APPENDIX

U. S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-382/83-07 License/CP: CPPR-103

Docket: 50-382 Category: 2A

Licensee: Louisiana Power and Light Company (LP&L)
142 Delaronde Street
New Orleans, Louisiana 70174

Facility Name: Waterford-3 (WF-3)

Inspection At: Taft, Louisiana

Inspection Conducted: January 24-28, 1983

Inspector: Ronald Baer 4/7/83
R. E. Baer, Radiation Specialist Date

Approved: Blaine Murray 4/7/83
Blaine Murray, Chief, Facilities Radiation Protection Section Date

for C. R. Oberg 4/12/83
W. A. Crossman, Chief, Reactor Project Section B Date

Inspection Summary

Inspection conducted on January 24-28, 1983 (Report: 50-382/83-07)

Areas Inspected: Routine, unannounced followup inspection of the licensee's radioactive waste program and transportation activities including: organization, training, personnel qualifications, waste systems, effluent release controls, air cleaning systems, instrumentation, radiological effluent technical specifications, transportation activities, audits, and procedures. The inspection involved 36 inspector-hours onsite by one NRC inspector.

Results: Within the 11 areas inspected, no violations or deviations were identified.

DETAILS

1. Persons Contacted

Louisiana Power and Light Company

*R. P. Barkhurst, Plant Manager
*T. Alexander, Radwaste Startup Engineer
*D. Baker, Licensing
*H. A. Canavier, Maintenance Assistant Superintendent
*D. Espenan, Effluent and Environmental Coordinator
J. Funk, Health Physics Supervisor, Operations
B. Hinson, Staff Assistant, I&C Superintendent
D. Hoel, Health Physics Supervisor, Operations
*R. W. Kenning, Health Physics Superintendent
*K. L. LeBlanc, Maintenance Assistant Superintendent (I&C)
*J. McGaha, Technical Support Superintendent
*W. M. Morgan, Operational Quality Assurance Engineer
*J. B. Perez, Operational Quality Assurance Engineer
C. V. Phillips, Instrument and Control Supervisor
*P. B. Prasankumar, Maintenance Superintendent
*D. M. Rieder, Radwaste Associate Engineer
A. R. Roberts, Quality Assurance Associate Engineer
*L. R. Simon, Radwaste Engineer
C. J. Toth, Manager - Nuclear Training - Implementation
*M. J. Wise, Plant Manager Assistant

Others

*W. E. Hellums, Supervisor, Health Physics Radwaste Training - Consultant
C. A. Moore, Radwaste Startup Supervisor - Charles Moore & Associates
*D. T. Simpson, Radwaste Consultant - Nuclear Support Services
H. Story, Health Physics Consultant
T. A. Flippo, Resident Inspector, USNRC
*R. Landry, Secretary to Resident Inspector, USNRC

*Denotes those present at the exit interview.

2. Licensee Action on Previous Inspection Findings

(Open) Open Item (382/8211-01): Corporate Radwaste Organization - This item was discussed in NRC Inspection Report 50-382/82-11 and involved the lack of a corporate radwaste policy, position qualifications and job descriptions, defined responsibilities and interfaces with the onsite radwaste department, and procedures governing activities. The licensee had developed a radwaste policy, defined responsibilities and interfaces with the onsite radwaste department, and developed procedures governing activities of the radiation control section. This item is considered open pending the development of position qualifications, job descriptions, and procedures. See paragraph 3a for details.

(Closed) Open Item (382/8211-02): Station Radwaste Organization - This item was discussed in NRC Inspection Report 50-382/82-11 and involved the lack of a station radwaste policy, position qualifications and job descriptions, defined responsibilities and interfaces with the corporate organization, and procedures governing activities. The licensee has developed the necessary procedures and job descriptions which cover the items listed above. See paragraph 3b for additional details. This item (382/8211-02) is considered closed.

(Closed) Open Item (382/8211-03): Radwaste Training Program - This item was discussed in NRC Inspection Report 50-382/82-11 and involved the lack of an established training program for radwaste personnel. The licensee had developed and implemented a training program for radwaste personnel. See paragraph 4 for additional details. This item (382/8211-03) is considered closed.

(Closed) Open Item (382/8211-04): Personnel Selection and Qualification Criteria - This item was discussed in NRC Inspection Report 50-382/82-11 and involved the lack of minimum selection and qualification criteria for personnel involved with radwaste and transportation activities. The licensee had developed a procedure and position descriptions which set forth minimum selection and qualification criteria. See paragraph 5 for additional details. This item (382/8211-04) is considered closed.

