

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-440/84-16(DRSS); 50-441/84-15(DRSS)

Docket No. 50-440; 50-441

Licenses No. CPPR-148; CPPR-149

Licensee: Cleveland Electric Illuminating Company  
Post Office Box 5000  
Cleveland, OH 44101

Inspection At: Perry Site, Lake County, OH

Inspection Conducted: July 17-19, and 20, 1984 (Perry Site)

*S. Rozak for*

Inspector: M. J. Oestmann

8/10/84  
Date

*S. Rozak for*

Approved By: M. C. Schumacher, Chief  
Independent Measurements and  
Environmental Protection Section

8/10/84  
Date

Inspection Summary

Inspection on July 17-19, and 20, 1984 (Reports No. 50-440/84-16[DRSS];  
50-441/84-15[DRSS])

Areas Inspected: Routine, unannounced inspection of: (1) preoperational radiological environmental monitoring program (REMP), including implementation and results, quality assurance, and management controls; (2) review of the chemistry and radiochemistry program and procedures, organization, training, qualifications, and quality assurance; and (3) review of licensee actions taken regarding previously identified items. The inspection involved 21 inspector-hours onsite by one NRC inspector.

Results: No violations or deviations were identified.

## DETAILS

### 1. Persons Contacted

#### Licensee Personnel

- \*J. Bellock, General Supervising Engineer, Nuclear Design and Analysis Section (NDAS), Nuclear Engineering Department (NED)
- \*S. J. Wojton, Senior Engineer (NDAS)(NED)
- \*R. F. Zucker, Associate Engineer (NDAS) (NED)
- \*J. Webb, Associate Environmentalist (NDAS) (NED)
- J. Krylow, Engineering Technician (NDAS) (NED)
- \*F. Stead, Manager (NED)
- B. Nyerges, Junior Environmentalist, Licensing
- \*B. Walrath, General Supervising Engineer, Operational Quality Section (OQS), Nuclear QA Department (NQAD)
- \*R. P. Bowers, Corporate Health Physicist
- \*D. Reyes, Supervisor Chemistry Unit, Radiation Protection Section, Perry Plant Department (PPD)
- \*E. Traverso, Supervisor, Chemistry Unit, Radiation Protection Section, (PPD)
- \*D. Hech, Skills Training Supervisor, Perry Training Section
- D. Goddard, General Coordinator, Skills Training Section, Perry Training Section
- \*J. Lansberg, Unit Supervisor, Operational Support Program
- \*K. Kimmel, QA Engineer, Operational Support Program
- \*K. C. Kaplan, Senior Engineering Technician, Procurement and Administration Quality Section (NQAD)
- J. Zimmerman, Engineer, Electrical System (NDAS)
- \*\*S. Kensicki, General Supervising Engineer, Radiation Protection Section (PPD)

#### NRC Personnel

- \*,\*\*J. Grobe, Resident Inspector

The inspector also interviewed several other licensee personnel during the course of the inspection, including chemistry personnel.

\*Denotes those present at the plant exit interview on July 19, 1984.

\*\*Denotes those present during a telephone conversation on July 20, 1984.

### 2. Licensee Action on Previous Inspection Findings

- a. (Open) Open Item (50-440/80-14-01; 50-441/80-13-01): Licensee to install loudspeakers to warn boaters in case of an accident at the plant. Loudspeakers have been installed on Unit 1 cooling tower but not on Unit 2 cooling tower. A sound survey has just been performed with the loudspeakers on Unit 1 cooling tower and another one will be performed after the loudspeakers in the Unit 2 cooling tower are installed. This item will remain open pending completion of the

second sound survey and an acceptance test is performed to assure that specification 3.F(2) of the construction permit is met.

- b. (Closed) Open Item (50-440/80-14-02; 50-441/80-13-02): Barge slip area found disorderly, requiring cleanup. During a tour of the site during this inspection, the inspector noted that the barge slip area had been filled in with fill and the area cleaned up.

