



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

Report Nos. 50-321/81-24 and 50-366/81-24

Licensee: Georgia Power Company  
270 Peachtree Street  
Atlanta, Georgia 30303

Facility Name: E. I. Hatch

Docket Nos. 50-321 and 50-366

License Nos. DPR-57 and NPF-5

Inspection at Exley, GA, Decatur, GA, Atlanta GA

Inspector: D. M. Montgomery for 10-30-81  
A. L. Cunningham Date Signed

Approved by: D. M. Montgomery 10-30-81  
D. M. Montgomery, Section Chief, EPOS Branch Date Signed

SUMMARY

Inspection on September 28 - October 6, 1981

Areas Inspected

This routine, unannounced inspection involved 42 inspector-hours on site in the area of radiological environmental monitoring including: management and administrative controls; review of annual environmental monitoring report for the period ending December 12, 1981; implementation of the environmental monitoring program as defined in the ETS; inspection of selected environmental monitoring stations; review of licensee's response to IE Bulletin 83-03; collection and analysis of plant site ground water samples attending continued followup of LER 50-321/1979-021.

Results

Of the seven areas inspected, one violation was found in one area. No apparent deviation was found in seven areas.

## REPORT DETAILS

### 1. Persons Contacted

#### Licensee Employees

- \*C. T. Jones, Assistant Plant Manager Power Generation
- \*T. V. Greene, Assistant Plant Manager
- \*P. E. Fornel, Jr., Assistant QA Site Supervisor
- \*R. C. Hand, Laboratory Supervisor
- \*W. H. Rogers, Health Physics Superintendent
- \*I. Kochery, Senior Health Physicist
- \*C. R. Miles, Jr., QA Field Supervisor
- \*\*W. H. Olinger, Nuclear Licensing Engineer
- \*\*R. W. Staffa, Manager, Quality Assurance
- \*\*W. R. Woodall, Jr., Power Supply Laboratories Manager
- \*\*T. E. Byerley, Manager of Environmental Affairs
- \*\*D. R. Savage, Supervisor, Nuclear Procurement Standards

#### NRC Resident Inspector

- \*R. Rogers

\*Attended exit interview at plant site on October 2, 1981

\*\*Attended exit interview at Georgia Power Company General office on October 6, 1981

### 2. Exit Interview

The inspection scope and findings were summarized on October 6, 1981 with those persons indicated in paragraph 1 above. Prior to the conclusion of the inspection, the inspector discussed with plant personnel on October 2, 1981, the inspection scope and those items of concern which required additional inspection effort. At the conclusion of inspection, inspection scope and findings were summarized on October 6, 1981 with those persons indicated in paragraph 1 above. The violation listed herein was discussed. The inspector later informed the Plant Manager, the Assistant QA Site Supervisor, and the NRC resident inspector of the inspection findings discussed in paragraph 5d.

### 3. Licensee Action on Previous Inspection Findings

No previous radiological environmental findings were outstanding.

### 4. Unresolved Items

Unresolved items were not identified during this inspection.

## 5. Management Controls

### a. General

Management and administrative controls defined in Section 5.0 of the Environmental Technical Specifications (ETS) were reviewed by the inspector with respect to the following items: (1) organization and management responsibility for implementation of the radiological environmental monitoring program; (2) environmental monitoring program procedures; (3) quality assurance including periodic audits and analytical quality control.

### b. Organization and Management Responsibilities

The inspector conducted a comprehensive review, including discussions with cognizant licensee representatives, of recent corporate organizational changes to determine the adequacy of specific management responsibility for assuring implementation of the radiological environmental monitoring program. Although recent organizational changes have been instituted, management responsibility for implementation of the radiological environmental provisions of ETS-3.2 remains essentially as defined in ETS-5.1 and procedure HNP-7650. These references address program responsibilities of the Plant Manager, Manager of Environmental Affairs, Nuclear Engineer, and the Manager of Quality Assurance in the respective areas of sampling and analysis, program coordination, interpretation and evaluation of program results, and periodic audits of plant operation and environmental monitoring activities to ensure conformance with the ETS. There were no questions regarding organizational responsibilities for implementing of the radiological environmental monitoring program defined in ETS-3.2, Table 3.2-1.