(Open) Open Item (382/8211-05): Liquid Waste Management - This item was discussed in NRC Inspection Report 50-382/82-11 and involved the lack of preoperational surveillance and calibration procedures, defined calibration standards, and problem areas identified in a system ALARA review. The licensee had developed procedures for preoperational testing and was in the process of modifying the liquid waste system to correct identified problem areas. This item is considered open pending completion of all procedures, defined calibration standards, and ALARA problem areas. See paragraph 6 for additional details.

(Open) Open Item (382/8211-06): Gaseous Waste Management - This item was discussed in NRC Inspection Report 50-382/82-11 and involved the lack of preoperational surveillance and calibration procedures, defined calibration standards, and problem areas identified in a system ALARA review. The licensee had developed procedures for preoperational testing and was in the process of modifying the gaseous waste system to correct identified problem areas. This item is considered open pending completion of calibration procedures, defined calibration standards, and ALARA problem areas. See paragraph 6 for additional details.

(Open) Open Item (382/8211-07): Control of Effluent Releases - This item was discussed in NRC Inspection Report 50-382/82-11 and involved the lack of a program for controlling the release of gaseous and liquid effluents. The licensee had draft procedures for the manual release of effluents, but had not started on procedures for the automated release of effluents. See paragraph 7 for additional details.

(Open) Open Item (382/8211-08): Solid Waste Management - This item was discussed in NRC Inspection Report 50-382/82-11 and involved the lack of system performance testing, acceptable waste storage area, and problem areas identified in a system ALARA review. The licensee was in the process of constructing a building for the compaction and storage of dry radioactive waste, rerouting piping for the spent resin system, and evaluating a vendor-supplied solidification system. This item is considered open pending approval of final safety analysis report (FSAR) amendment, vendor-supplied solidification system selection, operating procedures, completion of waste storage area, and preoperational tests. See paragraph 8 for additional details.

(Open) Open Item (382/8211-09): Air Cleaning Systems - This item was discussed in NRC Inspection Report 50-382/82-11 and involved the lack of procedures for filter system tests. The licensee had not put any filter systems in operation. Work was in progress on the fuel handling building air cleaning system; filters and charcoal adsorber beds were to be loaded and tested. This item is considered open pending development of filter system test procedures and acceptable testing of all high-efficiency particulate air (HEPA) filters and charcoal absorption units.

(Open) Open Item (382/8211-10): Instrumentation - This item was discussed in NRC Inspection Report 50-382/82-11 and involved the lack of system startup, functional test, and calibration procedures; defined calibration standards; and defined responsibility. The licensee has started developing the necessary procedures for system startup, functional test, and calibration. This item is considered open pending the completion of procedures, defined calibration standards, calibration frequency, FSAR correction of detector range, and identification. See paragraph 9 for additional details.

(Open) Open Item (382/8211-11): Technical Specifications - This item was discussed in NRC Inspection Report 50-382/82-11 and involved the lack of Radiological Effluent Technical Specifications (RETS). The licensee had submitted a proposed RETS to Nuclear Reactor Regulation. See paragraph 10 for additional details.

(Open) Open Item (382/8211-12): Transportation Activities - This item was discussed in NRC Inspection Report 50-382/82-11 and involved the lack of defining responsibilities, procedures, training program, and audits for transportation activities. The licensee had defined responsibilities and developed a training program and audit procedure. The licensee had not developed all the necessary procedures for transportation activities. See paragraph 11 for additional details.

(Open) Open Item (382/8211-13): Audit and Review Program - This item was discussed in NRC Inspection Report 50-382/82-11 and involved the lack of an audit and review program for waste handling, storage, and transportation; operation of liquid, gaseous, and solid systems; control of effluent releases; effluent, process, and area radiation monitor calibration; air cleaning systems; and Radiological Effluent Technical Specifications. The licensee had developed procedures for audits of radwaste operations. Audit procedures for instrument calibrations, effluent releases, and air cleaning system testing had not been developed. See paragraph 12 for additional details.

(Open) Open Item (382/8211-14): Procedures - This item was discussed in NRC Inspection Report 50-382/82-11 and involved the lack of procedures necessary to implement a radwaste or transportation program. The licensee has not completed all necessary procedures for instrument calibration and operation, effluent release control, and ventilation system testing and calibration.

3. Radioactive Waste Management Organization

The NRC inspector examined the licensee's corporate and onsite organizations regarding radioactive waste management to determine compliance with the Final Safety Analysis Report (FSAR) commitments.

