

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-461/84-26(DRSS)

Docket No. 50-461

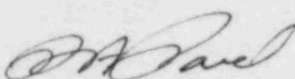
License No. - Construction
Permit CPPR-137

Licensee: Illinois Power Company
500 South 27th Street
Decatur, IL 62525

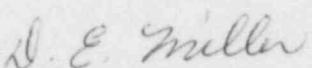
Facility Name: Clinton Power Station, Unit 1

Inspection At: Clinton Site, Clinton, IL

Inspection Conducted: September 4-6, and 25-27, 1984


Inspector: R. A. Paul

10/18/84
Date


Approved By: D. E. Miller, Chief
Facilities Radiation Protection
Section

10/18/84
Date

Inspection Summary

Inspection on September 4-6, and 25-27, 1984 (Report No. 50-461/84-26[DRSS])

Areas Inspected: Routine announced inspection of preoperational inspection of radwaste and radiation protection programs, including staffing, status of tests and test procedures for liquid and gaseous radwaste, and ALARA reviews. Extensive tours of the facility were also made. The inspection involved 48 inspector-hours onsite by one NRC inspector.

Results: No violations or deviations were identified.

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DETAILS

1. Persons Contacted

J. Barcalow, Engineering
R. Campbell, Director, Quality Systems and Audits
T. Froelich, Supervisor - Radiological Support
J. Funk, Health Physics Supervisor
*R. Haight, Supervisor - Radiation Protection
*D. Hall, Vice President
*D. Hillyer, Supervisor - Radiological Operations
R. Hinson, Lead Start Up Engineer
D. Holsinger, Lead Start Up Engineer
*R. Riedel, Assistant Director, Construction
*J. Sprague, Station Quality Control Specialist

*P. Gwynn, Resident Inspector

*Those in attendance at the exit interview on September 27, 1984.

2. General

This inspection, which began at 10:30 a.m. on September 4, 1984, was conducted to review the status of the preoperational tests of the liquid, gaseous, and solid radwaste systems, and the preoperational radiation protection program, including health physics staffing, radiation monitoring systems, status of FSAR and procedural changes, and discussions concerning NUREG 0737 TMI Action Items. Several tours of the licensee's facility were made.

3. Licensee Action on Previous Inspection Findings

(Closed) Open Item (461/83-18-01): Review of certain radiation protection procedures. The inspector-identified problems with the procedures have been or are being revised.

(Closed) Open Item (461/84-01-01): Procedure to incorporate the basis for establishing the plant ALARA program. A Corporate Nuclear Procedure (CNP 5.01) incorporates a radiation policy section concerning ALARA.

(Closed) Open Item (461/84-01-05): Independent ALARA review by the licensee of liquid radwaste systems. The licensee initiated an ALARA review of these systems which was verified during this inspection.

4. Organization and Staffing

Since the previous inspection (Report No. 50-461/84-09), the licensee has lost the Plant Manager and has appointed the Assistant Power Plant Manager as the Acting Plant Manager. The licensee has also appointed a Supervisor-Radiological Support, a Health Physics Supervisor, a Radiation Protection Shift Supervisor, and an Acting Supervisor-Radiological Engineering. The

person appointed as the Health Physics Supervisor meets the Professional-Technical Radiation Protection (RPM) qualifications requirements specified in Section 4.4.4 of ANSI/ANS 3.1, 1978, and the person appointed as the Radiation Protection Shift Engineer meets the "Supervisors Not Requiring NRC Licenses" qualifications specified in Section 4.3.2 of ANSI/ANS 3.1 - 1978.

5. Liquid Radwaste Systems

To date, there have been no preoperational tests of the liquid radwaste system; however, approximately 90% of individual component and hydrostatic testing and flushing has been completed for such systems on the 702' and 720' levels. Approximately 25% of the same tests have been completed on the systems on the 737' and 762' levels. The status of the test programs will continue to be reviewed during future inspections (50-461/84-01-02).

During a previous inspection (50-461/84-01), it was noted that the licensee had developed approved procedures for liquid releases/alarm set points, laboratory analyses, sampling analyses, sampling schedules, and surveillance and calibration for instrumentation. To date the inspector has not reviewed these procedures but will do so during a future inspection (50-461/84-01-03).

During a previous inspection (50-461/84-01), it was noted that because of problems concerning the licensee's liquid radwaste solidification system, engineering, construction and testing had been stopped. Since then the stop order has been lifted and the licensee plans on modifying the system so that it can be used to support the portable liquid solidification system the licensee intends to use. The status of this system will continue to be reviewed by the inspector (50-461/84-01-04).

6. Liquid Effluent Process Radiation Monitors

During a previous inspection (50-461/84-01) it was noted that the quantity and types of liquid process monitors were sufficient; however, none had been preoperationally tested or calibrated. The status has not changed. This matter will be reviewed during a future inspection (50-461/84-26-01).

7. Liquid Waste Preoperational Test Procedures

The inspector reviewed the status of the following radwaste preoperation test procedures.

