



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

OCT 23 1986

Report No.: 50-400/86-82

Licensee: Carolina Power and Light Company
 P. O. Box 1551
 Raleigh, NC 27602

Docket No.: 50-400

License No.: CPPR-158

Facility Name: Harris 1

Inspection Conducted: October 6-10, 1986

Inspector: for Roy C. Weddington 10/22/86
 G. L. Troup Date Signed

Approved by: for Roy C. Weddington 10/22/86
 C. M. Hosey, Section Chief Date Signed
 Division of Radiation Safety and Safeguards

SUMMARY

Scope: This routine, unannounced inspection was in the areas of radiation protection and radioactive waste management including the area radiation monitoring system, installation, preoperational testing and operation of the solid radioactive waste system, internal and external exposure controls, and inspector followup items.

Results: No violations or deviations were identified.

8611030355 861023
 PDR ADOCK 05000400
 Q PDR

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100



1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100



REPORT DETAILS

1. Persons Contacted

Licensee Employees

*J. L. Willis, Plant General Manager
 *J. L. Harness, Assistant Plant General Manager
 *J. R. Sipp, Manager, Environmental and Radiation Control
 *D. L. Tibbitts, Director, Regulatory Compliance
 *J. W. McDuffee, Supervisor, Radiation Control
 *H. Lipa, Supervisor, Environmental and Chemistry
 J. M. Bradley, Radwaste Supervisor
 O. N. Hudson, Sr., Engineer, Regulatory Compliance
 *A. D. Poland, Project Specialist, Radiation Control
 M. G. Wallace, Specialist, Regulatory Compliance
 L. A. Oakley, Startup Engineer
 F. J. Smith, Jr., Startup Engineer

Other licensee employees contacted included radiation control foremen, radiation control technicians, and administrative personnel.

Other Organizations

W. L. Aspray, Multi-Amp Technical Services
 G. M. Farlee, Aerojet Energy Conversion Company

Nuclear Regulatory Commission

G. F. Maxwell, Senior Resident Inspector
 *S. P. Burris, Resident Inspector

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on October 10, 1986, with those persons indicated in Paragraph 1 above. The inspector described the areas inspected and discussed in detail the inspection findings. Licensee representatives acknowledged the inspection findings and took no exceptions. The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspector during this inspection.

3. Licensee Action on Previous Enforcement Matters

This subject was not addressed in the inspection.



4. Inspector Followup Items (92701)

- a. (Closed) 85-16-16, TMI Item II.F.1.3, Containment High Range Radiation Monitors. The calibration and preoperational testing of these monitors has been completed. It is discussed further in Paragraph 5.
- b. (Closed) 86-43-03, Radiation Monitoring System. The preoperational testing of the area radiation monitors has been completed. It is discussed further in Paragraph 5.

5. Radiation Monitoring System (RMS) (83526)

- a. Inspector Followup Items (IFIs) 85-16-16 and 86-43-03 concern the installation and testing of the containment high range monitors and area radiation monitors. Installation and testing of the containment high range monitors is required by NUREG-0737, Section II.F.1.3. Area radiation monitors are described in FSAR Sections II.5.2.3 and 12.3.4.
- b. The inspector reviewed Test Procedure 7005-P-01, Waste Process Building Radiation Monitors, and Test Procedure 700-P-02, Radiation Monitors - Nuclear Operations. Test Procedure 7005-P-01 was complete and had been approved by JTG on October 3, 1986. The inspector determined that procedure changes had been approved as required, test deficiencies and corrective actions were documented, and any exceptions were documented and approved by the Manager, Startup.
- c. Test Procedure 7005-P-02 had not been completed and approved due to problems encountered with one process monitor. The inspector discussed the status of the testing of the other monitors with the cognizant engineers and reviewed the completed portions of the test procedure. The inspector reviewed the portions of the test procedure which had been completed for the containment high range monitors, and the area monitors such as the fuel handling building operating floor monitor, sample room monitors, coolant volume control system equipment room or area monitors, and the fuel handling building area monitors, and determined that the tests had been satisfactorily completed. The inspector also reviewed Maintenance Surveillance Tests (MSTs), which included the calibration for the containment monitors.
- d. The inspector informed licensee management that, based on the review of the test procedures and MSTs, the review of the area monitor testing was complete. The inspector had no further questions and IFIs 85-16-16 and 86-43-03 were closed.

No violations or deviations were identified.

6. Solid Waste System (84522)

- a. FSAR Section 11.4 describes the Solid Waste Processing System (SWPS). The inspector toured the SWPS with licensee and contractor personnel to

observe the installation of equipment and piping and to review the status of testing.