Documents Reviewed

- FSAR Chapter 13, "Organizational Structure of Applicant"
- Position Description for "Radwaste Department Head Engineer-Nuclear"
- Position Description for "Radwaste Helper-Nuclear"
- Position Description for "Waste Management Engineering Technician"
- PMD-RW-001, "Program Description for Radioactive Waste," Revision 0
- PMD-RW-002, "Program Description for Transportation of Radioactive Waste," Revision 0
- RW-1-100, "Administrative Procedure Radioactive Waste Reduction," Revision 0
- NAP-220, "Radiation Control Section Overview," Revision 0
- NAP-269, "Radiation Control Section Radwaste Procedure," Revision 0

a. Corporate Radioactive Waste Management Organization

The management of radioactive waste activities within the Louisiana Power and Light (LP&L) corporate organization had been assigned to the Waterford-3 nuclear project support group (NPSG) personnel in the radiation control section (RCS). The responsibilities and interface with the onsite radwaste department has been defined in Nuclear Administrative Procedure (NAP)-220 and is further delineated in NAP-269. The RCS has been assigned interface duties in the area of contract maintenance, burial scheduling, facility design changes/reviews, and special projects. The corporate radwaste policy has not been specifically addressed; however, the elements of the corporate radwaste policy are contained in PMD-RW-001.

The NRC inspector was not able to determine if the licensee had developed a position qualification and job description for the radiation control engineer-nuclear, laboratory service engineer-nuclear, or exposure control engineer-nuclear, or developed all the necessary procedures governing activities to be performed by the RCS.

Open Item (382/8211-01), corporate radwaste organization, will remain open pending the development of position qualifications and job descriptions and procedures.

b. Onsite Radioactive Waste Management Organization

The responsibility for coordination of the overall radwaste program at Waterford-3 had been assigned to the plant manager-nuclear. The radwaste engineer-nuclear had been assigned the responsibility for coordinating all radwaste logistics.

The radwaste engineer-nuclear and four radwaste helper-nuclear positions were filled in the organizational structure at the time of this inspection. Personnel had been selected to fill the positions of waste management engineering technician-nuclear and the radwaste helper-nuclear which were vacant. The licensee had developed position descriptions for all personnel assigned to the radwaste department.

The station radwaste policy statement had not been specifically addressed; however, the elements of the station radwaste policy are contained in PMD-RW-001 and Administrative Procedure RW-1-100.

The licensee had developed procedures governing activities within the assigned area of responsibility.

Open Item (382/8211-02), station radwaste organization, is considered closed.

No violations or deviations were identified.

4. Radioactive Waste Management Training Program

The NRC inspector reviewed the licensee's radioactive waste training program to determine compliance with FSAR commitments, 10 CFR Part 19.12 requirements, and the recommendations of ANSI/ANS 55.1-1979, 55.4-1979, 55.6-1979, NUREG-0761, and Regulatory Guides 8.8 and 8.10.

Documents Reviewed

. PMD-TR-015, "Program Description for Radwaste Training Program," Revision 0

. RW-1-410, "Radwaste Personnel Qualifications," (Draft)

. W3T001-000-00, "Radwaste Program Overview," Lesson Plan

. W3T002-000-00, "Solid Waste Compaction"

. W3T004-001-00, "Radioactive Material Packaging"

The NRC inspector discussed the training programs for radwaste personnel with the training manager. The training program for radwaste helpers was in progress. Personnel were scheduled for training in the following areas:

. General Employee Training (GET)-1

. GET-II, Radiation Worker Training

. GET-III, Respiratory Protection Training

. Introductory Health Physics

. Junior 1 Health Physics Technician Training

. W3T001-000-00, Radwaste Program Overview

. W3T002-000-00, Solid Waste Compaction

. W3T003-000-00, Radwaste Solidification

. W3T004-000-00, Radwaste Packaging Requirements

. W3T004-001-00, Radioactive Material Packaging

. W3T005-000-00, Radwaste Shipments

. W3T006-000-00, Decontamination

. W3T007-000-00, Radwaste Filter Handling

. W3T008-000-00, Radwaste Laundry Handling

. W3T009-000-00, Radwaste Material Handling

. W3T010-000-00, Resin Transfer Operations

. W3T011-000-00, Radwaste Storage Policies

. W3T012-000-00, Radwaste Reduction Policies

- W3T013-000-00, Contaminated Tool Handling
- W3T014-000-00, QA/QC Radwaste Program Requirements
- Class 1, Introduction to Nuclear Power Plant Systems, Reactor Coolant System (includes Pressure Control System)
- Class 13, Fire Protection System
- Class 19, Gaseous Waste Management, Liquid Waste Management, and Solid Waste Management
- Class 20, Summarization of Integrated Plant Systems

The licensee stated that a practical factors session was planned; all personnel will be required to demonstrate operability of the radwaste systems. Supervisory personnel are scheduled to receive training in plant systems denoted above as Class 1, 13, 19, and 20.

Retraining has been planned for a minimum of 40 hours per year during which modifications to procedures and systems; changes to burial site, 10 CFR and 49 CFR requirements; and weak areas identified during the year will be presented to personnel.

