APPENDIX

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Inspection Report: 50-445/94-07
50-446/94-07

Licenses: NPF-87
NPF-89

Licensee: TU Electric
Skyway Tower
400 North Olive Street, L.B. 81
Dallas, Texas

Facility Name: Comanche Peak Steam Electric Station, Units 1 and 2

Inspection At: Glen Rose, Texas

Inspection Conducted: March 7-11, 1994

Inspector: L. T. Ricketson, P.E., Senior Radiation Specialist

Approved: Blaine Murray 3/23/94
B. Murray, Chief, Facilities Inspection Programs Branch — Date

Inspection Summary

Areas Inspected (Units 1 and 2): Routine, announced inspection of the radiological environmental monitoring program, including audits and appraisals, changes, program implementation, meteorological monitoring program, and training and qualifications. Also included was a review of specific startup test results.

Results:

- The audit of the radiological environmental monitoring program was sufficient to ensure that the program functioned correctly. The vendor laboratory was appropriately audited as well (Section 1.1).
- Sufficient staffing was allotted to meet program goals (Section 1.3).
- The radiological environmental monitoring program was effectively implemented (Section 1.3).
- No radiological environmental sample results were above reporting limits (Section 1.3).

- The land use census was properly conducted, and the results did not indicate a need for change in the program (Section 1.3).

- The vendor laboratory participated in an interlaboratory comparison program, as required, with good results (Section 1.3).

- The meteorological instrumentation was operable and properly maintained and calibrated, but there were frequent problems with the associated computer and computer software (Section 1.4).

- A violation was identified concerning the failure to follow procedural requirements related to the analysis of meteorological data recovery (Section 1.4).

- An unresolved item was identified involving 90 percent meteorological data recovery (Section 1.4).

Summary of Inspection Findings:

- A noncited violation was identified (Section 1.4).

- Unresolved Item 445/9407-01; 446/9407-01 was opened (Section 1.4).

Attachment:

- Attachment - Persons Contacted and Exit Meeting

DETAILS

1 RADIOLOGICAL ENVIRONMENTAL MONITORING (84750)

The licensee's program was inspected to determine compliance with Technical Specifications 6.5.2.8, 6.8.1, 6.8.3, 6.9.1.3, 6.14, and the requirements of 10 CFR Part 20, and agreement with the commitments in the Final Safety Analysis Report and the recommendations of Regulatory Guides 1.23 and 4.15.

1.1 Audits and Appraisals

Quality Assurance Audit 93-122, entitled, "Effluent and Environmental Monitoring Programs," was performed August 16-31, 1993. The inspector reviewed the audit report and noted that the audit team included two technical experts from other operating power reactor facilities. No problems were identified involving the radiological environmental monitoring program. The audit was commensurate with the complexity of the program.

Analyses of radiological environmental samples were performed by a vendor laboratory. In lieu of licensee personnel performing an audit of the vendor, the licensee took credit for an audit performed by New York Power Authority personnel in 1992. Both the licensee and the New York Power Authority were participating members of the Nuclear Utility Procurement Issues Committee (NUPIC). Licensee personnel stated that NUPIC audits are performed on a 24-month cycle. The audit identified a number of deficiencies and made recommendations for improvement. The audit team consisted of five people from various licensed facilities. One member was identified as a technical expert. The vendor satisfactorily resolved questions related to the audit findings. Licensee personnel also added that the vendor is not considered to be performing a safety related function and is, therefore, not required to be listed on the approved vendor list.

The inspector noted that the most recent surveillance of the radiological environmental monitoring program activities was performed March 21, 1992.

1.2 Changes

A change of the licensee's organization resulted in the environmental group moving from Chemistry to Site Engineering. The new designation for the group was Environmental/Site Facilities Engineering.

Personnel changes were confined to the loss of the Environmental/Site Facilities Engineering worker who had been responsible for collecting radiological environmental samples. The individual terminated approximately 6 months ago. Before leaving, the individual trained a replacement. Several other individuals were qualified to perform as a backup.

There were no major changes to facilities, equipment, programs, or procedures.

