



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064**

February 14, 2000

William T. Cottle, President and
Chief Executive Officer
STP Nuclear Operating Company
P.O. Box 289
Wadsworth, Texas 77483

SUBJECT: NRC INSPECTION REPORT NO. 50-498/00-01; 50-499/00-01

Dear Mr. Cottle:

This refers to the inspection conducted on January 24-27, 2000, at the South Texas Project Electric Generating Station, Units 1 and 2 facilities. The purpose of the inspection was to review the radioactive effluent waste programs and the release of radioactive materials from the radiological controlled area. The enclosed report presents the results of this inspection.

Overall, the liquid and gaseous radioactive effluent waste programs were effectively implemented. However, based on the results of this inspection, the NRC has determined that two Severity Level IV violations of NRC requirements occurred. These violations are being treated as noncited violations (NCVs), consistent with Section VII.B.1.a of the Enforcement Policy. These NCVs are described in the subject inspection report. If you contest the violation or severity level of these NCVs, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001, with copies to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region IV, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011, the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the South Texas Project Electric Generating Station, Units 1 and 2 facilities.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure(s), and your response, if requested, 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,

/RA/

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

Docket Nos.: 50-498

50-499

License Nos.: NPF-76

NPF-80

Enclosures:

NRC Inspection Report No.

50-498/00-01; 50-499/00-01

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STP Nuclear Operating Company

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E-Mail report to D. Lange (DJL)
 E-Mail report to NRR Event Tracking System (IPAS)
 E-Mail report to Document Control Desk (DOCDESK)

E-Mail notification of report issuance to the STP SRI and Site Secretary (NFO, LAR).

E-Mail notification of issuance of all documents to Nancy Holbrook (NBH).

bcc to DCD (IE06)

bcc distrib. by RIV:

Regional Administrator
 DRP Director
 DRS Director
 Branch Chief (DRP/A)
 Project Engineer (DRP/A)
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STP Resident Inspector
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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket Nos.: 50-498
50-499

License Nos.: NPF-76
NPF-80

Report No.: 50-498/00-01
50-499/00-01

Licensee: STP Nuclear Operating Company

Facility: South Texas Project Electric Generating Station, Units 1 and 2

Location: FM 521 - 8 miles west of Wadsworth
Wadsworth, Texas

Dates: January 24-27, 2000

Inspectors: Michael P. Shannon, Senior Radiation Specialist
James S. Dodson, Radiation Specialist

Approved By: Gail M. Good, Chief, Plant Support Branch

Attachment: Supplemental Information

EXECUTIVE SUMMARY

South Texas Project Electric Generating Station, Units 1 and 2
NRC Inspection Report No. 50-498/00-01; 50-499/00-01

This announced, routine inspection reviewed engineering safety feature filter ventilation systems maintenance and in-place filter testing, implementation of the liquid and gaseous radioactive effluent monitoring program, status of the effluent monitors and chemistry counting equipment, training and qualifications of personnel, and quality assurance oversight. In addition, the release of radioactive material from the radiologically controlled area was reviewed.

Engineering

- In-place filter tests and laboratory tests of charcoal adsorber samples complied with the appropriate Technical Specification requirements (Section R3.1).