The NRC inspector reviewed the instructors' expertise in the field of health physics and radwaste. Instructors had sufficient knowledge and experience and were kept informed of proposed and current changes to regulatory requirements.

Open Item (382/8211-03), radwaste training program is considered closed.

No violations or deviations were identified.

5. Personnel Selection and Qualification Criteria

The NRC inspector reviewed the minimum qualification criteria established by the licensee for personnel responsible for radwaste and transportation activities.

Documents Reviewed

- Position Description for "Radwaste Helper-Helper Nuclear"
- Position Description for "Waste Management Engineering Technician"
- Position Description for "Radwaste Department Head Engineer-Nuclear"

. RW-1-410, "Radwaste Personnel Qualifications" (Draft)

The licensee had established in Procedure RW-1-410 a minimum qualification criteria for the positions of radwaste engineer-nuclear, waste management engineering technician, and radwaste helper. A radwaste department qualification record is incorporated into this procedure which is completed for each individual assigned radwaste activities documenting areas of training, date completed, final examination grade, and practical demonstration completion where required. Personnel are required to attain a grade of 70 percent or greater to pass the qualification examination. Requalification examinations are to administered every 2 years for radwaste helpers.

The NRC inspector had no further questions on this subject. Open item (382/8211-04), personnel selection and qualification criteria, is considered closed.

No violations or deviations were identified.

6. Radioactive Waste Management

The inspector reviewed selected portions of the licensee's radioactive waste management program with respect to FSAR Chapter 11, "Radioactive Waste Management"; Chapter 12, "Radiation Protection"; Chapter 13, "Conduct of Operations"; and Chapter 14, "Initial Tests and Operations."

Documents Reviewed

. SFL-55A-001, Flushing Procedure, "Gaseous Waste Management"

. SFG-55A-001, Prerequisite Procedure, "Gaseous Waste Management"

. SPO-55A-001, Preoperational Procedure, "Gaseous Waste Management"

. SFL-55B-001, Flushing Procedure, "Liquid Waste Management"

. SPO-55B-001, Preoperational Procedure, "Liquid Waste Management"

. SFL-55E-001, Flushing Procedure, "Laundry Waste Management"

. SFG-55E-001, Prerequisite Procedure, "Laundry Waste Management"

Liquid and Gaseous Radioactive Waste Systems

The inspector spent a limited amount of time reviewing the liquid and gaseous radioactive waste systems. The licensee commissioned Charles Moore & Associates to coordinate the radioactive waste management systems including system design, installation, and startup. Mr. C. A. Moore has

been designated the Radwaste Startup Supervisor for the gaseous, liquid, solid, resins, laundry, and concentrator systems. Prerequisite testing where individual portions of a system, valve operation, motor rotation, and verification that systems are completed as described in drawings, are scheduled to start in February. Startup testing on complete systems are scheduled to start in mid February and be complete on all radioactive waste management systems in early April. These areas will be reviewed during a future inspection.

The inspector noted that sample lines and sample recirculation lines which had previously passed through uncontrolled areas and normally occupied areas within the licensee's radiation controlled area (RCA) had been rerouted and are now in a nonoccupied area of the RCA.

No violations or deviations were identified.

7. Control of Effluent Releases

The licensee was in the process of establishing procedures for controlling liquid and gaseous releases. The health physics group had two procedures, HP-1-231, "Liquid Radioactive Waste Release Permit (Manual)," and HP-1-232, "Gaseous Radioactive Waste Release Permit (Manual)," in draft form. Two additional procedures, HP-1-233 and HP-1-234, were to be developed for the liquid and gaseous radioactive waste release permits (automated). A licensee's representative stated that all procedures would be completed and approved by early April 1983.

The NRC inspector noted that Procedure HP-1-231 addressed the potential for an uncontrolled release through improper valve lineup; however, the licensee had not made provisions to verify that the valve lineup was correct prior to releasing radioactive liquids. The procedure did not address functional tests of gas/liquid monitors prior to releasing radioactive effluents or tests of isolation valves.

Open Item (382/8211-07) is considered open pending completion of all effluent release procedures.

No violations or deviations were identified.

8. Solid Radioactive Waste System

The NRC inspector reviewed the solid radioactive waste system to determine compliance with FSAR commitments and the recommendations of ANSI/ANS 55.1-1979.

