U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-483/82-08(DETP)

Docket No. 50-483 License No. CPPR-139

Licensee: Union Electric Company
P. O. Box 149
St. Louis, MO 63166

Facility Name: Callaway, Unit 1

Inspection At: Callaway Site, Callaway County, MO

Inspection Conducted: August 18-20, 1982

Inspectors: P. C. Lovendale — 9/2/82

W. B. Grant — 9/2/82

Approved By: L. R. Greger, Chief — 9/2/82
Facilities Radiation
Protection Section

Inspection Summary

Inspection on August 18-20, 1982 (Report No. 50-483/82-08(DETP))
Areas Inspected: Routine, unannounced preoperational inspection of the radiation protection program including: organization, initial training, refresher training, radiation protection procedures, facilities and equipment, and respiratory protection program. The inspection involved 46 inspector-hours onsite by two NRC inspectors.
Results: No items of noncompliance or deviations were identified.

DETAILS

1. Persons Contacted

*S. E. Miltenberger, Manager, Callaway Plant
*G. L. Randolph, Assistant Manager, Technical Services
*D. C. Poole, Advisor to the Manager, Callaway Plant
*J. R. Peevy, Supervisor, Radiation Protection
*P. A. Walsh, Supervisor, Health Physics Technical Support
*R. R. Roselius, Supervisor, Health Physics Operations
*F. Forck, QA Chemist
*M. Reinhart, QA Consultant

*J. H. Neisler, NRC Senior Resident Inspector

The inspectors also interviewed other licensee and contractor employees including Rad/Chem foremen and technicians.

*Denotes those present at the exit meeting.

2. General

This inspection, which began at 8:00 a.m. on August 18, 1982, was conducted to examine the licensee's provisions for health physics staff, initial and refresher training, radiation protection procedures, facilities, and instruments and equipment necessary to comply with regulatory requirements and commitments in the Final Safety Analysis Report (FSAR).

3. Organization

The licensee's health physics, radwaste, and chemistry organizations were reviewed. The Health Physics Supervisor, Radwaste Supervisor, and Chemistry Supervisor head their respective groups and report to the Assistant Manager, Technical Services, who reports to the Manager, Callaway Plant (see attached organization chart). These three groups are separate except that 40 percent of the technicians will rotate between the three groups. Sixty percent of the technicians will remain permanently assigned to a specific group. Although no problems were evident, this organization differs from that which is described in Chapter 13 of the Final Safety Analysis Report (FSAR). This matter was discussed during the exit meeting and will be reviewed during a future inspection. (483/82-08-01)

The current staffing plan allows for fifty radiation/chemical technicians (RCTs) to staff the three groups (health physics, radwaste, and chemistry). Twenty-eight of the fifty RCT positions had been filled, but ten were recently promoted to radiation/chemical foremen. Five recently hired RCTs will start work in the near future, leaving about twenty-seven RCT openings. The licensee has continued to hire experienced RCTs who meet or exceed the selection criteria

for technicians in Section 4.5.2 of ANSI 3.1-1978. Two of the technicians are certified by the National Registry of Radiation Protection Technologists (NRRPT). Eight RCTs have participated in refueling outages at other power reactors.

Currently, twelve radiation/chemical foremen have been selected to fill positions within the health physics, chemistry, and radwaste groups. Six of these are assigned to health physics. All six radiation/chemical foreman assigned to health physics meet or exceed the selection criteria for supervisors not requiring NRC licenses in Section 4.3.2 of ANS 3.1-1978. Four radiation/chemical foremen assigned to health physics are certified by the NRRPT.

According to the licensee, the Health Physics Supervisor will serve as the plant's Radiation Protection Manager (RPM). As noted in a previous inspection[1] the person currently filling this position meets the RPM academic and experience criteria of Regulatory Guide 1.8, "Personnel Selection and Training." This person has completed Part I of the American Board of Health Physics certification for power reactor health physicists. In a letter to NRR dated September 4, 1981, the licensee stated that the Health Physics Supervisor (RPM) would participate in two refueling outages at other nuclear power plants by fuel load. (483/02-08-02)

During a previous inspection,[2] it was noted that no person in the organization met the radiochemistry experience criterion of Section 4.4.3 of ANSI 3.1-1978. The licensee has recently hired a person who meets this criterion. This person holds a BS degree in chemistry, a MA degree in radiochemistry, and has about five years of related experience.