1.3 Implementation of the Radiological Environment Monitoring Program

The radiological environmental monitoring program was implemented by two onsite organizations. The samples were collected by Environmental/Site Facilities Engineering personnel and were analyzed by a vendor laboratory. The results of the analyses were evaluated by the Radiation Protection Department. The inspector determined that the staffing used was appropriate to meet the program goals.

The inspector reviewed the 1992 Annual Radiological Environmental Operating Report and the 1993 draft report and determined that the Radiological Environmental Monitoring Program was implemented as described the Offsite Dose Calculation Manual. The inspector visited selected sampling locations to observe licensee personnel collecting and processing samples and reviewed sample tracking, and sample shipment preparation. The inspector determined that these portions of the program were properly conducted. The inspector noted that the storing of samples in an unlocked refrigerator in an area where other workers had access could compromise the concept of "chain of custody" and had the potential of resulting in sample tampering.

The inspector interviewed the Radiation Protection personnel responsible for reviewing the results of the sample analysis received from the vendor laboratory and verified that procedural requirements were met.

The inspector noted that the Annual Environmental Monitoring Report for 1992 and the 1993 draft report reported no anomalous sample results and, therefore, no sample levels above the reporting limits. The 1993 draft report made note of the increasing yearly average of tritium levels in the Squaw Creek reservoir. Licensee personnel stated that this was expected and the level was also expected to "plateau" after a period of operation of both plants. The tritium level was also below reporting levels.

The inspector reviewed the 1993 Land Use Census and determined that the licensee had appropriately assessed the land use around the facility and documented significant changes. The census report concluded that minimal changes in the Radiological Environmental Monitoring Program were necessary.

The vendor laboratory responsible for analyzing the licensee's samples participated in the Environmental Protection Agency's laboratory intercomparison program. Results of the comparison were reviewed by Radiation Protection personnel and included in the Annual Radiological Environmental Operating Report as required. The vendor laboratory achieved satisfactory agreement; however, Radiation Protection personnel stated that they had established no acceptance criteria for vendor laboratory performance.

1.4 Implementation of the Meteorological Monitoring Program

Technical Specification 6.8.1 states, in part, that written procedures shall be established, implemented, and maintained covering applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Section 7(h) of Appendix A of Regulatory Guide 1.33 includes meteorological monitoring. Station Procedure STA-714, "Meteorological Monitoring Program,"

outlines the responsibilities for implementing the program. Several onsite groups shared responsibilities related to the meteorological monitoring program.

Operations personnel performed daily surveillances of the meteorological data displays to determine operability of the instruments. These checks were verified to have been performed as required.

Instrumentation and Controls personnel performed maintenance and calibrations on the meteorological instrumentation. The inspector determined through a review of records that semiannual calibrations have been performed as required. The inspector noted that during the latest calibration of wind direction loop X-Z-4116, portions of the "as found" data were outside the allowable range. Procedure ICA-101, "I&C Work Control," Section 6.5.2 states, in part, that a technical evaluation "should" be initiated in such a case. However, no evaluation was performed. Operations Notification and Evaluation Form 94-346 was initiated to document and correct the finding. The inspector observed that there were other occurrences during which the "as found" data were out of the allowable range and the responsible technicians initiated the required technical evaluations.

Procedure STA-714, Section 6.1.1.6 states, in part, "Radiation Protection shall monitor the collection of meteorological data . . . Radiation Protection shall provide information on data reliability and recoverability for all parameters to System Engineering on a monthly basis. However, licensee representatives acknowledged that this has not been done since early 1992. The reason given was that they had experienced continuing problems with the computer software which was designed to calculate the percent recovery.

Procedure STA-714, Section 6.1.1.7 states, in part, "System Engineering shall review documentation necessary for determining overall performance and reliability. Using this information, along with the data recovery information provided by Radiation Protection, System Engineering shall compile a report which provides an accountability for the absence of data . . . . This report shall be transmitted to Radiation Protection prior to preparation of the end of year Semiannual Radioactive Effluent Release Report." Licensee representatives acknowledged that this was not done in 1992. System engineering relied on the information supplied by Radiation Protection in order to compile a report which was to be transmitted back to Radiation Protection.