Documents Reviewed

. FSAR Chapter 11.4, "Solid Waste Management System," (Draft)

- Preoperational Test Procedure SPO-55D-001, "Resin Waste Management System"
- Preoperational Test Procedure SPO-55F-001, "Waste Concentrator"
- Prerequisite Test Procedure SFG-55F-001, "Radioactive Waste Concentrator"
- Prerequisite Test Procedure SFG-55D-001, "Resin Waste Management System" (Draft)
- Technical Procedure RW-2-200, "Packaging Radioactive Solid Waste (DAW) for Disposal"
- LP&L Drawing, Field Sketch No. SK 1564-RW2, "Portable Solidification Facility," November 24, 1982

The NRC inspector's review of the solid radioactive waste system indicated that the licensee was in the process of submitting a change to the FSAR which describes two systems for solidification of waste: the installed plant system and a portable solidification system supplied by a vendor. The licensee plans to substitute the portable solidification system for the plant system to solidify waste. A final determination relating to the modification and operation of the plant system will be made after power tests are complete. The licensee had completed preliminary drawings of a weatherproof structure to house the portable solidification system.

A new facility designated the interim dry compacted waste facility was under construction at the time of this inspection to house the waste compactor and storage of boxes containing dry compacted radioactive waste. The licensee had purchased a compactor which uses 4' x 4' x 6' metal boxes for dry waste. A licensee's representative stated that waste will be collected in plastic bags and transported to the new facility where the bags will be opened and monitored for radioactivity while being sorted. Tools, metal, and other objects which can be salvaged will be segregated and decontaminated if practicable.

The licensee was in the process of modifying the spent resin system. Short radius elbows in the resin transfer system piping had been removed and large radius bends had been installed. Other modifications included rerouting of piping to the portable solidification system area.

The licensee has employed Charles Moore & Associates to oversee modifications to the solid radioactive waste system, develop procedures, and perform startup testing. A portable solidification system will be contracted for and be operational prior to fuel loading.

Open Item (382/8211-08) is considered open until installation of the portable solidification system and completion of previously identified items in the area of filter handling, lighting, and valves. These items will be reviewed during a future inspection.

No violations or deviations were identified.

9. Radiation Monitoring Instrumentation

The NRC inspector reviewed the licensee's inplant radiation monitoring systems. This included area radiation monitors, process radiation monitors, and plant effluent monitors (including NUREG-0737 monitors). This review indicated a limited number of process and effluent monitoring instrumentation partially installed and area radiation monitors which were installed. The fuel handling building area radiation monitors were operational. The inspector was unable to ascertain whether the installation would be in agreement with the FSAR and NUREG-0737, or the recommendations of applicable ANSI standards.

Documents Reviewed

- FSAR Chapter 11, "Radioactive Waste Management"
- FSAR Chapter 12, "Radiation Protection"
- Surveillance Procedures

  M1-3-350, Containment Purge Isolation Area Radiation Monitor Safety Channel "A" Function Test, ARM-1R-5022S and ARM-1R-5026S

  M1-3-351, Containment Purge Isolation Area Radiation Monitor Safety Channel "B" Function Test, ARM-1R-5024S and ARM-1R-5027S

  M1-3-352, Containment Purge Isolation Area Radiation Monitor Safety Channel "A" Calibration, ARM-1R-5025S and ARM-1R-5026S

  M1-3-354, Containment Area Radiation Monitor Safety Channel "A" Functional Test, ARM-1R-5030S and ARM-1R-5031S

  M1-3-355, Containment Area Radiation Monitor Safety Channel "B" Functional Test, ARM-1R-5028S and ARM-1R-5029S

  M1-3-356, Containment Area Radiation Monitor Safety Channel "A" Calibration, ARM-1R-5030S and ARM-1R-5031S

  M1-3-357, Containment Area Radiation Monitor Safety Channel "B" Calibration, ARM-1R-5028S and ARM-1R-5029S

  M1-3-362, Fuel Handling Building Airborne Isolation Radiation Monitors Safety Channel "A" Functional Test, ARM-1R-0300.2S and ARM-1R-0300.4S

  M1-3-363, Fuel Handling Building Airborne Isolation Radiation Monitors Safety Channel "B" Functional Test, ARM-1R-0300.1S and ARM-1R-0300.3S

M1-3-364, Fuel Handling Building Ventilation Isolation Airborne Radiation Monitor Safety Channel "A" Calibration, ARM-1R-0300.2S and ARM-1R-0300.4S

M1-3-365, Fuel Handling Building Ventilation Isolation Airborne Radiation Monitor Safety Channel "B" Calibration, ARM-1R-0300.1S and ARM-1R-0300.3S

M1-3-425, Waste Condensate Discharge Flow Loop Check and Calibration, LWM-1F-0647

M1-3-427, Gaseous Waste Management System Discharge Flow Loop Check and Calibration, GWM-1F-0648

OP-903-019, Radioactive Liquid Effluent Monitoring System Source Check

OP-903-021, Radioactive Gaseous Process and Effluent Monitoring System Source Check

OP-903-080, Liquid Waste Management System Operability Test

. Operating Procedure

OP-4-001, Radiation Monitors Fuel Handling Building (Draft)

. Technical Procedure

CE-3-900, Operation of the Postaccident Sampling System (Draft)

a. Area Radiation Monitoring System

The NRC inspector reviewed that segment of the area radiation monitoring system completed (fuel handling building) for conformance with the FSAR and ANSI/ANS-6.8.1.-1981.