### c. Procedures

Environmental Technical Specification 5.6 requires preparation of and adherence to detailed written procedures for all activities involved in implementing the radiological environmental monitoring program. The subject specification further requires that such procedures will apply to sampling, data recording and storage, measurements and analysis, and actions to be taken when limits are approached or exceeded. Inspection included a comprehensive review of licensee procedures and respective revisions developed to assure implementation of the radiological environmental monitoring requirements defined in Technical Specification 3.2, Table 3.2-1. The procedures reviewed are listed below.

Procedure No.	Revision/Date	Procedure Title
ENV-10-17	(R3, 5/8/81)	Collection of Benthic Samples For Radiological Analysis
ENV-10-18	(R3, 5/8/81)	Collection of Sediment Samples For Radiological Analysis

ENV-10-19	(R3, 5/8/81)	Collection of Fish Samples For Radiological Analysis
ENV-10-20	(R2, 5/8/81)	Altamaha River Drinking Water User Survey
ENV-10-21	(R2, 2/7/80)	Annual Three Mile Milk Survey
ENV-10-22	(R1, 2/7/80)	Radiological Data Handling
ENV-13-04	(R3, 5/8/81)	Environmental Affairs Procedures Preparation and Manual Control
ENV-13-05	(R2, 5/29/80)	Amending ETS (Appendix B)
ENV-13-06	(R0, 5/11/79)	Submittal and Approval of the Annual Environmental Surveillance Report 95.7 HNP-ETS)
ENV-13-07	(R2, 9/23/80)	Internal Audit
ENV-14-01	(R0, 5/8/81)	Environmental Affairs Center Organization
ENV-14-02	(R0, 5/8/81)	Selection, Use, and Control of Contractors
HNP-7800	(R8, 7/28/80)	Airborne Radioactivity
HNP-7802	(R9, 9/24/81)	External Radiation
HNP-7803	(R10, 9/24/81)	Milk
HNP-7804	(R7, 9/24/81)	Grass
HNP-7805	(R8, 9/24/81)	River Water
HNP-7806	(R6, 1/30/80)	Ground Water
HNP-7807	(P3, 9/24/81)	Benthos
HNP-7808	(R3, 9/28/81)	River Fish
HNP-7809	(R4, 9/24/81)	River Sediment
HNP-7812	(R2, 9/24/81)	Piezometer Measurements
HNP-7820	(R3, 5/17/81)	Environmental Air Filter Flow Rate Determination
HNP-7650	(R0 1/4/79)	Quality Assurance for ETS

HNP-7651

(R3 9/28/81)

Analytical Quality Control for  
Chemical Analysis

Inspection of procedures also included review and audit of sample collection and shipping records (i.e., shipment of environmental samples to contract laboratories for radiochemical analysis as provided for in ETS-3.2, Table 3.2-1) for the period January 1, 1980 through August, 1981. Inspection disclosed that all samples were shipped as required by licensee procedures HNP-7802 through HNP-7809, and ENV-10-17 through ENV-10-19; however, inspection disclosed delay in shipment of air filters and radioiodine cartridges (HNP-7800) collected during the periods 8/4/80 through 8/11/80 and 9/29/80 through 10/6/80. This finding was consistent with that previously identified in licensee Audit QA-81-215. Data reported for the subject samples indicated that acceptable analytical results were achieved. Appropriate corrective action was taken to preclude any further delay in sample shipments to contractor laboratories. All required environmental sample analyses defined in ETS-3.2, Table 3.2-1, are conducted by licensee contractor laboratories. The contractor laboratories and respective radiochemical analyses conducted are as follows: (1) Eberline Midwest Facility - TLD's; (2) Center for Isotopic Studies, University of Georgia - grass, tritiated water (river water, plant site ground water); (3) Teledyne Isotopes - particulate filters, radioiodine, drinking water (gamma isotopics), milk, clams, fish, river sediment. Teledyne and Eberline analytical procedures were reviewed by the inspector. Inspection findings regarding procedures and discussed below.