Plant Support

- Overall, an effective radiological effluent control program was in place. The 1997 and 1998 Annual Radioactive Effluent Release Reports were submitted in accordance with regulatory requirements and documented a decreasing trend in the radioactivity released through liquid effluents. Whole-body dose to the public from radiological effluent releases for 1997 and 1998 were less than 1 percent of the yearly regulatory limit. Sampling and analysis procedures provided the staff with the necessary guidance to complete the tasks assigned (Section R1.1).
- A violation of Technical Specification 6.8.1.a was identified for failure to survey and control radioactive material released from the radiologically controlled area. This Severity Level IV violation is being treated as a noncited violation, consistent with Section VII.B.1.a of the NRC Enforcement Policy. Condition Report 99-16737 was written to document this issue (Section R1.2).
- All effluent monitors and tanks were located as described in the Updated Final Safety Analysis Report. Effluent monitors and analytical instrumentation were properly calibrated (Section R2).
- An effective radiological effluent continuing training program was maintained (Section R5).
- A violation of Technical Specification 6.8.1.g was identified for failure to perform an Offsite Dose Calculation Manual audit within 24 months or document and obtain the approval of the Director of Quality to schedule an audit at a later date. This Severity Level IV violation is being treated as a noncited violation, consistent with Section VII.B.1.a of the NRC Enforcement Policy. The licensee wrote Condition Report 00-1346 to document this issue (Section R7).
- A thorough department self-assessment provided management with the status of the areas which needed improvement. Condition reports identified issues at a very low threshold to provide management with the tools needed to assess the program (Section R7).

Report Details

Summary of Plant Status

Both Units operated at full power.

III. Engineering

E2 Engineering Support of Facilities and Equipment

E2.1 Engineered Safety Feature Filter Ventilation Systems

The inspectors performed visual inspections of the Unit 1 and 2 control room makeup/cleanup filtration systems and fuel handling building exhaust air systems and interviewed the engineer assigned to these systems. All systems were properly maintained and in good material condition. Redundant systems were available as required. Test ports for in-place filter testing were installed and accessible. The system engineer was very knowledgeable of these systems.

E3 Engineering Procedures and Documentation

E3.1 Engineered Safety Feature Filter Ventilation System Equipment Testing Results

a. Inspection Scope (84750)

The inspectors reviewed the following documents to determine compliance with Technical Specification requirements:

- Records of in-place filter testing of high efficiency particulate air filters and charcoal adsorbers
- Records of laboratory tests of charcoal adsorbers

b. Observations and Findings

Filter testing was properly tracked by the system engineer responsible for the systems. Through a review of the in-place filter test results and the results of the laboratory testing of charcoal adsorber samples, the inspectors confirmed that the licensee complied with the Technical Specification requirements of Sections 4.7.7 and 4.7.8.

c. Conclusions

In-place filter tests and laboratory tests of charcoal adsorber samples complied with the appropriate Technical Specification requirements.

E7 Quality Assurance in Engineering Activities (84750)

The inspectors confirmed that an audit was conducted of the vendor who performed laboratory testing of samples of the charcoal adsorber material. The inspectors concluded from a review of the audit summary that there were no adverse findings which would render the vendor laboratory test results invalid.

IV. Plant Support

R1 Radiological Protection and Chemistry Controls

R1.1 Implementation of the Liquid, and Gaseous Radioactive Waste Program

a. Inspection Scope (84750)

Selected personnel involved in the radioactive waste effluent program were interviewed, and the following items were reviewed:

- Offsite Dose Calculation Manual
- 1997 and 1998 annual effluent release reports
- Release permits
- Sampling procedures
- Technical Specification requirements

b. Observations and Findings

The Annual Radioactive Effluent Release Reports for 1997 and 1998 were submitted in accordance with requirements in Section 6.9.1.4 of Technical Specifications and documented in accordance with the format described in NRC Regulatory Guide 1.21, Revision 1, June 1974. The annual effluent release reports documented a decreasing trend in the radioactivity released through liquid effluents. From the review of the annual reports and data supplied by the licensee, the inspectors determined that releases of radioactive effluents were within regulatory requirements and did not exceed the limits defined within the Offsite Dose Calculation Manual. The inspectors noted that whole-body dose to the public from liquid and gaseous radiological effluent releases for 1997 and 1998 were less than 1 percent of the yearly regulatory limit.

From a review of randomly selected sampling and analysis procedures, the inspectors determined that, in general, the procedures provided the staff with the necessary guidance to complete the tasks assigned. The inspectors observed the sampling and analysis of Unit 1's plant vent monitor and waste monitor tank No. 1E. No problems were identified during these evolutions, station procedures were correctly followed, and the chemistry technician obtaining the samples used good health physics practices during the tasks.