The licensee had changed the area radiation monitor designations listed in the FSAR, Table 12.3-2, to a unique identification (UNID) numbering system. A monitor listed in the FSAR as RE-1 is now designated as 1R-5001; in the fuel handling building RE-32, RE-33, RE-34, and RE-35 had been changed to 1R-0300.1, 1R-0300.2, etc.

The NRC inspector noted that the FSAR, Table 12.2-3, was not consistent with the detector installed. The range, milliroetgen per hour (mR/hr), for RE-32, RE-33, RE-34, and RE-35 are listed as $1\text{-}10^4$ mR/hr, with an accuracy of plus of minus (±) 3 percent. The licensee had installed a detector with a range of $0.1\text{-}10^4$ mR/hr and was calibrated to ±15 percent. The licensee had specified a calibration frequency of 18 months for the area radiation monitors (ARM's).

ANSI/ANS-6.8.1-1981, paragraph 4.4.1, recommends a calibration frequency of annually or at refueling intervals. The industry-accepted practice is for annual calibration of ARM's assessable during normal operation and those ARM's assessable only during a refueling outage at the extended frequency.

Open Item (382/8211-10) will be considered open pending completion of previously identified areas of concern and:

- changes to FSAR to properly identify area radiation monitors, detector range, and accuracy.

- revision of calibration procedures to perform calibrations at recommended frequency.

b. Process and Effluent Radiation Monitoring System

The licensee had not completed the installation of any process or effluent radiation monitoring systems at the time of this inspection. Procedures for functional tests or calibration had not been developed. The NRC inspector was unable to determine if the installed systems will meet the FSAR commitments and ANSI recommendations.

The NRC inspector noted that the identification of process and radiation monitors listed in the FSAR, Table 11.5.1, is not consistent with the UNID identification system used by the licensee. These systems will be reviewed during a later inspection.

No violations or deviations were identified.

10. Technical Specifications

The licensee had drafted the Radiological Effluent Technical Specifications (RETS) covering radwaste and transportation activities and submitted them to NRR for review. Open Item (382/8211-11) will remain open pending this review and acceptance of the RETS.

No violations or deviations were identified.

11. Transportation Activities

The NRC inspector reviewed the licensee's transportation activities to determine compliance with 10 CFR Parts 20, 71, and 49 CFR regulatory requirements.

Documents Reviewed

Administrative Procedures

. RW-1-300, "Component and Equipment Leak Reduction and Control," Revision 0

. RW-1-400, "Radioactive Waste Reduction Cost Benefit Analysis," (Draft)

. RW-1-700, "Radiation Controlled Area Cleanliness Control," (Draft)

. RW-1-500, "Radioactive Material Storage Area," (Draft)

. RW-1-100, "Radioactive Waste Reduction," Revision 0

. RW-1-410, "Radwaste Personnel Qualifications," (Draft)

Program Description

. PMD-RW-001, "Radioactive Waste," Revision 0

. PMD-RW-002, "Transportation of Radioactive Material," Revision 0

. PMD-TR-015, "Radwaste Training Program," Revision 0

Technical Procedures

. RW-2-200, "Packaging Radioactive Solid Waste (DAW) for Disposal," Revision 0

. RW-2-300, "Receipt and Storage of Empty Shipping Containers," Revision 0

. RW-2-320, "Radioactive Waste Inventory and Material Control," Revision 0

. RW-2-500, "Radioactive Material Shipments," Revision 0

. RW-2-510, "Limited Quantity Shipments," Revision 0

. RW-2-520, "Low Specific Activity (LSA) Shipments," Revision 0

. RW-2-531, "Empty Package Shipments," Revision 0

. RW-2-540, "Type B and Large Quantity Shipments," Revision 0

. RW-2-560, "Shipment of Contaminated Equipment," Revision 0

. RW-2-570, "Receipt of Radioactive Material," Revision 0

. RW-2-220, "Radwaste Filter Disposal," (Draft)

. RW-2-100, "Handling and Control of Radioactive Waste," (Draft)

. RW-2-110, "Waste Sample Collection and Isotope Evaluation," (Draft)

. RW-2-600, "General Area and Cubicle Decontamination," (Draft)

The licensee had established a program for handling radioactive waste and transportation activities which are described in PMD-RW-001 and PMD-RW-002. The plant manager had been assigned the responsibility for coordination of the overall radwaste program and the establishment of policies for station activities that affect the packaging and transport of radioactive material. The radwaste engineer is responsible for ensuring that station policies are implemented with respect to the transportation activities. Additional individuals: health physics superintendent, chemistry engineer, quality control engineer/quality assurance representative, maintenance superintendent, training director, and licensing engineering supervisor have been assigned specific duties to perform to support the radioactive waste handling and transportation program.