Since the last inspection,[3] two additional health physicists have been hired, bringing the total to five. One holds a B.S. degree in health physics but has very limited experience. The other holds a B.S. in chemistry, an M.S. degree in nuclear engineering, and has about five years experience at a research reactor; however, his experience was not in health physics.

4. Radiation/Chemical Technician Training

The licensee's radiation/chemical technician chemistry and health physics training program remains as previously described,[4] except that the licensee's training department has taken over administration of the program from the University of Missouri. The radwaste operations portion of the RCTs training is currently under development. A radiation/chemical technician refresher training program has not been developed. The licensee has committed to implement a refresher training program six months after fuel load. This commitment is contained in a letter to NRR dated September 4, 1981. (483/82-08-03)

1 Inspection Report No. 50-483/81-18.
2 Ibid.
3 Ibid.
4 Ibid.

5. General Employee Training

The licensee's general employee radiation protection training was reviewed. Escorted radiation workers (Category I) will attend a one-day course and must achieve a grade of 70 percent on a 60 question written test. Unescorted radiation workers (Category II) will attend a two-day course and must achieve a grade of 70 percent on a 100 question written test. Workers who have previous radiation worker training will attend a four-hour refresher course and must achieve a grade of 70 percent on the Category II test. No problems were noted.

6. Facilities

The inspectors toured selected areas of the plant related to radiation protection including, access control area, laboratories, laundry facilities, change areas, decontamination facilities, counting room, and office areas. Some space deficiencies were noted as follows:

a. The access control area is small and will likely become congested during outages.

b. There is no space allotted for storage, cleaning, maintenance, and issuing of respiratory protection equipment.

c. The laundry is small and occupies space in the access control area which could be better utilized for respiratory equipment issuance/storage, protective clothing storage, or increased locker space.

d. There appears to be no dedicated contaminated tool crib or storage area.

e. The steam generator platforms are very small and will make entries more difficult.

f. Office space is needed for the chemistry, radwaste, and health physics groups. They currently occupy the Emergency Operations Facility.

These matters were discussed during the exit interview and will be reviewed during a future inspection. (483/82-08-04)

7. Instrumentation and Equipment

The licensee has hardware and software packages to provide the health physics and radiochemistry programs with a computer based system for gamma spectroscopy, whole body counting, Radiation Work Permit management, personal exposure record management, and TLD data management. The system will provide for acquisition, processing, and management of the specific data inputs.

The licensee plans to install intrinsic germanium detectors and multichannel analyzer hardware in the counting room, the radwaste room, and in the Emergency Operation Facility (EOF). Other hardware and software systems including the whole body counter, system terminals, microprocessors, printers/plotters, and data entry terminals are planned for various areas in the power block and the service building. The inspectors reviewed the available system functions with the licensee; no problems were noted.

8. Respiratory Protection Program

The respiratory protection program was reviewed. An adequate supply of respirators and spare parts have been purchased or have been ordered. A two-person test booth is in place for respiratory fit testing, which will utilize corn oil for the aerosol. The only problem noted concerns the lack of storage and maintenance space for respirators previously noted in Section 6.

