

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Reports No. 50-456/80-09; 50-457/80-08

Docket Nos. 50-456; 50-457

Licenses No. CPPR-132; CPPR-133

Licensee: Commonwealth Edison Company
P. O. Box 767
Chicago, IL 60690

Facility Name: Braidwood Station, Units 1 and 2

Inspection At: Braidwood Construction Site, Braidwood, IL

Inspection Conducted: September 17-19, and 23, 1980

Inspector: *C. J. Paperiello*
M. P. Phillips

Approved By: *C. J. Paperiello*
C. J. Paperiello, Acting Chief
Environmental and Special
Projects Section

Inspection Summary:

Inspection on September 17-19, and 23, 1980 (Reports No. 50-456/80-09;
50-457/80-08)

Areas Inspected: Routine, unannounced environmental protection inspection for both units, including preoperational environmental monitoring; review of onsite meteorological monitoring program; implementation of the Environmental Protection Program for onsite construction; examination of the licensee program for quality control of analytical measurements of ground-water samples from site monitoring wells; and a tour of the site construction activities. The inspection involved 24 inspector-hours on site by one NRC inspector.

Results: Of the five areas inspected, no items of noncompliance or deviations were identified in four areas; two apparent items of noncompliance were identified in one area (deficiency - radiological environmental monitoring program had not begun in July 1979 - Paragraph 2; deficiency - no daily or weekly environmental monitoring checks performed - Paragraph 4).

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DETAILS

1. Persons Contacted

- *C. L. McDonough, Director of Environmental Assessment, CECo
- J. Golden, Ph.D., Administrator for Radiological Environmental Monitoring Programs, Technical Services Department, CECo
- L. Literski, Meteorologist, Technical Services Department, CECo
- **R. R. Dlesk, Section Engineer, Operational Analysis Department, CECo
- **P. Nosko, Principal Chemist, Operational Analysis Department, CECo
- R. Monzingo, Ph.D., Fisheries Biologist, Environmental Affairs, CECo
- ***C. Grey, Environmental Activities Coordinator, CECo
- ***T. Summerfield, QA Supervisor for Construction, CECo
- ***R. Schleiter, Administrative Assistant for Construction, CECo
- ***R. Casaro, Project Superintendent for Construction, CECo
- J. Petro, Operating Engineer, CECo

*Denotes those present at the corporate exit interview.

**Denotes those present at the Technical Center (Maywood, IL) exit interview.

***Denotes those present at the construction site exit interview.

2. Preoperational Environmental Monitoring

During this inspection, the inspector reviewed the second and third Annual Construction and Preoperational Aquatic Monitoring Report and observed that all required parameters were measured. These reports cover monitoring performed from May 1978 through November 1979. For any sample missed at the time of sample collection, the reasons were given. The Aquatic Monitoring Program measures the physical, chemical, and biological water quality of the Kankakee River and Horse Creek. Measurements are taken along a transect upstream and downstream of the cooling lake's makeup and blowdown structures. Similar measurements will also be made in the cooling lake. The required terrestrial infrared aerial photogrammetric monitoring program was implemented and the report for CY79 was reviewed. Summaries of all the monitoring reports indicated that no adverse effects on the aquatic or terrestrial ecology due to plant construction or dewatering operations were evident.

Construction of the artificial cooling lake had been completed, and the lake is scheduled to be filled during October 1980. Cooling lake operations were inspected to ensure licensee compliance with environmental protection commitments. During the cooling lake filling, the licensee will monitor fish impingement on the intake screens.

Section 6.1.5 of the licensee's Environmental Report states in part, that the radiological environmental monitoring program will begin in July 1979. This program has not yet begun. The licensee was informed that all monitoring programs mentioned in the Environmental Report

were referenced as requirements of the Construction Permit, and as such, the licensee was in noncompliance for not having begun their radiological monitoring program.

No deviations or further items of noncompliance were identified.

