UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
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ARLINGTON, TEXAS 76011-8064

September 27, 1999

Charles M. Dugger, Vice President
Operations - Waterford 3
Entergy Operations, Inc.
P.O. Box B
Killona, Louisiana 70066

SUBJECT: NRC INSPECTION REPORT NO. 50-382/99-19

Dear Mr. Dugger:

This refers to the inspection conducted on August 30 through September 3, 1999, at the Waterford Steam Electric Station, Unit 3 facility. The inspection focused on the station's radiological environmental monitoring program. The enclosed report presents the results of this inspection.

Overall, the NRC has determined that the radiological environmental monitoring program was effectively implemented.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room (PDR).

Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,

/s/

Gail M. Good, Chief
Plant Support Branch
Division of Reactor Safety

Docket No.: 50-382
License No.: NPF-38

Enclosure:
NRC Inspection Report No.
50-382/99-19

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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket No.:	50-382
License No.:	NPF-38
Report No.:	50-382/99-19
Licensee:	Entergy Operations, Inc.
Facility:	Waterford Steam Electric Station, Unit 3
Location:	Hwy. 18 Killona, Louisiana
Dates:	August 30 through September 3, 1999
Inspector:	Michael P. Shannon, Senior Radiation Specialist
Approved By:	Gail M. Good, Chief, Plant Support Branch
Attachment:	Supplemental Information

EXECUTIVE SUMMARY

Waterford Steam Electric Station, Unit 3
NRC Inspection Report No. 50-382/99-19

Plant Support

- In general, sampling stations were located as described in the Technical Requirements Manual. However, an Unresolved Item pertaining to the location of the broadleaf control station was identified pending the resolution of the licensee's record research to justify its current location (Section R1.1).

- Sample collection logs and receipt forms were maintained in accordance with procedural and management expectations. Analytical results from the interlaboratory comparison program were properly reported in accordance with the licensee's Technical Specifications requirements (Section R1.1).

- An effective meteorological monitoring program was in place. The performance of the meteorological monitoring equipment exceeded the guidance contained in Regulatory Guide 1.23. Appropriate meteorological data were transmitted and displayed in the control room, technical support center, and emergency operations facility (Section R1.2).

- Personnel assigned to collect and process radiological environmental monitoring program samples were fully qualified to perform assigned tasks (Section R5).

- Radiological environmental monitoring program activities were not covered in the station's continuing training program in accordance with management's expectations. The lesson plan used for initial radiological environmental monitoring program training was not reviewed or approved by chemistry management. As a result, some lesson plan contents had unnecessary/inappropriate wording (Section R5).

- Effective audits of the radiological environmental monitoring program were performed by qualified auditors. Conditions adverse to quality were properly documented and tracked in the station's condition reporting system. The station captured radiological environmental monitoring and meteorological monitoring program issues at the proper threshold to identify equipment and program problems. Overall, corrective actions were closed in a timely manner and resolved repeat problems (Sections R7.1 and 7.2).

- In general, the radiological environmental monitoring portion of the chemistry department observation program was weak. One of the two chemistry department radiological environmental monitoring program related observations conducted since July 1996 was closed without properly documenting corrective actions. As of September 2, 1999, there were no radiological environmental monitoring program related chemistry department observations conducted for 1999 (Section R7.3).

Report Details

IV. Plant Support

R1 Radiological Protection and Chemistry Controls

R1.1 Radiological Environmental Monitoring Program

a. Inspection Scope (84750)

The radiological environmental monitoring program was reviewed to determine compliance with Technical Specifications, Technical Requirements Manual, and Offsite Dose Calculation Manual requirements. Selected environmental sampling stations were inspected.

b. Observations and Findings

The inspector visited and examined the following types of media sampling locations: thermoluminescent dosimeter, airborne, drinking water, groundwater, and broadleaf vegetation sample locations. Air sampler equipment was properly calibrated in accordance with procedural requirements. All sampling stations, with the exception of the broadleaf control station, were located as described in the Technical Requirements Manual.

Section 3.1 of Procedure UNT-005-014, "Offsite Dose Calculation Manual," Revision 6, stated, in part, that the Offsite Dose Calculation Manual shall be comprised of the applicable sections of the Technical Requirements Manual as listed on Attachment 7.23 of the above procedure. Attachment 7.23 listed Table 3.12-1. Section 4c of Table 3.12-1 required that the broadleaf control sample point be located in the least prevalent wind direction. Notation 1 on Table 3.12-1 allowed deviations in sample locations when specimens are unobtainable due to seasonal unavailability or other legitimate reasons. Using licensee supplied wind rose information derived from preoperational meteorological data, the inspector identified that the control broadleaf station was located in the ninth least prevalent wind direction, Sector K, rather than the least prevalent wind direction, Sector E.

