparedness program.
- h. (Closed) IFI 70-1201/87-02-47: Providing a copy of the RCP to State and local support agencies.

Proposed changes to the RCP dated April 1988 were being reviewed by the NRC Office of Nuclear Materials Safety and Safeguards. According to licensee representatives, distributions will be made to the appropriate offsite authorities following NRC review and approval of changes. The licensee committed to the RCP distribution to State and local support agencies by the second quarter of Calendar Year 1990. The inspector informed licensee representatives that item 87-02-47 was closed, but a new item was opened to track the completion of the RCP distribution as an IFI.

IFI 70-1201/89-08-04: Complete the distribution of the RCP to appropriate State and local support agencies.

- i. (Closed) IFI 70-1201/87-02-48: Providing for wider distribution of the RCP to onsite emergency management personnel.

A discussion and review of the controlled distribution matrix indicated that distribution had not occurred. A licensee representative discussed the current distribution to onsite personnel and the need for evaluating the appropriateness of certain personnel to receive a copy of the RCP. The licensee committed to conducting an evaluation of the current distribution to onsite personnel, and adjusting the distribution accordingly upon NRC approval of the revised RCP. Consequently, Item 87-02-48 is closed, and a new item opened as an IFI.

IFI 70-1201/89-08-05: Evaluate the appropriateness of the current RCP distribution to onsite management personnel and adjust the distribution as needed.

- j. (Closed) Violation 70-1201/88-11-01: failure to document the audit results for fire protection equipment in accordance with Procedure AS-1130.

Audit records reviewed for the period January 1989 to September 1989, indicated that audits were being documented in accordance with Procedure AS-1130. Documentation included any problems identified during audits and the corrective actions taken as well as the return to service date if appropriate.

9. Exit Interview

The inspection scope and results were summarized on October 19, 1989, with those persons indicated in Paragraph 1. The inspector described the areas inspected and discussed in detail the inspection results listed below. The licensee did not identify as proprietary any of the material provided to or reviewed by the inspector during this inspection. In response to the IFIs detailed in Paragraphs 4 and 8 of this report, the licensee management representatives made the following commitments.

- ° Evaluate the training program and upgrade the RCP to better address training (Paragraph 4).
- ° By January 1990, revise the RCP and Emergency Procedure to include additional occurrences under the NOUE classification (Paragraph 8).
- ° Pending NRC approval of license renewal, complete the distribution of the RCP to State and local support agencies by the second quarter of Calendar Year 1990 (Paragraph 8).
- ° Evaluate the current RCP distribution to onsite management personnel and adjust distribution accordingly (Paragraph 8).

There were no dissenting comments.

<u>Item Number</u>	<u>Description/Reference</u>
70-1201/89-08-01	IFI - Evaluate the current training program for the entire emergency organization and include upgrades to the RCP (Section 7.2) to better address this training (Paragraph 4).
70-1201/89-08-02	IFI - Revise the RCP and Emergency Procedure to include additional occurrences under the NOUE classification (Paragraph 8).
70-1201/89-08-03	DEV - Failure to establish a formal annual review and approval of the RCP (Paragraph 8).

70-1201/89-08-04

IFI - Complete the distribution of the RCP to appropriate State and local support agencies (Paragraph 8).

70-1201/89-08-05

IFI - Evaluate the appropriateness of the current RCP distribution to onsite management personnel and adjust the distribution as needed (Paragraph 8).

Licensee management was informed that nine open items were reviewed from the 1987 Operational Safety Assessment Team inspection and one item from the Calendar Year 1988 inspection. All items reviewed were closed (Paragraph 8).