REPORT DETAILS

1. Persons Contacted

*T. Engelder, Laboratory Director
*C. Bell, Facilities Manager
*A. Olsen, License Administrator
*P. Doran, Administrative Services Manager
*J. Cure, III, Health and Safety Supervisor
S. Pennington, Health Physics Engineer
D. Harris, Senior Health Physics Engineer
C. Burnham, Senior Operator
K. Long, Accountability Specialist
B. Stewart, Radiochemist
R. Spradlin, Industrial Safety Officer

Other licensee employees contacted included two technicians and two operators.

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on January 15, 1982 with those persons indicated in paragraph 1 above.

3. Licensee Action on Previous Inspection Findings

(Closed) Violation 70-824/81-02-01, Failure to make representative air sampling measurement of concentrations of radioactive material in the Loop Sampling Room of the Radiochemistry Lab. The inspector verified that a stationary air sampler was installed and operable at the fume hood in the Loop Sampling Room.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. IE Information Notice No. 81-26

a. Verification was made that the licensee had received the information notice. A licensee representative stated that they were aware of the updated guidelines for the use of the Biopak-60P recirculating-mode (closed circuit) self-contained breathing apparatus (rebreathers) identified as SCBA-R. They stated that they do not use this equipment for protection from inhalation of radioactive materials but have it available for emergency use for chemicals, fire, etc. The inspector had no further questions.

b. License representatives stated that they do not use DOP for quantitative facepiece fit testing of respirators. DOP is used to test HEPA filters and precautionary measures are taken to prevent unnecessary exposure of personnel. The inspector had no further questions.

c. Licensee representatives stated that they did not have any steam generators but it was an inherent practice to place dosimetry devices on the part of the body which was most likely to receive the maximum exposure. The inspector had no further questions.

d. Licensee representatives stated that they had no known inerted containments at the laboratory but this type of a safety issue is always a concern of the industrial safety personnel. The inspector had no further questions.

e. A licensee representative stated that geotropism or angular dependence was not a problem with their radiation detection survey instruments plus instruments were normally used in the same position as when calibrated. The inspector had no further questions.

6. Gaseous Effluents

a. The inspector examined the licensee's records for 1980 and 1981 of the gaseous effluents discharged from the stack. Weekly activity levels ranged from E-16 to E-15 microcuries per milliliter for alpha activity and E-15 to E-14 microcuries per milliliter for beta activity. The licensee representative explained the procedure and method used to determine the quantities of radioactive materials released to the environment. The inspector verified that the quantities were less than the release limits and action levels specified in Table A-3 of Section A.9.3, Effluent Control, of Appendix A of the license application which has been incorporated as condition 9 of the license. No violations were identified.

b. Discussions with licensee representatives revealed that the air flow measuring device of the stack sampler had not been calibrated in several years. They stated that the flow is determined with a Magnehelic gauge across a venturi. They agreed that the accuracy of determining the quantity of the effluents discharged and the validity of the isokinetic sampling depended upon the sampling flow rate. However, several orders of magnitude error would have to prevail before any regulatory limits were exceeded. The licensee representative stated that the necessary equipment would be secured to calibrate the stack sampler flow device and that the calibration would be completed by March 31, 1982. The inspector stated that this matter would be considered an inspector followup item (IFI-70-824/82-01-01).

7. Liquid Effluents

a. The licensee collects radioactive liquid wastes in underground storage tanks at the liquid waste disposal building. When a tank is full the liquid is agitated with a water and air purge in accordance with the licensee's procedure, sampled and released to the B&W-NNFD liquid waste treatment facility if the activity levels are below the license condition specification of 25 percent of the MPC values of Table I, Column 2 of 10 CFR 20, Appendix B. When the activity level is above the license condition specifications, dilution is used to meet the limit. The licensee representative explained the agitation, sampling and dilution procedures during a tour of the liquid waste disposal building. An examination of the records for 1980 and 1981 showed that the concentrations of radioactive material in the liquid waste released to B&W-NNFD liquid waste treatment facility were below the license condition specifications. No violations were identified.

b. The water in the hot cell pool and the old BAWTR transfer canal are circulated through ion exchange resin columns in the basement of the Cask Handling Area prior to release to the tanks at the liquid waste disposal building. A licensee representative stated that certain categories of liquid wastes generated in the hot cell areas are evaporated to reduce volume prior to application of the licensee's liquid waste solidification procedure with cement. The inspector had no further questions.

c. The inspector examined the following licensee's procedures:

B-GP-1	Liquid Waste Solidification
B-GP-2	Procedure for Handling and Disposal of Radioactive Solid Waste
B-GP-4	Contaminated Don Exchange Resin Disposal for the Cask Handling Pool Filtration System
B-GP-5	Dewatering Spent Resins

The procedures address the importance of removing liquids from solid wastes and the requirements for assuring that solid wastes do not contain any liquids. The insector had no further questions.

d. A licensee representative stated and showed the inspector documentation to confirm that the liquid waste line from the Primary Equipment Cell to the liquid waste disposal building was pneumatically tested at 60 psi for two hours. This procedure was initiated several years ago prior to decommissioning of the BAWTR reactor. A license representative stated that they would determine if other underground liquid waste lines could be hydrostatically tested for possible leakage. The inspector had no further questions.

8. Solid Waste Disposal

The inspector verified that the licensee had developed and maintained procedures for assuring that solid wastes did not contain any liquids. Dewatering of the spent resins is performed in accordance with the instructions from Chem-Nuclear, Barnwell, South Carolina. A licensee representative demonstrated the dewatering procedure and explained the procedure for solidifying certain liquid waste with cement. Most laboratory solid wastes are compacted to reduce the volume. An inspection of the Building J area where drums of solid wastes are stored revealed that the drums were marked and labelled in accordance with 10 CFR 20.203(f). The area was properly posted and under lock and key controlled by Health Physics. No violations were identified.

9. Packaging and Transportation of Radioactive Materials

The inspector verified that the licensee was maintaining records of shipments of radioactive material in accordance with 10 CFR 71.62. It was apparent from an examination of the licensee's check sheet procedures that all aspects of inspecting and approving containers for shipment were being performed in accordance with the Quality Assurance Plan and that the preliminary and routine determinations were being performed as required by regulations. The inspector verified that Certificate of Compliance documents were maintained for appropriate containers and that copies of the transferee's licenses were maintained in accordance with 10 CFR 70.42. An examination of the shipping documents showed the shipping papers contained the proper description of the radioactive material as required by 49 CFR 172.200. No violations were identified.