As of September 3, 1999, the licensee was researching records to justify the present location of the control broadleaf station. This item was identified as an unresolved item pending the results of the licensee's records research (50-382/9919-01).

From a review of sample collection logs and receipt forms, the inspector determined that these documents were maintained in accordance with procedural and management expectations. Consumable supplies appeared to be adequate to implement an effective environmental program.

The licensee participated in an interlaboratory comparison program as required by Section 3.12.3 of the Technical Requirements Manual. The inspector verified that

analytical results from the interlaboratory comparison program were reported in the annual radiological environmental operating report in accordance with the requirements of Section 6.9.1.7 of the licensee's Technical Specifications.

c. Conclusions

In general, sampling stations were located as described in the Technical Requirements Manual. However, an Unresolved Item pertaining to the location of the broadleaf control station was identified pending the resolution of the licensee's record research to justify its current location. Sample collection logs and receipt forms were maintained in accordance with procedural and management expectations. Analytical results from the interlaboratory comparison program were properly reported in accordance with the licensee's Technical Specifications requirements.

R1.2 Meteorological Monitoring Program

a. Inspection Scope (84750)

The meteorological monitoring program was reviewed to determine agreement with commitments in the Technical Requirements Manual and the guidance in NRC Regulatory Guide 1.23. The inspector reviewed meteorological data collection and displays at station facilities, instrument calibration procedures, and records to ensure that the meteorological instrumentation was operable, properly calibrated, and maintained.

b. Observations and Findings

The inspector verified that the meteorological tower's primary and secondary instrumentation agreed with the guidance in Regulatory Guide 1.23 and Technical Requirements Manual. The primary and secondary towers provided for meteorological instrument redundancy at the 10- and 60-meter levels.

The inspector verified that appropriate meteorological data was transmitted and displayed in the control room, technical support center, and emergency operations facility. Daily system channel checks were recorded by control room operations personnel in accordance with procedure requirements.

From a review of selected calibration records, the inspector determined that the meteorological instrumentation was properly maintained and calibrated in accordance with station procedures. Calibration tolerances for the meteorological instrumentation were within the recommendations of Regulatory Guide 1.23. The meteorological data recovery rate of 100, 99.8, and 99.9 percent for 1996, 1997, and 1998, respectively, exceeded the recommended rate of 90 percent indicating that, overall, an effective meteorological program was in place.

c. Conclusions

An effective meteorological monitoring program was in place. The performance of the meteorological monitoring equipment exceeded the guidance contained in Regulatory Guide 1.23. Appropriate meteorological data were transmitted and displayed in the control room, technical support center, and emergency operations facility.

R3 Procedures and Documentation

R3.1 Radiological Environmental Monitoring Program Implementing Procedures

a. Inspection Scope (84750)

The radiological environmental monitoring program implementing procedures were reviewed.

b. Observations and Findings

The inspector determined that, in general, the environmental procedures were written with sufficient detail to ensure compliance with the requirements described in the Offsite Dose Calculation and Technical Requirements Manuals. However, the inspector identified that a number of procedure references, attachments, and form numbers were incorrectly listed or referenced. Additionally, during the review of Procedure CE-003-526, "Collection and Preparation of Radiological Environmental Monitor Program Liquid Samples," Revision 0, the inspector noted that, although hydrochloric acid was added to groundwater samples during the sample preparation phase, the steps requiring the acid addition were incorrectly omitted from Section 10.3.3. Chemistry management stated that the radiological environmental monitoring program procedures would be reviewed to ensure the procedures correctly reflected implementing practices.

c. Conclusions

In general, descriptive radiological environmental monitoring program implementing procedures were maintained; however, some corrections were needed.

R5 Staff Training and Qualification

a. Inspection Scope (84750)

The inspector reviewed the training and qualification programs for personnel who implemented the radiological environmental monitoring program.

b. Observations and Findings

As of September 3, 1999, there were three chemistry personnel qualified to collect and process radiological environmental monitoring program samples. From a review of training records, the inspector determined that these individuals were fully qualified to perform their assigned tasks. Qualification tasks listed on the qualification cards were

appropriate for the environmental work assigned. From a review of selected 1998 and 1999 training review group meeting minutes, the inspector determined that chemistry management was appropriately involved in the oversight of the continuing training program. The inspector noted that there was a management expectation for personnel involved in the collection of environmental media to complete a performance qualification card biennially. However, from discussions with the licensee's training staff, the inspector determined that radiological environmental monitoring program activities were not covered in the station's continuing training program in accordance with management's expectations.