According to licensee personnel, numerous problems have been experienced with the meteorological instruments. Most have been computer or computer software problems. A meteorological instrumentation vendor recently visited the site, at the licensee's request, to diagnose the problems and consult on possible solutions. Licensee personnel expressed the opinion that, with new computer software, they would soon have the capacity to analyze the meteorological data and determine the percent recovery. The licensee also immediately initiated a revision to STA-714 which changed at least some of the requirements to suggested guidance by substituting "shoulds" for "shalls." The inspector reviewed the licensee's proposed corrective action concerning the failure to

implement procedure requirements and determined that the actions were appropriate to address the problem.

The inspector identified the licensee's failure to fully implement Sections 6.1.1.6 and 6.1.1.7 of STA-714 as a violation of Technical Specification 6.8.1 which requires the implementation of certain procedures. The violation is not being cited because the criteria specified in Section VII.B.1 of Appendix C to 10 CFR Part 2 have been met.

The licensee committed in Section 1 AB of the Final Safety Analysis Report to comply with Regulatory Guide 1.23. Regulatory Guide 1.23 establishes a goal of 90 percent annual meteorological data recovery. Because of computer software problems, the procedural requirements discussed above were not met, and the licensee's personnel could not demonstrate to the inspector that they had achieved the 90 percent data recovery. However, licensee representatives stated that the necessary raw data was available to make this determination but had not been assembled in a report format. The inspector identified the question of whether the licensee had met the Regulatory Guide 1.23 commitment as an unresolved item, pending further review (445/9407-01; 446/9407-01). An unresolved item is a matter about which more information is required to ascertain whether it is an acceptable item, a violation, or a deviation.

1.5 Training and Qualifications.

The inspector reviewed training records and qualification cards for selected individuals involved in the radiological environmental monitoring program and determined that they met qualification requirements.

1.6 Conclusions

The audit of this area was in sufficient depth to ensure that the program functioned correctly. The vendor laboratory was appropriately audited as well.

Sufficient staffing was allotted to meet program goals. The radiological environmental monitoring program was as described in the Offsite Dose Calculation Manual and was effectively implemented. There were no sample results above reporting limits, and the land use census did not indicate a need for significant change in the program. The vendor laboratory participated in an interlaboratory comparison program, as required, with satisfactory results.

The meteorological instrumentation was operable and properly maintained and calibrated, but there were frequent problems with the associated computer and computer software. A violation was identified because licensee personnel failed to follow procedural requirements. It could not be determined whether or not the licensee achieved 90 percent meteorological data recovery.

2 STARTUP TEST RESULTS EVALUATION (72301)

The inspector reviewed the licensee's final set of radiation surveys performed in accordance with ISU 208B Radiation Survey Tests. The surveys were

conducted at power levels between 95 and 100 percent. Other startup surveys were reviewed during NRC Inspection 50-445/93-28; 50-446/93-28 and NRC Inspection 50-445/93-40; 50-446/93-40. The surveys identified some radiation base points at which radiation levels were marginally higher than expected but were lower than the maximums for those areas specified in the Final Safety Analysis Report. The findings were evaluated by Radiation Protection personnel and found to be satisfactory.

ATTACHMENT

1 PERSONS CONTACTED

1.1 Licensee Personnel

*J. Ayres, Quality Assurance Manager, Operations
*J. Finneran, Civil Engineering Manager
*E. Floyd, Staff Health Physicist
*N. Harris, Senior Licensing Specialist
*T. Hope, Regulatory Compliance Manager
*D. Kay, Supervisor, Radiation Protection Technical Support
*D. McAfee, Quality Assurance Manager
*J. Nandi, Environmental/Site Facilities Engineering Supervisor
*R. Prince, Radiation Protection Manager
M. Syed, Meteorological Instrumentation System Engineer
*C. L. Terry, Vice President, Nuclear Operations
*B. Turner, Senior Environmental Specialist

1.2 NRC Personnel

D. Graves, Senior Resident Inspector
*K. Kennedy, Resident Inspector

*Denotes personnel that attended the exit meeting. In addition to the personnel listed, the inspector contacted other personnel during this inspection period.

2 EXIT MEETING

An exit meeting was conducted on March 11, 1994. During this meeting, the inspector reviewed the scope and findings of the report. The licensee did not express a position on the inspection findings documented in this report. The licensee did not identify as proprietary, any information provided to, or reviewed by the inspector.