3. Onsite Meteorological Program

The preoperational meteorological program is being performed for the licensee by Murray and Trettel in accordance with the Construction Permit and Section 6.1.1 of the Final Environmental Statement. The inspector examined the onsite meteorology equipment and determined that all required equipment was in calibration and functioning properly. The inspector also reviewed the semiannual meteorological reports for the period January 1979 through July 1980, and observed that all required parameters were measured and documented.

The inspector reviewed weekly operational and bimonthly calibration records of the meteorological equipment for the period January 1980 through July 1980. Data recovery and equipment status reports were also reviewed. These records and reports indicated that quality control of meteorological measurements was being performed.

No items of noncompliance or deviations were identified.

4. Onsite Environmental Protection Program

The inspector examined daily, weekly, and monthly records on the onsite Environmental Protection program for the period October 1978 through August 1980. The daily check sheets had been revised to incorporate a check for trash disposal. This had formerly been recorded on the weekly check sheet, but was revised by the licensee based on their commitment made during the previous inspection.^{1/} On September 13, 1979, construction at the Braidwood Site was halted. Construction was resumed during April 1980. The daily and weekly Environmental Protection programs were abandoned during October 1979 and at the time of this inspection had not been resumed. For example, daily checks were not being performed to monitor for entry of cement dust into the air, even though the auxiliary batch plant on site was being used to produce cement for a pour within the last week. This is in violation of the Construction Permits and constitutes an item of noncompliance. This was discussed at the exit interview, and the licensee stated they would begin all weekly, daily, and monthly checks immediately.

^{1/} IE Inspection Report No. 50-456/78-12; 50-457/78-12.

The inspector reviewed groundwater monitoring records for the period October 1978 through July 1980. Wells were being monitored for both quality and water level. In July 1979, the groundwater monitoring sample collection changed from monthly to quarterly, and the number of wells monitored was reduced from 15 to 7. No private wells were used in either monitoring program. These changes to the monitoring program were made with a corresponding amendment to the FSAR, but without a change to the Environmental Report. The licensee was reminded by the inspector that Section 6 of the Environmental Report is referenced by the Construction Permits as containing the environmental monitoring program requirements, and as such, changes to the monitoring program must be preceded by an amendment revising the appropriate section of the Environmental Report. The inspector noted that the licensee had not established a formal "action" guide list to identify any detrimental changes in the groundwater. The inspector stated that according to the Final Environmental Statement, Section 4.5.2.b, the licensee is required to take remedial action to protect offsite groundwater users if detrimental changes are detected. The licensee had developed a generic groundwater monitoring program basing "action levels" on a change of 50% in either direction from water quality measurements taken during the baseline period. This program had not yet been put in effect at the Braidwood site. This was discussed with the licensee at the exit interview.

Licensee records indicated that the dike area around the cooling lake had been seeded during May 1980 to help control erosion. An herbicide (2, 4-D) had been used on the transmission corridor, in accordance with Construction Permit requirements.

No deviations or further items of noncompliance were identified.

5. Construction Site Tour

At the beginning of the inspection, the inspector conducted a tour of the construction site facilities to verify the onsite Environmental Protection Program was being implemented. Areas inspected during the tour included the equipment laydown area, sewage treatment facility, NPDES discharge points, cooling lake, cooling lake dike, cooling lake intake and discharge structures, and the outside of containment structure areas. All around the site, and especially at the NPDES discharge points, several signs of erosion were present. For example, the concrete dam at NPDES discharge point 1 showed signs of internal collapse, and a similar dam at discharge point 2 had collapsed with water going around it. Since no daily checks for erosion control had been performed, these conditions had not been discovered prior to the inspectors site tour. A severe rain the day before the inspection probably contributed to the erosion, and also kept the dust under control. Upon discovery of the erosion, licensee representatives stated that they would correct the problems as soon as possible. The inspector stated that the lack of daily checks probably helped contribute to the erosion problems found at the site. This was discussed at the exit interview.

