UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA ST., N.W., SUITE 3100
ATLANTA, GEORGIA 30303

FEB 25 1983

Report No.: 70-1113/83-04

Licensee: General Electric Company
Wilmington, NC 28401

Docket No.: 70-1113

License No.: SNM-1097

Facility Name: Wilmington Manufacturing Department

Inspector: G P Coryell 2/24/83
G. P. Coryell, Fuel Facility Inspector — Date Signed

Approved by: E J McAlpine 2/24/83
E. J. McAlpine, Chief, Material Control and Accountability Section, Safeguards Branch, Division of Emergency Preparedness and Materials Safety Programs — Date Signed

SUMMARY

Inspection on February 7 - 11, 1983

Areas Inspected

This routine, unannounced inspection involved 32 inspector-hours on site in the areas of Operations, Facility Changes and Modifications, Training, Maintenance and Safety Committees.

Results

No violations or deviations were identified in the five areas inspected.

REPORT DETAILS

1. Persons Contacted

   Licensee Employees

   *E. A. Lees, Manager, Quality Assurance
   *B. F. Bentley, Acting Manager, Fuel Manufacturing
   *R. G. Patterson, Manager, Fuel Fabrication Operation
   *D. W. Brown, Manager, Powder Production
   *D. A. Burns, Manager, Materials Services
   *L. A. Sheely, Manager, Fuel Quality
   *T. P. Winslow, Manager, Chemet Laboratory
   *C. M. Vaughan, Manager, Licensing and NMM
   *H. Stern, Manufacturing Technology and Engineering Operation
   *W. B. Smalley, Manager, Environmental Protection
   *G. M. Bowman, Senior Nuclear Safety Engineer
   *S. P. Murray, Nuclear Safety Engineer
   *G. R. Mallett, Senior Engineer, Measurements and Statistics
   *R. L. Torres, Manager, Radiation Protection
   *W. B. Haverty, Analyst, Licensing and NMM
   S. W. Dale, Manager, Chemical Process Engineering
   C. Schiltz, Manager, Chemical Equipment Engineering
   B. Bean, Senior Chemical Manufacturing Engineer
   L. C. Hu, Senior Nuclear Safety Engineer
   J. T. Taylor, Senior Nuclear Safety Engineer
   J. F. Mincey, Nuclear Safety Engineer
   A. W. Cameron, Foreman Shop Support
   M. Moser, Senior Chemical Process Engineer
   J. R. Nettles, Manager, Facilities Engineering and Design Services

   Other licensee employees contacted included several technicians, operators, and mechanics.

   *Attended exit interview

2. Exit Interview

   The inspection scope and findings were summarized on February 11, 1983, with those persons indicated in paragraph 1 above.

3. Licensee Action on Previous Enforcement Matters

   Not inspected.

4. Unresolved Items

   Unresolved items were not identified during this inspection.

5. Safety Committee

a. The Wilmington Safety Review Committee responsibilities, membership and procedural requirements are provided in Appendix A, Section 4.4 of the license application and P/P 40-1, Rev. 5, Wilmington Safety Review Committee.

b. The inspector reviewed the minutes for meetings held on October 28 and November 1, 1982, and January 24, 1983. Agenda items included technical review of new and proposed facility modifications and procedures. The Committee assigned responsibility for corrective actions or additional analysis. No deviations from procedural requirements were identified.

6. Facility Changes and Modifications

a. Modifications to the facility, process equipment or operational methods are controlled as defined in procedure P/P 40.-5, Rev. 3, Nuclear Safety Review System. Installations meet the conditions of procedure P/P 40-4, Rev. 4, Nuclear Safety Design Criteria.

b. The inspector reviewed six change requests covering both completed installations and proposals being reviewed. Change requests are documented on form NF-1-014. Permanent changes are approved on a Nuclear Safety Release/Requirement Form that specifies the criticality and radiological safety requirements for the operation. Temporary changes may be approved by a letter from Nuclear Safety Engineering (NSE) or by a Production Test Authorization. Records verify completion of required safety and engineering reviews, inspections, and approvals in accordance with procedural requirements.