The licensee had written procedures for most of the processes and details of the transportation activities. Procedures for the vendor-supplied solidification process had not been started during the time of this inspection. Open item (382/8211-12) will remain open until completion of written procedures.

No violations or deviations were identified.

12. Audits and Review

The NRC inspector reviewed the licensee's internal audit/review program regarding radioactive waste and transportation activities to determine compliance with FSAR commitments, the requirements of 10 CFR Part 50, Appendix B, and the recommendations of ANSI N18.7-1976, Regulatory Guides 1.33, 1.144, 1.146, and 4.15.

Documents Reviewed

. Safety Evaluation Report (NUREG-0787) Waterford Unit No. 3

. LP&L Quality Assurance Manual

. QP 18.10, "Conduct of Onsite Operations Quality Assurance Audits," Revision 0

. PMD-RW-001, "Program Description for Radioactive Waste," Revision 0

. PMD-RW-002, "Program Description for Transportation of Radioactive Material," Revision 0

. NAP-220, "Radiation Control Section Overview," Revision 0

The licensee had developed an audit and review program for the radioactive waste and transportation activities program at the Waterford-3 site. The onsite operational Quality Assurance (QA) Department had scheduled annual audits of these areas with the first audit to be performed in February 1983. A QA engineer was in the process of developing a checklist for this audit. The corporate radiation control section had been delegated the responsibility to conduct an ongoing inhouse review and appraisal program for the radwaste program including related training programs.

The QA engineer assigned to perform the first audit appeared to have sufficient experience in the field of radiation protection. The NRC inspector noted that additional training in the areas of plant radwaste systems, burial site license requirements, 10 CFR Parts 61 and 71, and 49 CFR should be considered for this individual or others who will perform audits of radwaste and transportation activities.

The NRC inspector was unable to ascertain that audits will be performed in the areas of instrument operation and calibration for all effluent, process, and area radiation monitors; the air cleaning systems testing and operation; or the qualifications of individuals assigned to perform audits of these areas. This had been previously identified in open item (382/811-13). This will be reviewed during a future inspection.

No violations or deviations were identified.

13. Procedures

The inspector reviewed the licensee's procedures to determine compliance with 10 CFR 20, 10 CFR 71, 49 CFR 100-199 requirements; recommendations contained in Regulatory Guides 1.33, 4.15, 8.8, 8.10; and ANSI N13.1-1969, N13.10-1974, 55.1-1979, N101.1-1972, N199-1976, N323-1978, N510-1975, and NUREG-0761.

For documentation purposes in this report, the licensee's procedures have been classified as either: (1) procedures approved since last inspection, (2) procedures in draft form, or (3) procedures which need to be written.

a. Procedures Approved Since Last Inspection

. OP-903-019, "Radioactive Liquid Effluent Monitoring System Source Check," Revision 0

. OP-903-021, "Radioactive Gaseous Process and Effluent Monitoring System Source Check," Revision 0

- OP-903-080, "Liquid Waste Management System Operability Check," Revision 0
- M1-3-350, "Containment Purge Isolation Area Radiation Monitor Safety Channel 'A' Functional Test, ARM-1R-5025S and ARM-1R-5026S," Revision 1
- M1-3-351, "Containment Purge Isolation Area Radiation Monitor Safety Channel 'B' Functional Test, ARM-1R-5024S and ARM-1R-5027S," Revision 1
- M1-3-352, "Containment Purge Isolation Area Radiation Monitor Safety Channel 'A' Calibration, ARM-1R-5025S and ARM-1R-5026S," Revision 0
- M1-3-354, "Containment Area Radiation Monitor Safety Channel 'A' Functional Test, ARM-1R-5030S and ARM-1R-5031S," Revision 0
- M1-3-355, "Containment Area Radiation Monitor Safety Channel 'B' Functional Test, ARM-1R-5028S and ARM-1R-5029S," Revision 0
- M1-3-356, "Containment Area Radiation Monitor Safety Channel 'A' Calibration, ARM-1R-5030S and ARM-1R-5031S," Revision 0
- M1-3-357, "Containment Area Radiation Monitor Safety Channel 'B' Calibration, ARM-1R-5028S and ARM-1R-5029S," Revision 0
- M1-3-362, "Fuel Handling Building Airborne Isolation Radiation Monitor Safety Channel 'A' Functional Test, ARM-1R-0300.2S and ARM-1R-0300.4S," Revision 1
- M1-3-363, "Fuel Handling Building Airborne Isolation Radiation Monitor Safety Channel 'B' Functional Test, ARM-1R-0300.1S and ARM-1R-0300.3S," Revision 1
- M1-3-364, "Fuel Handling Building Ventilation Isolation-Airborne Radiation Monitor Safety Channel 'A' Calibration, ARM-1R-0300.2S and ARM-1R-0300.4S," Revision 0
- M1-3-365, "Fuel Handling Building Airborne Isolation Radiation Monitor Safety Channel 'B' Calibration, ARM-1R-0300.1S and ARM-1R-0300.3S," Revision 0
- M1-3-425, "Waste Condensate Discharge Flow Loop Check and Calibration, LWM-1F-0647," Revision 0