No items of noncompliance or deviations were identified.

6. Licensee Program for Quality Assurance in Environmental Monitoring

a. Licensee Internal Audits

The aquatic monitoring program is conducted for the licensee by the Illinois Natural History Survey. Licensee personnel routinely accompany this contractor on sample collections to verify that the required samples are properly collected; however, no documentation of these accompaniments was available for review by the inspector.

The CECO QA Department conducted an audit of the meteorological contractor, Murray and Trettel, during the period July 23, 1980, through August 4, 1980. Several deficiencies, including the lack of an N.B.S. traceable reference for calibrating thermometers, were identified in this audit. Corrective actions taken to correct these deficiencies will be reviewed during a future inspection.

No items of noncompliance or deviations were identified.

b. Licensee Program for Quality Control of Analytical Measurements

During the inspection, the inspector examined the licensee Operational Analysis Department (OAD) laboratory located in Maywood, Illinois. The inspector reviewed selected licensee procedures and records relating to nonradiological analysis of site groundwater. Procedures reviewed covered analysis for boron, cadmium, sulphate, zinc, lead, cyanide, dissolved solids, oil and grease, pH, calibration of the spectrophotometer, calibration of the balance, calibration of the turbidimeter, and preparation of samples for atomic absorption. All procedures noted above were current (most having been revised within the past year) and were deemed technically adequate.

The inspector toured the licensee's chemistry laboratory and observed that all laboratory instruments appeared to be functional, calibrations were current, and calibration curves were up-to-date. No technical weaknesses were observed.

No items of noncompliance or deviations were identified.

c. Quality Control of Laboratory Results

The licensee has established a formal program for checking the quality of analytical measurements of these observation well samples.

Currently, all analyses include a duplicate, spike, and blank to verify the accuracy of each analysis. Currently, QC checks on

all measurements are being conducted. The inspector reviewed selected QC results for phosphate, silica, and cyanide for the period January 1979 through September 10, 1980. All QC standard solutions are traceable to Environmental Research Associates prepared standards.

No items of noncompliance or deviations were identified.

d. Training of Chemistry Laboratory Personnel

Currently, the licensee trains chemistry personnel on-the-job. Such training includes supervisor observation of analytical measurements. The licensee has established a formal training program requiring chemistry personnel to perform selected analytical measurements.

If an analytical procedure is substantially changed, everyone must be re-certified on that procedure. These training records were reviewed by the inspector. Rigorous acceptance criteria have been established to determine if a plant chemist is properly trained. An unknown sample is given to individuals on a random basis approximately every two months. If a chemist fails to accurately determine the unknown however, no program currently exists to requalify that chemist for the analysis. The inspector stated that this needs to be addressed by the licensee in their training program. This was discussed at the exit interview.

No items of noncompliance or deviations were identified.

7. Exit Interview

The inspector met with licensee representatives (denoted in Paragraph 1) at the conclusion of the appropriate inspections on September 17, 18, and 23, 1980. The inspector summarized the scope and findings of the inspection. The licensee made the following remarks in response to certain of the items discussed by the inspector:

- a. Acknowledged statements by the inspector with respect to the items of noncompliance. (Paragraphs 2 and 4)
- b. Agreed to establish a groundwater monitoring program in accordance with the one defined in a letter from W. Naughton (CECo) to W. H. Regan, Jr., (NRC), dated August 30, 1979. The licensee further agreed to amend the Environmental Report prior to implementation of this program, and to implement this program by March 1981. (Paragraph 4)
- c. Agreed to immediately resume daily onsite environmental monitoring checks beginning with September 18, 1980, to help identify and correct erosion problems onsite. (Paragraph 5)

- d. Agreed to look into the revision of the certification program for laboratory personnel to include actions to be taken when an analyst's results for a certification sample during a bimonthly check are inaccurate. (Paragraph 6.e)