Additionally, during the review of the lesson plan (W-3LP-CMSA-REMP) used for initial radiological environmental monitoring program training, the inspector noted that the contents of the lesson plan seemed to be "Boiler Plate" wording. For example, for the collection and preparation of milk, vegetation, fish, sediment, and groundwater samples, lesson plans stated, "describe the method of performing a calibration or calibration check," and "state the acceptance criteria," utilizing the corresponding procedures. However, the inspector noted that for the above samples, there were no calibration requirements or acceptance criteria listed in the procedure needed to perform the above tasks. The inspector also noted that chemistry management had not reviewed or approved the lesson plans. The inspector was informed, by chemistry management, that the initial radiological environmental monitoring program related lesson plans would be reviewed for program improvements.

c. Conclusions

Personnel assigned to collect and process radiological environmental monitoring program samples were fully qualified to perform assigned tasks. Qualification tasks listed on the qualification cards were appropriate for the environmental work assigned. Radiological environmental monitoring program activities were not covered in the station's continuing training program in accordance with management's expectations. The lesson plan used for initial radiological environmental monitoring program training was not reviewed or approved by chemistry management. As a result, some lesson plan contents had unnecessary/inappropriate wording.

R6 Organization and Administration

a. Inspection Scope (84750)

The organization, staffing, and assignment of the radiological environmental monitoring program responsibilities were reviewed.

b. Observations and Findings

In October 1996, the radiological environmental monitoring program responsibilities were transferred from the radiation protection department to the chemistry department. The inspector noted that the primary individuals involved in the sample preparation, collection, shipment, and evaluation of the analysis results were also transferred with the program. Thus, the inspector determined that the implementation of the radiological

environmental monitoring program was not negatively effected by the transfer. From interviews with personnel involved with the radiological environmental monitoring program, the inspector determined that chemistry management provided appropriate support to implement an effective program.

c. Conclusions

The organization, staffing, and assignment of the radiological environmental monitoring program responsibilities were effectively implemented.

R7 Quality Assurance Program

R7.1 Radiological Environmental Monitoring Quality Assurance Program

a. Inspection Scope (84750)

The inspector reviewed quality assurance audits and surveillance reports of the radiological environmental monitoring program.

b. Observations and Findings

No problems were identified with the qualifications of the lead quality assurance auditor assigned to provide oversight to the radiological environmental monitoring program. There were three quality assurance radiological environmental monitoring program audits (SA- 97, 98, and 99,-022.1) performed since the last NRC inspection of this program in June 1996. Chemistry management was appropriately involved in the planning stages of the audits. The inspector determined that the audits were a comprehensive review of the radiological environmental monitoring program which provided management with a good assessment of the program and areas that needed attention. The audits identified a total of seven conditions adverse to quality. All items were documented in the station's condition reporting program in accordance with procedural requirements. Quality assurance originated condition reports were properly tracked by the quality assurance area lead to ensure corrective actions adequately addressed the issue.

The inspector reviewed the audit that was performed to assess the offsite (vendor) laboratory responsible for analyzing the environmental samples. No problems were identified. The audit provided station management with a good overview of the programs reviewed.

c. Conclusions

Effective audits of the radiological environmental monitoring program were performed by qualified auditors. Conditions adverse to quality were properly documented and tracked in the station's condition reporting system.

R7.2 Condition Reports and Corrective Actions

a. Inspection Scope (84750)

Selected condition reports were reviewed to evaluate the effectiveness of the licensee's controls in identifying, resolving, and preventing problems.

b. Observations and Findings

The inspector reviewed condition reports relating to the radiological environmental monitoring and meteorological monitoring programs and determined that the station captured issues at the proper threshold to identify minor, as well as, major equipment and program problems. Overall, corrective actions were closed in a timely manner and resolved repeat problems.

c. Conclusions

The station captured radiological environmental monitoring and meteorological monitoring program issues at the proper threshold to identify equipment and program problems. Overall, corrective actions were closed in a timely manner and resolved repeat problems.

R7.3 Department Self-Assessments

a. Inspection Scope (84750)

Selected observation reports were reviewed to evaluate the chemistry department's oversight of the radiological environment monitoring program.

b. Observations and Findings

There were two radiological environmental monitoring program related chemistry observation reports written since the last inspection in June 1996. The first observation (97-032), documented on October 21, 1997, was a management, on-the-job evaluation covering a radiological environmental monitoring program air filter change out. The second observation (98-017), documented on July 21, 1998, covered collection and preparation of radiological environmental monitoring program air samples. As of September 2, 1999, there were no radiological environmental monitoring program related chemistry department observations conducted for 1999.