- M1-3-427, "Gaseous Waste Management System Discharge Flow Loop Check and Calibration, GWM-1F-0648," Revision 0
- CE-2-016, "Monitoring Gaseous Waste Management," Revision 0
- CE-2-018, "Monitoring Liquid Waste Management," Revision 0
- PMD-RW-001, "Program Description for Radioactive Waste," Revision 0
- PMD-RW-002, "Program Description for Transportation of Radioactive Material," Revision 0
- PMD-TR-015, "Program Description for Radwaste Training Program," Revision 0
- NAP-220, "Radiation Control Section Overview," Revision 0
- NAP-269, "Radiation Control Section Radwaste Procedure," Revision 0
- RW-1-100, "Radioactive Waste Reduction," Revision 0
- RW-1-300, "Component and Equipment Leak Reduction and Control," Revision 0
- RW-2-200, "Packaging Radioactive Solid Waste (DAW) for Disposal," Revision 0
- RW-2-300, "Receipt and Storage of Empty Shipping Containers," Revision 0
- RW-2-320, "Radioactive Waste Inventory and Material Control," Revision 0
- RW-2-500, "Radioactive Material Shipments," Revision 0
- RW-2-510, "Limited Quantity Shipments," Revision 0
- RW-2-520, "Low Specific Activity (LSA) Shipments," Revision 0
- RW-2-531, "Empty Package Shipments," Revision 0
- RW-540, "Type B and Large Quantity Shipments," Revision 0
- RW-2-560, "Shipment of Contaminated Equipment," Revision 0

b. Procedures in Draft Form

- CE-3-305, "Sampling of Ventilation and Gaseous Waste Management Systems for Radioactive Effluents"
- CE-3-900, "Operation of the Postaccident Sampling System"
- HP-1-231, "Liquid Radioactive Waste Release Permit (Manual)"
- HP-1-232, "Gaseous Radioactive Waste Release Permit (Manual)"
- MI-3-353, "Containment Purge Isolation Area Radiation Monitor Safety Channel 'B' Calibration"
- MI-3-384, "Radioactive Gaseous Effluent Monitoring Instrumentation Channel Functional Test"
- OP-4-001, "Radiation Monitors Fuel Handling Building"
- RW-1-400, "Radioactive Waste Reduction Cost Benefit Analysis"
- RW-1-410, "Radwaste Personnel Qualifications"
- RW-1-500, "Radioactive Material Storage Areas"
- RW-1-700, "Radiation Controlled Area Cleanliness Control"
- RW-2-100, "Handling and Control of Radioactive Waste"
- RW-2-110, "Waste Sample Collection and Isotope Evaluation"
- RW-2-220, "Radwaste Filter Disposal"
- RW-2-310, "Storage of Loaded Shipping Containers"
- RW-2-600, "General Area and Cubicle Decontamination"

c. Procedures Which Need To Be Written

- CE-1-901, "Testing and Maintenance of Postaccident Sample Systems"
- CE-3-703, "Tank Sampling Recirculation Times"
- MI-3-358, "Fuel Handling Building Airborne Isolation Radiation Monitor Safety Channel 'A' Calibration"
- MI-3-359, "Fuel Handling Building Airborne Isolation Radiation Monitor Safety Channel 'B' Calibration"

- MI-3-360, "Control Room Airborne Radiation Monitor Safety Channel 'A' Functional Test"
- MI-3-361, "Control Room Airborne Radiation Monitor Safety Channel 'B' Functional Test"
- MI-3-381, "Radioactive Liquid Effluent Monitoring Instrument Channel Calibration"
- MI-3-382, "Radioactive Liquid Effluent Monitor Instrumentation Channel Functional Test"
- MI-3-383, "Radioactive Gaseous Effluent Monitoring Instrumentation Channel Calibration"
- OP-4-013, "Process Radiation Monitoring System"

14. Exit Interview

The inspector met with licensee representatives identified in paragraph 1 at the conclusion of the inspection. The inspector discussed the scope and findings of the inspection. The NRC inspector stated that all open items must be resolved before a recommendation would be made for issuance of an operating license.