1. Inspection disclosed that Section E.2 of procedure HNP-7802 (milk) failed to specify the preservatives and/or other chemicals and the respective amount of each required by the contract laboratory to be added to milk samples immediately upon collection. The inspector informed a licensee representative that the procedure should be revised to include the additives and the specific amounts of each required. The inspector was informed that the following reagents and respective amount per gallon of milk is required: (1) 155 ml of 37% formaldehyde; (2) 16 mg of potassium iodide; (3) 40g of sodium bisulfite. This item will be reviewed during a subsequent inspection (50-321/81-24-01, 50-366/81-24-01)
2. Procedure HNP-7650 (Quality Assurance Program for Environmental Tech Specs) describes a program designated to assure the quality of ETS program results including analytical measurements as required by ETS Section 5.6.2 (Quality Assurance of Program Results). Section M of the procedure lists the contract laboratories utilized to provide analysis of sample media collected by the licensee in compliance with environmental monitoring program defined in ETS-3.2, Table 3.2-1. Inspection disclosed that only two of such laboratories used were listed, viz., Teledyne Isotopes and Eberline Instrument Corp. The procedure requires revision to include the Center for Isotopic Studies - University of Georgia which conducts radiochemical-

analysis of surface and groundwater, and grass as required by the referenced monitoring program. This item will be reviewed during a subsequent inspection (50-321/81-24-02, 50-366/81-24-02).

3. The requirements of ETS Section 5.6.2, which define quality assurance procedures for ETS program results were discussed in detail with cognizant licensee representatives. The inspector's review of licensee procedure HNP-7650 disclosed that the procedure (absenting the inspector followup item identified in the preceding paragraph) meets the intent of the requirements defined in ETS 5.6.2. There were no further questions regarding this item.

d. Audits

1. Environmental Technical Specification 5.3.2.2 requires that audits of facility activities shall be performed at least once a year under the cognizance of the SRB to ensure conformance of facility operation to all provisions of the ETS. Inspection included a detailed review of audits conducted during calendar years 1979 through 1981 to assess licensee compliance with the subject specification. Review of 1979 audits was confined to licensee audits of contractor laboratories (viz., Eberline Midwest Facility, Teledyne Isotopes, and University of Georgia) selected to implement environmental sample analysis provisions defined in ETS 3.2, Table 3.2-1. Licensee representatives informed the inspector that contractor laboratories were audited triennially. Inspection and review of audits conducted during 1980 included the following: Environmental Affairs Center audits of Procedures ENV-10-17 through ENV-10-21; Quality Assurance Audit 80-ETS-1 regarding implementation of ETS-3.2; and audit of the Manager of Environmental Affairs compliance with HNP Environmental Technical Specifications. Review of 1981 audits was confined to quality assurance Audit 81-ETS-1 regarding ETS-3.2. No deficiencies or adverse findings were disclosed in any of the audits listed above.
2. Inspection disclosed that licensee audits of environmental sampling provisions defined in ETS 3.2, Table 3.2-1 were conducted, at least, on an annual basis as required by ETS 5.3.2.2; however, the corresponding ETS provision for radiochemical analyses of such samples as conducted by contract laboratories was audited on a triennial basis. During detailed discussions with cognizant licensee representatives, the inspector was informed that 10CFR50 Appendix B, ANSI N45.2, and corresponding sections of the Quality Control Manual were used as criteria controlling the frequency and content of the 1979 audits of the subject contractor laboratories. Licensee representatives further asserted that the triennial audit of contractor laboratories was sufficient, since Georgia Power Company should be able to assume that the expertise of the contractor is such that data and results generated can be relied upon for accuracy and

adherence to Georgia Power Company's program requirements. The inspector informed licensee representatives that frequency of contractor laboratory audits is governed by ETS 5.3.2.2 which requires, at least, annual audits of all ETS provisions. Further, the contents of such audits are defined in Section 5.6.2 of the ETS and promulgated through licensee procedure HNP-7650 discussed above. Accordingly, the inspector informed licensee representatives that ETS audits, 80-ETS-1 and 81-ETS-1, were inadequate based upon the failure of such audits to include radiochemical analyses of environmental sample media. Licensee representatives were informed that this finding constituted a violation of ETS-5.3.2.2 (50-321/81-24-03, 50-366/81-24-03) In discussions with licensee representatives regarding the inadequacy of Audits 80-ETS-1 and 81-ETS-1 cited above, the inspector emphasized the items listed below.