No problems were identified during the review of six randomly selected batch liquid release permits and six randomly selected continuous gaseous release permits.

c. Conclusions

Overall, an effective radiological effluent control program was in place. The 1997 and 1998 Annual Radioactive Effluent Release Reports were submitted in accordance with regulatory requirements and documented a decreasing trend in the radioactivity released through liquid effluents. Whole-body dose to the public from radiological effluent releases for 1997 and 1998 were less than 1 percent of the yearly regulatory limit. Sampling and analysis procedures provided the staff with the necessary guidance to complete the tasks assigned.

R1.2 Control of Radioactive Materials and Contamination; Surveying and Monitoring

a. Inspection Scope (83750)

The control of radioactive material was reviewed.

b. Observations and Findings

Background information: On November 24, 1999, the NRC's Region IV Plant Support Branch received a telephone call from the NRC's Region III office pertaining to a shipment of unidentified radioactive material (two pieces of steam generator laser templating equipment) from the South Texas Project. This equipment was shipped to a Westinghouse facility in Lake Bluff, Illinois, which ultimately shipped it to Farley Nuclear Power Station in Alabama. Farley Nuclear Power Station personnel surveyed the equipment and detected approximately 250 corrected counts per minute. On November 24, 1999, a member of the Plant Support Branch, informed the licensee's Radiation Protection Manager of the event. On November 24, 1999, the licensee wrote Condition Report 99-16737 documenting the issue. The licensee conducted an investigation and determined that the two pieces of equipment were incorrectly free released from Unit 2's radiologically controlled area around November 4, 1999.

Technical Specification 6.8.1.a requires that procedures be established, implemented, and maintained covering the activities recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Regulatory Guide 1.33, Appendix A, Section 7e (4) lists "contamination control." Procedure OPR04-ZR-0004, "Release of Materials from Radiologically Controlled Areas," Revision 3, Section 3.7, defined free release as "to remove all radiological restrictions from handling the material." Section 5.1.2.2 stated, in part, if no radioactivity is detected during direct monitoring, then the item has passed the direct monitoring criteria. Section 5.1.4 stated, in part, that items passing the direct monitoring criteria may be free released from the radiologically controlled area. The failure to properly survey and control radioactive material released from the radiologically controlled area is a violation of Technical Specification 6.8.1.a. This Severity Level IV violation is being treated as a noncited violation, consistent with Section VII.B.1.a of the NRC Enforcement Policy. Condition Report 99-16737 was written to document this issue (50-499/0001-01).

c. Conclusions

A violation of Technical Specification 6.8.1.a was identified for failure to survey and control radioactive material released from the radiologically controlled area. This Severity Level IV violation is being treated as a noncited violation, consistent with Section VII.B.1.a of the NRC Enforcement Policy. Condition Report 99-16737 was written to document this issue.

R2 Status of Radiation Protection and Chemistry Facilities and Equipment

a. Inspection Scope (84750)

Areas reviewed included:

- Effluent monitor physical condition
- Effluent monitor calibrations
- Analytical instrumentation calibrations

b. Observations and Findings

The inspectors performed a walk down of the liquid and gaseous monitors and storage tanks, in both units, pertaining to the effluent program. All effluent monitors and tanks were located as described in the Updated Final Safety Analysis Report. Material condition of the monitors and tanks were generally acceptable; however, the inspectors noted some problems during the tour. For example, in Unit 1, waste monitor transfer pump No. 1 F had a slight oil leak and waste monitor tank No. 1F had a patch of rust approximately 6 inches wide and 12 inches long. In Unit 2's waste monitor tank room, the inspectors observed a white residue below the auxiliary demineralizer strainer. The licensee wrote condition reports to address the inspectors' observations. Housekeeping in these areas was good. All tools and equipment were properly stored.