### 3. Management Controls, Organization, Training, and Qualifications

The inspector reviewed the licensee's management controls for implementation of the requirements of the preoperational radiological environmental monitoring program (REMP). The environmental programs are implemented under the supervision of the Senior Engineer in the Nuclear Design and Analysis Section of the Nuclear Engineering Department in the Nuclear Operations Division. Under the Senior Engineer, the Associate Environmentalist administers the contract with Nuclear Utilities Services, Inc. (NUS) who perform the analysis of the environmental samples. The Site Environmental Monitor, who reports to the Associate Environmentalist, collects and ships the environmental samples to NUS for analysis. The licensee was informed by NUS that NUS is discontinuing analytical laboratory services by August 15, 1984. The licensee is in the process of finding an alternate means to perform the sample analysis. This item will be examined in a future inspection. (Open Item 50-440/84-16-01; 50-441/84-15-01).

The inspector also reviewed the organization and staffing of the Chemistry Unit in the Radiation Protection Section of the Perry Plant Department in the Nuclear Operations Division. The Chemistry Unit organization and staffing appear to meet the commitments of the FSAR. There are two supervisors, one responsible for the chemistry hot and cold laboratory functions and the other for the counting room function plus procedures preparation and effluent monitoring development. Review of their resumes and discussions held with them indicate that they meet the qualification requirements in ANSI/ANS 3.1-1978. Two other technically qualified chemists with B.S. degrees in chemistry provide technical support to these two supervisors.

Twelve technicians, most of whom have experience in the nuclear navy, provide additional support and perform the daily plant sampling and analysis in the laboratory and counting room. The inspector noted that several were performing laboratory tasks during a tour of the laboratory and appeared to have a clear understanding of the procedures being followed. Staffing appears to be satisfactory.

The inspector also reviewed the training program for the chemistry technicians, which includes on the job experience, supervisory observation, and completion of a formal program of lecture and laboratory work. Discussions with the Training Section personnel indicate that they and the chemistry Unit supervisors have developed an adequate training program specifically for the chemists. This is described in Procedure RAP-0201, "Chemistry Unit Training/Qualification Program", dated August 31, 1983. A series of courses involving about a ten week period has been developed. This is in addition to a two week general employee training program. Five

technicians will complete the ten week course by mid-September. At that time the licensee will meet his commitments in the FSAR. In addition, the technicians are involved in completing their qualifications card by demonstrating their proficiency to perform all the analyses required in the laboratory. The training program appears to be satisfactory.

The inspector noted that the Environmental Monitor for the REMP attended a one week Basic Radiological Health course at the University of Texas Health Sciences Center in February 1983.

4. Implementation of the Radiological Environmental Monitoring Program (REMP)

The inspector discussed the implementation of the REMP with licensee representatives and reviewed annual environmental monitoring reports for 1981 and 1982 and monthly reports for 1983 to date to assure the requirements in Table 6.1-3 of the licensee's Environmental Report-Operating License Stage (ER-OC) are met. Except for strontium analysis, no problems were noted in the results. The licensee's contractor, NUS, is re-analyzing 18 samples collected in 1983 for strontium-89 and strontium-90 in milk and water to assure the results are valid prior to issuing the annual report for 1983. All samples were collected and results documented in the report's weekly log sheets accounted for all samples. These log sheets also included explanations for missing samples.

A tour of several environmental stations including air sampling, TLD, and a water compositor at the discharge indicated no problems. The air samplers had current calibration stickers. The air samplers are calibrated every six months. Access to one air sampling station (No. B-35) located on the east side of the licensee's site boundary is rather limited. No road is readily available to reach the present station. The inspector discussed the possibility of relocating Station No. 35 near a residence about 2000 ft. east of the present location where radiation exposure is more likely and the sampler would be readily available for sample collection. The inspector agreed to discuss this matter with NRC representatives from the Office of Nuclear Reactor Regulations and inform the licensee of the results of the discussion.

The inspector also reviewed the contractor's (NUS) internal QC program and the results of his participation in the EPA's cross check program for interlaboratory comparisons and found no problems. The licensee also had recently conducted a land census of milk animals. A fourth milk sampling farm is being added to the programs.

The inspector also reviewed 16 REMP sampling procedures prepared by the licensee and NUS. The concerned sample collection field logs, maintenance and calibration of air samplers, exchange of TLDs, collection of air particulate filters, air iodine charcoal adsorbers, milk and water, food crop soilage, vegetation, fish and sediment. The procedures were current, having been prepared and approved by management in 1983 and 1984. No problems were identified.

No violations or deviations were identified.