- (a) Radiological environmental monitoring defined in Environmental Technical Specification 3.2, Table 3.2-1, is an integrated program consisting of periodic environmental sampling and the respective radiochemical analyses of samples collected. Hence, annual audit of the specified program should not be confined solely to environmental sampling requirements, but should also include required environmental sample analyses, respective analytical sensitivities, and assessment of the contractor's analytical quality assurance and quality control programs assuring validity and accuracy of analytical procedures and results.
- (b) Radiochemical analyses of environmental samples conducted by the contractor are, in fact, an extension of the licensee's required function imposed by the subject specification; hence the licensee bears responsibility for assuring the quality and accuracy of the contractor's analytical procedures, quality assurance commitments and analytical results through review and audit, at least, in conformance with the minimum frequency required by Environmental Technical Specification 5.3.2.2.

## 6. Implementation of Radiological Environmental Monitoring Program

- a. Environmental Technical Specification 3.2 defines the requirements for the radiological environmental monitoring program. Inspection included review and discussion of the following items with cognizant licensee representatives: (1) Annual Environmental Report (as required by ETS-5.6.1.1) for the periods ending December 31, 1979 and December 31, 1980; (2) environmental sampling field data records for the period January 1, 1980 through August 31, 1981; (3) records/invoices of licensee shipments of environmental samples to contractor laboratories for radiochemical analyses during the period January 1, 1980 through August 31, 1981; (4) records verifying receipt of environmental samples by service contractor and analytical results generated by the

contractors during the period January 1, 1980 through August 31, 1981; (5) review of updated licensee radiological environmental monitoring procedures. Inspection disclosed that the above elements of the subject program appeared to be consistent with Technical Specification requirements.

- b. The inspector also accompanied a licensee representative on a tour and inspection of environmental monitoring stations including the following: (1) all air particulate/radioiodine monitoring stations and respective TLD's including those posted by the licensee, State of Georgia, and the NRC; (2) milk sampling stations; (3) surface water sampling stations; (4) aquatic sediment; (5) forage (grass). Inspection disclosed that all air particulate monitoring equipment was operational and periodically calibrated as required. Inspection further disclosed that all program parameters were implemented as required. There were no questions regarding this item.

7. Status Review of LER-50-321/1979-021

A summary of the subject LER addressing intrusion of tritiated water into plant Hatch ground water sources is given in paragraph 8 of IE Inspection Report Nos. 50-321/80-12 and 50-388/80-12. As part of a continuing followup to evaluate the significance of tritium concentrations in groundwater, eighteen groundwater samples were collected by the inspector for tritium analysis at the RII laboratory. Selected samples were split with the licensee for tritium analysis by the licensee's contractor laboratory. A licensee representative agreed to make the results available to NRC RII. The NRC and licensee results will be reviewed during a subsequent inspection. The previously identified inspector followup item (321/81-07-06, 366/81-07-06) will remain open pending review of all data and the status of the licensee's groundwater monitoring program.

7. IE Bulletin 81-03

The inspector reviewed the licensee's response to IE Bulletin 81-03 (Flow Blockage of Cooling Water to Safety System Components by Corbicula Sp. (Asiatic Clam) and Mytilus Sp. (Mussel)).

The licensee routinely chlorinates the service water system attaining a chlorine residual of 0.3 ppm. Present detection methods consist of normal maintenance practices, including periodic dismantling and repairs of systems. The existing program appears to be effective in detecting any biological fouling. Further, the environmental monitoring program, as established under the ETS, requires sampling for clams semiannually. There were no questions regarding this item.