- b. The inspector determined that the major components listed in FSAR Table 11.4.2-4 were installed. The inspector also reviewed such items as floor drains and/or curbs in equipment rooms to collect and control spillage, sample points and sinks, and shielding around equipment or shielded cubicles.
- c. The inspector reviewed the Process Control Program (PLP-300) and the operating procedures for SWPS (OP-120.05.XX series). Several procedures had operating instructions identified as "later." This was also the case with CRC-858, Test Solidification of Wastes. A licensee representative stated that these sections required input from the preoperational test program, and will be revised before operation. The inspector also noted that some procedure references in PLP-300 were incorrect. This was acknowledged by a licensee representative who stated that PLP-300 would be reviewed and revised as necessary after the test program was complete, and the reference list would be updated at that time.
- d. The inspector discussed the status, of preoperational testing of the SWPS with the representatives. Construction tests have been in progress. The startup test procedures (7045-P-OX series) are being revised to reflect current knowledge developed from the construction tests and system operation prior to running the final preoperational test.
- e. The inspector informed licensee management that the preoperational test procedures and results, and the revised operating procedures would be reviewed during subsequent inspections.

No violations or deviations were identified.

7. Waste Classification (84522)

- a. 10 CFR 61.55 requires that wastes shipped for near surface disposal shall be properly classified based on radionuclide content. 10 CFR 61.55(a)(8) permits the use of scaling factors, which are derived from laboratory analysis, to quantify hard-to-detect radionuclides.
- b. The Process Control Program (PLP-300) specifies the sampling points for the various waste streams and the requirements for analysis by a laboratory. Licensee representatives informed the inspector that a contract is in effect with a laboratory to do the analytical work and develop the necessary scaling factors. Procedure HPP-116, Classification of Waste for Burial, then classifies waste per 10 CFR 61.55.



- c. The sampling of the various waste streams required by PLP-300 is covered by a master schedule for chemistry sampling, which is part of a draft procedure. The results from the laboratory are inputted to a computer program WASTRACK, which generates the amount of various nuclides in the waste streams. However, the requirements for sending the samples to the laboratory, receiving and evaluating the results, and inputting the new results into WASTRACK have not been incorporated into procedures. Licensee management representatives acknowledged the inspector's comments that these steps should be proceduralized to assure that current data is being used, and stated that the procedures would be revised to include these actions.

No violations or deviations were identified.

8. Radiation Protection Items (83525, 83526)

- a. The inspector discussed the methods and equipment for collecting noble gas and/or tritium air samples. Procedure CRC-251, Operation of the Auxiliary Radioactive Gas Sampler, provides for the collection of such samples using a special sampling system. Such samples can be collected in conjunction with, or independent of, noble gas and radioiodine samples.
- b. The inspector reviewed the inventory of anti-contamination clothing available to the staff. The inventory provides approximately nine thousand sets of full clothing. Additional clothing is stored offsite but is available for use if needed. Laundering of cloth clothing is presently in progress to remove lint, close the fabric weave and allow for shrinkage prior to use.
- c. During the inspection, a meeting was held at the Harris site of the Environmental and Radiological Control supervisors from the three licensee facilities and members of the corporate staff. The inspector attended part of the meeting to discuss limits for the release of material for unrestricted use which was formerly in the radiation controlled area (RCA). The inspector noted that PLP-511, Radiation Control and Protection Program, appears to permit the release of material with detectable (measurable) radioactivity. Licensee representatives stated that, while the procedure may appear to permit this, it is neither the intention or practice to release material with a detectable radioactive material on it. The basis for the wording in both PLP-511 and the CP&L Radiation Control and Protection Manual was stated as IE Circular No. 81-07, Control of Radioactively Contaminated Material. After discussion of the matter, including requirements to restrict the release of material, the intent of the IE Circular, and capabilities of instrumentation used for such purposes, licensee representatives agreed to review the matter, including wording in the procedures, and to revise the guidance further to assure that the procedural guidance and requirements were consistent with the regulatory requirements.

No violations or deviations were identified.

9. Startup Shield Survey (83521)

- a. FSAR Section 14.2.12.2.28 describes the shield survey test which will be conducted at 50% and 100% power during startup. Additionally, an initial survey (<5% power) will be conducted.
- b. The inspector reviewed Startup Procedures 1-9103-5-33, 1-9105-5-12 and 1-9108-5-20, which cover the survey at <5%, 50% and 100% power level, respectively. The procedures were consistent with the program specified in the FSAR. The inspector had no further questions at this time. Test results will be reviewed during the startup phase.

No violations or deviations were identified.