The effluent monitors were properly calibrated with radiation sources which were representative of plant related isotopes. Analytical instrumentation was calibrated and daily source response checked in accordance with station procedures.

c. Conclusions

All effluent monitors and tanks were located as described in the Updated Final Safety Analysis Report. Effluent monitors and analytical instrumentation were properly calibrated.

R5 Staff Training and Qualification

a. Inspection Scope (84750)

Personnel involved with the radioactive waste effluent training program were interviewed, and the following items were reviewed:

- Continuing training lesson plans
- Management oversight of the training program

b. Observations and Findings

The inspectors determined from a review of the chemistry related curriculum review committee meeting minutes that chemistry management was appropriately involved in the continuing training program. From a review of the continuing training program course descriptions and schedules pertaining to the effluent program, the inspectors concluded that the continuing training course material provided technicians with the appropriate topics to help ensure that technical competence was maintained.

Qualification cards were well developed, and chemistry management was appropriately involved in the development and qualification process. Site and industry lessons learned were included in the training program.

c. Conclusions

An effective radiological effluent continuing training program was maintained.

R7 Quality Assurance in Radiation Protection and Chemistry Activities

a. Inspection Scope (84750)

Selected quality department personnel involved with the oversight of the radioactive waste effluent program were interviewed, and the following items were reviewed:

- Qualifications of personnel who perform quality department audits and monitoring reports
- Quality monitoring reports
- Department self-assessments
- Radioactive waste effluent program condition reports

b. Observations and Findings

Audits and Monitoring Reports

A review of the qualifications of the lead auditor involved in the oversight of the radiological effluent program revealed that the auditor had the proper technical and operational experience and training to perform effective audits and monitoring reports.

Technical Specification 6.8.1.g requires that procedures be established, implemented, and maintained covering the quality assurance program for effluent monitoring implementation. Section 5.1.1 of Quality Procedure OPQP01-ZA-0015, "Oversight

Planning and Scheduling Process,” Revision 5, stated, in part, that the Offsite Dose Calculation Manual program audit shall be scheduled on a nominal frequency of 24 months. The Offsite Dose Calculation Manual program audit reviewed the radiological effluent program. The last quality audit of the radiological effluent monitoring program was performed during June 1997 and reviewed during the last NRC inspection in August 1997.

Section 5.1.1. of the above procedure also stated that it does not preclude the scheduling of an oversight activity at a later date, if the Oversight Planning and Scheduling Review Team deemed this appropriate. Section 5.3.4 of this procedure stated, in part, that the Oversight Planning and Scheduling Review Team shall document the specifics of any decisions that do not meet Section 5.1.1; get the approval of the Director of Quality; and inform the General Manager, Nuclear Assurance and Licensing, and the Nuclear Safety Review Broad Audit Subcommittee at the next meeting.

The inspectors noted that as of January 27, 2000, a radiological effluent monitoring program audit was neither conducted or planned nor was there any documentation that approved scheduling an audit at a later date. The failure to perform an Offsite Dose Calculation Manual audit within 24 months or document and obtain the approval of the Director of Quality to schedule an audit at a later date is a violation of Technical Specification 6.8.1.g. This Severity Level IV violation is being treated as a noncited violation, consistent with Section VII.B.1.a of the NRC Enforcement Policy. The licensee wrote Condition Report 00-1346 to document this issue 50-498;-499/0001-02).

Related to this issue, from discussions with members of the quality department and a review of quality program procedures, the inspectors determined that the term “nominal frequency” was not defined. The licensee wrote Condition Report 00 -1396 to address this issue.

Ten quality monitoring reports pertaining to the radiological effluent monitoring program were written since the last NRC inspection in August 1997. All monitoring reports were well written and provided management with a good assessment of the program areas reviewed.