PTP-WY-01	Revision 0	Laundry Equipment and Drain Radwaste Reprocessing and Disposal - usable
PTP-WE-01	Revision 0	Equipment Drain Radwaste Reprocessing and Drain Disposal - in revision
PTP-TE-01	Revision 0	Turbine, Off Gas, Radwaste Control, and DG Building Equipment Drains - approved

PTP-WF-01	Revision 0	Floor Drain Radwaste Reprocessing and Disposal - in revision
PTP-WX-01	Revision 0	Solid Radwaste - being written, on hold pending design question
PTP-WZ-01	Revision 0	Chemical Radwaste Reprocessing and Disposal - in revision
PTP-RE-01	Revision 0	Containment Auxiliary and Fuel Building Equipment Drains - in rewrite
PTP-RF-01	Revision 0	Containment Auxiliary and Fuel Building Floor Drains - in rewrite
PTP-TF-01	Revision 0	Turbine, Off Gas, Radwaste Control, and DG Building Floor Drains - in review
PTP-OG-01	Revision 0	Off Gas - in rewrite

No problems were identified with those procedures which were either approved or in the review cycle. The procedures being rewritten were not reviewed.

8. Gaseous Radwaste Systems

The gaseous radwaste system is briefly described in Inspection Report No. 50-461/84-09. With the exception of the glycol cooler section of the system, the gaseous radwaste system has not been turned over to the station. Preoperational testing for this system is scheduled for 1985. The results of the tests and test procedures will be reviewed during a future inspection (50-461/84-09-01).

9. Gaseous Radwaste Preoperational Test Procedures

The inspector reviewed the status of the following radwaste procedures.

PTP-OG-01	Off Gas Glycol - completed
PTP-OG-02	Off Gas Process - approved
PTP-VG-01	Standby Gas Treatment - in preparation
PTP-VQ-01	Drywell Purge - in preparation
PTP-VP-01	Containment HVAC - in preparation

No problems were identified with those procedures which were either approved or in the review cycle. The procedures in preparation were not reviewed.

10. Radiation Protection Procedures

The inspector reviewed the following radiation protection procedures:

CNP 5.01	Revision 0	Radiological Control Program
CNP 5.02	Revision 0	Radiological Control Organization and Administration

CPS 1895.04	Revision 0	ALARA Preoperational Review
CPS 1901.10	Revision 0	Radiation Protection Department Organization and Functions
CPS 1902.10	Revision 0	Radiological Controls Training and Qualification
CPS 1903.10	Revision 0	Personnel Dose Limits
CPS 1911.00	Revision 0	Radiation Protection Instrument Controls and Calibration Program

The inspector noted problems and raised several questions concerning the intent and content of Procedures CNP 5.01 and CNP 5.02. These matters were discussed with the licensee. Some minor problems were also found in the remainder of the procedures which will be discussed with the licensee at a future inspection (50-461/84-26-02).

11. ALARA

The Health Physics Department (HPD) has initiated an ALARA review program. The review is intended to identify design and construction features that are not ALARA. The program is designed so that each month HPD personnel review different systems of the plant. The program will include walkdowns of the Containment, Auxiliary, Fuel, Turbine, Radwaste, and Control and Diesel buildings; review of operations such as fuel handling; CRD maintenance, general maintenance activities and radwaste handling and processing; review of radiological and process monitoring locations; and access controls. Currently the reviews are of the liquid and solid waste management systems.

After each review is completed, the findings are recorded on the Preop ALARA Review Summary. The findings are then reviewed with a senior reviewer, after which the findings and recommendations for correcting the problems are submitted to the Radiation Engineering Group, which does a cost benefit analysis. The analysis and findings are then submitted to the ALARA committee for consideration. At the time of this inspection, none of the findings, recommendations, or cost benefit analyses had been submitted to the ALARA committee.

During this inspection, the Supervisor-Radiological Health (SRH) and the inspector toured portions of the plant which had been reviewed for ALARA. These areas included the liquid radwaste system, fuel transfer system, control rod drive (CRD) repair room, and under the vessel to observe how CRD mechanisms will be handled during removal and replacement. Some of the problems noted by the SRH include: (1) Manway access ports on the spent resin tanks are easily accessible and should be locked. Administrative controls should be developed to prevent entry during resin transfers. (2) Flanges should be put on the liquid process radwaste pump drain lines in place of the welded lines to prevent unnecessary radiation exposure during maintenance. (3) Air flows in some of the radwaste pump cubicles flow from a potentially high contaminated area to a potentially low contaminated area. The flow should be reversed. (4) Splash pans on radwaste processing pumps are shallow, possibly causing unnecessary floor contamination due to spillage. Deeper pans should be considered to replace

them. (5) Several waste control panels are located in probable high radiation areas. They should be relocated. (6) The reboiler used in the auxiliary steam system has a relief valve in the vent line. If the valve were used, radioactive material could be released into the Auxiliary Building vent. This is an unmonitored release path. (7) Effluent lines into the equipment drain collection processing and surge tanks have vertical support, but no horizontal support, possibly causing metal fatigue of the lines. (8) Potential for reduction of radioactive particulate and iodine collection efficiency on the constant air monitors in some of the radwaste areas due to line loss.

The progress of the ALARA review program will be reviewed during future inspections (50-461/84-26-03).

12. Exit Interview

The inspector met with the licensee representatives (denoted in Section 1) at the conclusion of the inspection on September 27, 1984. The scope and findings of the inspection were summarized. The licensee acknowledged the inspector's comments concerning procedure problems and the implementation of the ALARA review program.