During the review of observation 98-017, the inspector noted that the evaluator identified that some air sample heads were not equipped with an O-ring gasket. In the recommended follow-up corrective action section of the observation report, the inspector noted that the observation report was closed with the following statement, "Should all sample heads have O-rings between [the] cartridge housing and particulate filter holder?" The inspector determined that this statement did not address appropriate corrective actions. When this issue was discussed with members of the licensee's chemistry staff, the inspector was provided with a vendor memorandum dated February 19, 1998, which stated that the O-ring gaskets were not required. However, the

inspector noted that this statement was not documented in the recommended follow-up corrective action section of the observation report. The inspector commented on the lack of attention to detail when closing observation reports. The licensee acknowledged the inspector's comment.

Chemistry Department Standing Instruction 34 provided guidance and direction for performing chemistry department observations. Section 3.1 stated that observations of chemistry activities will be performed by all members of the chemistry department as scheduled. The inspector noted that the approved observation schedule for 1999 listed the individual assigned and the week that the observation was due; however, the inspector noted that the schedule did not identify the area within the chemistry department to be observed. Chemistry department management stated the observation scheduling program would be reviewed for possible program enhancements.

c. Conclusions

In general, the radiological environmental monitoring portion of the chemistry department observation program was weak. One of the two chemistry department radiological environmental monitoring program related observations conducted since July 1996 was closed without properly documenting corrective actions. As of September 2, 1999, there were no radiological environmental monitoring programs related chemistry department observations conducted for 1999.

V. Management Meetings

X1 Exit Meeting Summary

The inspector presented the inspection results to members of licensee management at an exit meeting conducted on September 3, 1999. The licensee acknowledged the findings presented. No proprietary information was identified.

ATTACHMENT

Supplemental Information

PARTIAL LIST OF PERSONS CONTACTED

Licensee

M. Brandon	Acting Licensing Manager
C. Benton	Technical Training Instructor
A. Bergeron	Chemistry Superintendent
R. Burski	Director Site Support
C. DeDeaux	Licensing Supervisor
G. Fey	IHEA Supervisor
R. Fili	Quality Assurance Manager
J. Hoffpanir	Operations Manager
R. Killian	Quality Engineering Supervisor
L. Lett	Radiation Protection Superintendent
B. Matherne	Technical Training Supervisor
E. Perkins	Acting Director Nuclear Safety & Regulatory Affairs
R. Prados	Senior Lead Engineer, Licensing
L. Rushing	Manager, System Engineering

NRC

T. Farnholtz	Senior Resident Inspector
J. Keeton	Resident Inspector

INSPECTION PROCEDURE USED

IP 84750	Radioactive Waste Treatment and Effluent and Environmental Monitoring

ITEMS OPENED, CLOSED, AND DISCUSSED

OPENED

50-382/9919-01	URI	Broadleaf Control Station Placement (Section R1.1)

CLOSED and DISCUSSED

None

LIST OF DOCUMENTS REVIEWED

1972 to 1975, and 1977 to 1978 Wind Rose Data.

A summary of radiological environmental monitoring and meteorological conditions reports written since June 1996.

Procedure W-3-QC-CMQC-REMP, “Radiological Environmental Monitoring Program Qualification Card,” Revision 0.

Lesson Plan W-3-LP-CMSA-REMP, “REMP Sampling Program,” Revision 1

Procedure CE-001-024, “General Laboratory Safety,” Revision 1.

Procedure CE-003-526, “Collection and Preparation of REMP Liquid Samples,” Revision 0.

Procedure CE-003-527, “Collection and Preparation of Milk Samples,” Revision 0.

Procedure CE-003-528, “Collection and Preparation of Sediment Samples,” Revision 0.

Procedure CE-003-529, “Collection and Preparation of Vegetation Samples,” Revision 0.

Procedure CE-003-530, “Collection and Preparation of Fish Samples,” Revision 0.

Procedure CE-003-531, “Collection and Preparation of REMP Air Samples,” Revision 0.

Procedure CE-003-532, “Preparation and Distribution of REMP Thermoluminescent Dosimeters,” Revision 0.

Procedure CE-003-533, “REMP Sample Scheduling, Recording, and Shipping,” Revision 0.

Procedure CE-003-534, “Land Use Survey,” Revision 0.