Department Self-Assessments

One chemistry department radioactive effluent self-assessment conducted between December 6 and 9, 1999, was performed since the last NRC inspection. This self-assessment was issued on January 27, 2000. The inspectors noted that the assessment team consisted of a technical specialist from another utility and a member from the quality and training departments. A chemistry supervisor was the team leader. The self-assessment identified 5 areas for improvement and 18 recommendations. All items were appropriately captured in the station’s corrective action program. No regulatory concerns were identified during this self-assessment.

Condition Reports

The inspectors reviewed a summary of radiological effluent control program condition reports written since August 1, 1997, and reviewed 12 in detail. This review revealed that the licensee identified issues at a very low threshold to provide management with the tools needed to assess the effluent control program. The review also identified that, in general, corrective action response timeliness was appropriate.

c. Conclusions

A violation of Technical Specification 6.8.1.g was identified for failure to perform an Offsite Dose Calculation Manual audit within 24 months or document and obtain the approval of the Director of Quality to schedule an audit at a later date. This Severity Level IV violation is being treated as a noncited violation, consistent with Section VII.B.1.a. of the NRC Enforcement Policy. The licensee wrote Condition Report 00-1346 to document this issue. A thorough department self-assessment provided management with the status of the areas which needed improvement. Condition reports identified issues at a very low threshold to provide management with the tools needed to assess the program.

V. Management Meetings

X1 Exit Meeting Summary

The inspectors presented the inspection results to members of licensee management at an exit meeting on January 27, 2000. The licensee acknowledged the findings presented. No proprietary information was identified.

ATTACHMENT

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

P. Arrington, Licensing Specialist
L. Cochrane, Auditor, Quality
B. Dowly, Manager, Generation Support
R. Gangluff, Manager, Chemistry
S. Head, Superintendent, Licensing
M. McBurnett, Director, Quality and Licensing
B. Mookhoek, Engineer, Licensing
K. Reynolds, Effluent Tracking Chemist, Chemistry
J. Simmons, Acting Manager, Health Physics
M. Smith, Manager, Plant Support Quality

NRC

N. O'Keefe, Senior Resident Inspector

LIST OF INSPECTION PROCEDURES USED

IP 84750 Radioactive Waste Treatment, and Effluent and Environmental Monitoring

LIST OF ITEMS OPENED AND CLOSED

Opened and Closed

50-499/0001-01 NCV Failure to survey and control radioactive material released from the radiologically controlled area

50-498; 499/0001-02 NCV Failure to perform an Offsite Dose Calculation Manual audit

LIST OF DOCUMENTS REVIEWED

Annual Radioactive Effluent Release Reports for 1997 and 1998

Offsite Dose Calculation Manual Revisions 9 and 10

A summary of radioactive effluent condition reports written since August 1, 1997.

Quality Monitoring Reports: MN-97-1-0795, MN-97-0-1064, MN-97-0-1065, MN-98-1-0391, MN-98-2-0577, MN-99-1-0197, MN-99-0-1015, MN-99-1-1019, and MN-00-0-0021

Quality Procedure OPQP01-ZA-0015, "Oversight Planning and Scheduling Process," Revision 5

Quality Procedure OPQP02-ZA-0003, "Quality Surveillance and Performance Monitoring Programs," Revision 5

Radiation Protection Procedure OPRP04-ZR-0004, "Release of Materials From Radiologically Controlled Areas," Revision 3

Chemistry Procedure OPOP02-WL-0100, "Liquid Waste Release," Revision 4

Chemistry Procedure OPSP07-VE-0002, "Unit Vent Particulate and Iodine Analyses," Revision 7

Chemistry Procedure OPSP07-WL-LDP1, "Liquid Effluent Permit," Revision 4

Chemistry Procedure OPCP07-ZS-0010, "Waste Monitor Tank Sampling," Revision 2

Chemistry Procedure OPCP07-ZS-0016, "Continuous Atmospheric Monitors," Revision 18