c. Change Request 82-090 covers a complex modification to one production line. A series of criticality safety requirements and restrictions are included in a Production Test Authorization for initial operations and in Temporary Operating Instructions (TOI). The inspector verified that the work station postings and records confirm compliance and that operations to date are controlled by an Engineering Supervisor.

d. Change Request 80-900 relates to installation of neutron absorber panels between the quarantine slab tanks in the radwaste area. A cadmium and polyethylene sandwich is secured between sheets of stainless steel welded on all edges.

e. Panel test, inspection and installation records were examined. Neutron scanning checks of each panel were performed in the neutron radiography unit to verify proper location of the cadmium plate. The test station was qualified and test setup and calibration confirmed with test panels. Comparison traces were made with panels reversed. Each panel was visually checked for defects and was leak tested. The test instructions were QC #799 and TOI A-588.

f. Panel installation and orientation was checked by the Facility Project Engineer. The inspector and a nuclear safety engineer inspected the panel installation for proper orientation. The inspector had no further questions.

g. This installation has not been released for operational use, that is, no safety credit is taken. The area manager has not requested a final installation acceptance audit by NSE that is a prerequisite for the Nuclear Safety Release/Requirement.

h. Each poison panel subassembly has been retested by the vacuum leak check method. No leaks were detected. Maintenance has scheduled semiannual vacuum leak tests but no specific test interval has been approved by management. Test procedures and schedules will be reviewed during future inspections.

7. Training

a. Procedure P/P 40-17, Rev. 2, Nuclear Safety Training defines training program requirements and assigns responsibilities for provision of criticality and radiation safety training. The Fuels Training and Program Development staff provides most of the training with Nuclear Safety Engineering and Radiation Safety representatives participating.

b. Training records show that new hires and transferred employees receive a one hour orientation and are provided a training checklist. They are then scheduled to complete the regular red-dot training program at the next opportunity. This formal training is on a monthly schedule. This program must be successfully passed before the red-dot is placed on the security badge allowing unescorted access to the manufacturing controlled area.

c. Retraining is provided annually. Records show a total of about 1100 employees were retrained in 1982.

d. Employee training covers many specialized courses in addition to the red-dot training. A partial listing of training activities follows:

Emergency Organization Drills
Emergency Response Team Training
Multimedia Standard First Aid
Criticality Drills
Powered Industrial Truck Training
Platform and Digital Load Cell Training

e. The training program is conducted by certified instructors. Tests are given at the conclusion of training sessions.

8. Maintenance

a. Maintenance activities in the controlled area conform with requirements of P/P 40-9, Service Work in Controlled Area and Maintenance Instructions that provide information needed to assure safety in performing maintenance work. Both licensee maintenance and contractor forces receive red-dot training and RWP training.

b. There are four levels of maintenance task assignments:

(1) Routine maintenance - line limits requiring only a phone request or Repair Assistance Procedure (RAP) form. Foreman and Area Engineer review required.

(2) A Rearrange, Install or Modify (RIMRAP) order requiring Unit Manager and Area Manager approval.

(3) Facility Change Request. (Licensee Maintenance)

(4) Project Task. (Contractor workforce)

Levels (3) and (4) require the full safety review and approval procedure for Facility Changes and Modifications.

c. Routine and preventive maintenance tasks are computerized for the chemical processing area. The job ticket system is still in use in the ceramic area.

d. Current job tickets were examined and calibration records for essential instruments noted. The inspector had no further questions.

9. Operations

a. The inspector verified that Nuclear Safety limits were posted as PROD documents at workstations and processing area. Temporary operating instructions were examined and found to be approved and current. Storage and handling of SNM was in accordance with posted limits.

b. General housekeeping in the facility was satisfactory and no industrial safety or fire hazards were observed.

c. Criticality monitor system records show that the annual recalibration was completed on December 28, 1982. Operational checks are made each week.