5. The Licensee's Chemistry/Radiochemistry Program

The licensee is performing sampling and analysis according to the Perry Chemical Procedure (OM12.CHI) during the flushing of reactor system components. The inspector observed several technicians performing several chemical analyses, in particular specific ion tests for chloride and fluoride ions. No problems were observed.

A tour of the cold and hot laboratory and counting room revealed no technical weaknesses. Instrumentation had been calibrated according to Procedure RAP-1202, "Control and Calibration of Chemistry Equipment, Standards, Services, and Reagents", dated August 31, 1983. Calibrations are controlled by the Radiation Protection Data Information System computer program. Reagents had labels with dates of preparation and expiration. No reagent was found with an expired date. In the counting room, the licensee performed daily background and performance checks of all counting equipment and maintains control charts on each instrument.

On May 1, 1984, the licensee established an analytical QC program in accordance with Procedure RAP-0204, "Chemistry Unit Analytical QC Program", involving intralaboratory analysis of spiked samples and interlaboratory analysis of split samples by the chemistry technicians every six months. Spiked samples include chloride, pH, conductivity, tritium, gross beta and alpha, iodine, iron, and strontium-89/90. Split samples include tritium, gross beta and alpha, iron and strontium-89/90. Results are not yet available but will be reviewed in a subsequent inspection. (Open Item 50-440/84-16-02; 50-441/84-15-02).

The inspector reviewed the following procedures that have been approved by the General Supervising Engineer of the Radiation Protection Section. They are classified as OM12A (Chemistry Analytical Instructions); )M12B (Chemistry Peagent Preparation Instructions); and OM12C (Chemistry Equipment Instructions).

<u>Procedure No.</u>	<u>Date Approved</u>	<u>Title</u>
OM12A:CHI-1	3/9/84	Acid Determination - % By Weight
7	4/15/84	Basic Laboratory Techniques
8	4/15/84	Boron - High Range
9	4/15/84	Boron - Low Range
12	4/1/84	Caustic Determination - % By Weight
13	4/15/84	Chloride, Electrode Method
14	4/1/84	Chlorine, Diphenylethylene-Dramine Method
15	4/15/84	Chromium, Permanganate Azide Method
16	4/15/84	Chromium, By Atomic Absorption
17	4/15/84	Conductivity Measurement
18	4/15/84	Copper, Neo-Cuproine Extraction Method
19	4/15/84	Copper, by Atomic Absorption
20	4/1/84	Dissolved Oxygen Chemets Kit

21	4/1/84	Dissolved Oxygen Indigo Carmine Method
23	4/1/84	Fluoride Electrode Method
27	4/15/84	Hydrazine
28	4/15/84	Iodine (I-131, 132, 133, 134, 135)
30	4/15/84	Iron-55 (Fe-55)
36	4/1/84	pH Measurement
43	4/1/84	Solids, Suspended, Dissolved
47	4/1/84	Tritium (H-3)

No problems were identified during the inspector's review of these procedures.

No violations or deviations were identified.

#### 6. Licensee Internal Audits

The inspector reviewed records for three internal QA audits of the environmental monitoring program performed by the licensee contractor, NUS, during 1983. Seven minor findings were identified. Corrective actions were taken in a timely manner and the findings closed out by November 3, 1983.

One chemistry audit was performed by QA representatives on December 14-21, 1983 for the purpose of evaluating the Chemistry Unit administrative and process controls to support cleaning, flushing, and testing activities. Six findings were identified concerning chemical lay ups, sampling and analysis of two bed and mixed bed water, lack of documentation of information on flush water quality sheets, and lack of documentation of training records on qualification cards for technicians performing analyses for flushing. All findings were closed out by January 16, 1984.

No violations or deviations were identified.

#### 7. Exit Interview

The inspector met with licensee representatives (denoted in Section 1) at the conclusion of the inspection on July 19, 1984. The inspector discussed the scope and findings of the inspection. The licensee agreed to resolve the open item (50-440/80-14-01; 50-441/80-13-01) identified previously prior to fuel load date. In addition, the licensee stated he will resolve the problem of finding an alternative means of analyzing REMP samples and to implement the QA program for chemistry spike and split samples in a timely manner.

On July 20, 1984, the inspector clarified certain items with the General Supervising Engineer of the Radiation Protection Section.