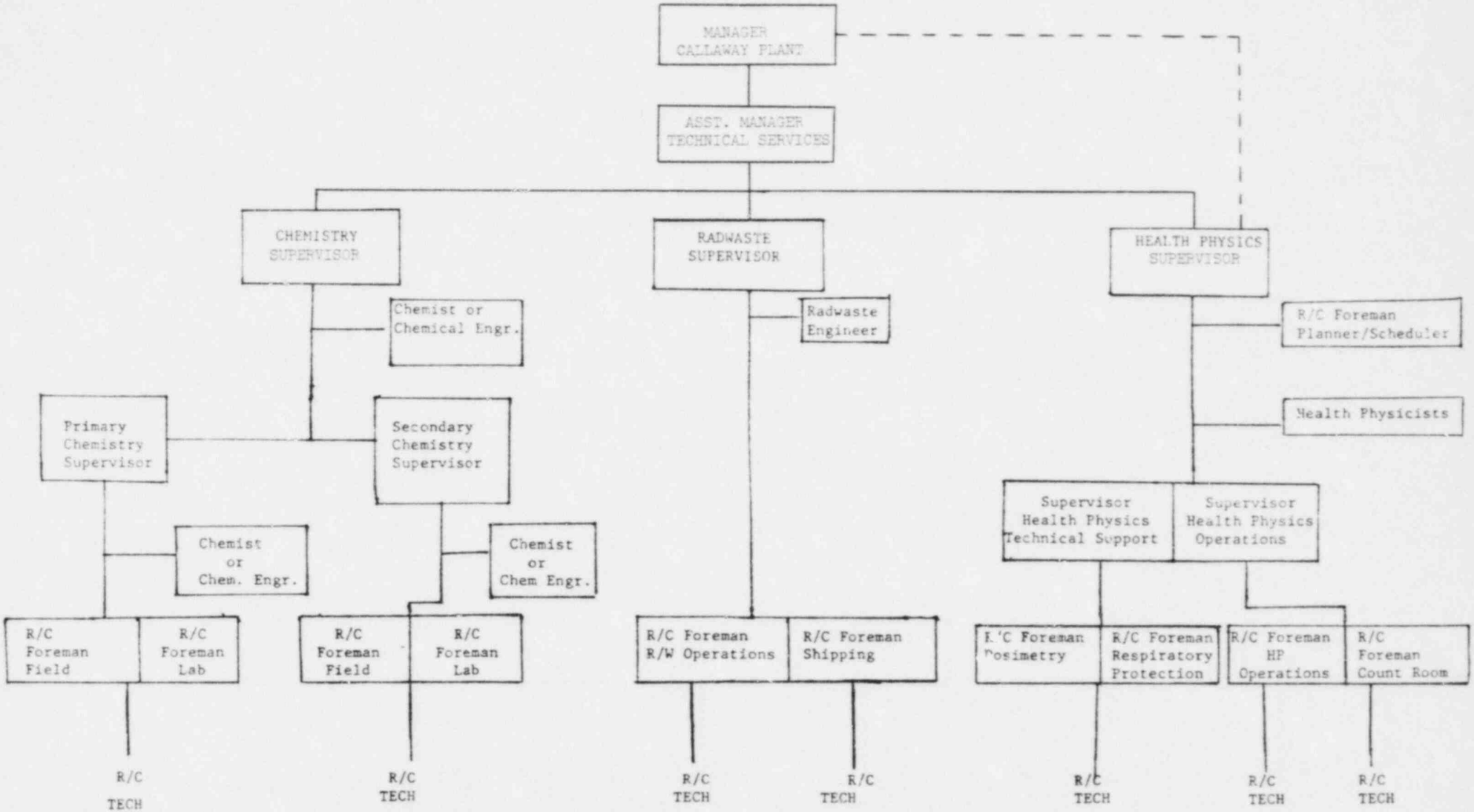
The licensee plans to install dedicated breathing air systems in the plant rather than utilizing the service air systems. This feature would preclude the possibility of contaminating the source of breathing air through interconnnections of contaminated systems with the service air systems as noted in IE Information Notice No. 79-08.

9. Exit Meeting

The inspectors met with licensee representatives (denoted in Section 1) on August 20, 1982. The inspectors summarized the scope and findings of the inspection. In response to certain items discussed, the licensee:

a. Stated that organization changes would be reflected in a future revision to Chapter 13 of the FSAR. (Section 3)

b. Acknowledged the inspectors' comments concerning radiation protection facilities space limitations.


MANAGER CALLAWAY PLANT
ASST. MANAGER TECHNICAL SERVICES
CHEMISTRY SUPERVISOR
RADWASTE SUPERVISOR
HEALTH PHYSICS SUPERVISOR
Chemist or Chemical Engr.
Radwaste Engineer
R/C Foreman Planner/Scheduler
Primary Chemistry Supervisor
Secondary Chemistry Supervisor
Health Physicists
Supervisor Health Physics Technical Support
Supervisor Health Physics Operations
Chemist or Chem. Engr.
Chemist or Chem Engr.
R/C Foreman Field
R/C Foreman Lab
R/C Foreman Field
R/C Foreman Lab
R/C Foreman R/W Operations
R/C Foreman Shipping
R/C Foreman Dosimetry
R/C Foreman Respiratory Protection
R/C Foreman HP Operations
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