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January 29, 2004
E910-04-004

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

Subject: Saxton Nuclear Experimental Corporation (SNEC)
Operating License No. DPR-4
Docket No. 50-146
2003 Annual Report

Gentlemen,

The purpose of this letter is to submit a written report covering the status of the Saxton Nuclear Experimental Corporation (SNEC) Facility in accordance with Section 3.8.2 of the Saxton Nuclear Experimental Corporation (SNEC) Technical Specifications.

The report is for the period beginning January 1, 2003 through December 31, 2003.

Sincerely,

A handwritten signature in black ink, appearing to read "G. A. Kuehn".

G. A. Kuehn
Vice President SNEC

cc: NRC Project Manager NRR
NRC Project Scientist, Region 1

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SAXTON NUCLEAR EXPERIMENTAL CORPORATION

2003

ANNUAL REPORT

FOR THE

SAXTON NUCLEAR EXPERIMENTAL CORPORATION FACILITY

January 1, 2003 - December 31, 2003

EXECUTIVE SUMMARY

During the report period January 1, 2003 through December 31, 2003, various activities were conducted at the Saxton Nuclear Experimental Corporation (SNEC) Facility to prepare for license termination. SNEC Facility Radiological Controls personnel continued to monitor radiological conditions at the site to assure protection of the health and safety of the general public and site personnel.

This report reviews those activities as required by the Technical Specifications Section 3.8.2 and includes:

- A. Information relating to changes in those management and supervisory positions designated in the Technical Specifications Section 3.1 (Organization and Responsibilities) as being responsible for decommissioning the facility.
- B. A summary of decommissioning, design, and maintenance changes made to the deactivated facility.
- C. Results of surveys and monitoring performed in accordance with Technical Specifications Section 3.6.2.1 (Radioactive Effluent Controls Program) and 3.6.2.2 (Radiological Environmental Monitoring Program).
- D. A review of the performance of access control and surveillance measures.

ANNUAL REPORT IN COMPLIANCE WITH PARAGRAPH 3.8.2 OF THE SNEC TECHNICAL SPECIFICATIONS

JANUARY 1, 2003 - DECEMBER 31, 2003

This report was prepared in accordance with Section 3.8.2 of the SNEC Technical Specifications. The reporting period covers January 1, 2003 through December 31, 2003. Each section presented below corresponds to a reporting requirement of Section 3.8.2.

A. Section 3.8.2.1 - The following is information relating to changes in those management and supervisory positions designated in Section 3.1 of the Technical Specifications:

Perry G. Carmel (SNEC Facility Site Supervisor) retired in the year 2003. Michael S. Williams (D&D Engineer) assumed the position of SNEC Facility Site Supervisor.

B. Section 3.8.2.2 - The following is a summary of decommissioning, design, and maintenance changes made to the deactivated facility:

CV Stabilization

- Upon completion of the CV Lower Head backfill, the Containment Vessel (CV) dewatering system was no longer required to stabilize the lower head and prevent floatation.
- 16 wells were removed from service in accordance with guidelines set forth by the Pennsylvania Department of Environmental Protection.
- Continued to operate the remaining dewatering wells to assist in site water control during rain events.
- Removed CV anchor bolt 1 through 5 brackets and cut bolts to provide access to the west side of the excavation.

CV Lower Head to 804' Elevation - Final Status Survey (FSS) Preparations

- Cleaned, removed paint, and decontaminated the CV interior steel shell from the lower head to approximately 804' elevation.
- Collected steel samples from potential activated zones of the shell.
- Completed the FSS from the lower head to approximately 804' elevation.
- Backfilled the lower head to approximately 804' elevation.
- Poured an approximately 6" concrete cap at approximately 804' elevation to act as a protection barrier and work platform to remove the upper portion of the CV shell.
- Backfilled the exterior CV excavation area, except for the southern portion to the approximately 804' elevation.

CV Dome and Shell Removal Preparations

- Removed the CV equipment hatch cover and replaced it with a wood door.
- Removed the Decommissioning Support Facility (DSF) and installed a temporary equipment access door at the CV cut out. Relocated the CV intrusion alarm.
- Removed the CV/DSF Ventilation System.
- Removed several CV piping penetrations.
- Removed the CV Polar Crane from service and started dismantling.
- Performed the structural evaluation and developed the lifting design for CV shell removal.
- Procured materials, welded, and QC inspected CV Dome lifting lugs and support clips.
- Started removal of exterior shell paint along the cut lines and started cutting the dome loose from the lower shell.

Saxton Steam Generating Station (SSGS) Intake Tunnels

- Cleaned and de-watered Intake Tunnels to support FSS.
- Drilled and sampled inaccessible areas at the Intake Tunnel screen rooms.
- Completed FSS and demobilized.
- Backfilled the Intake Tunnel manways and trash rake area.
- Backfilled Shoup Run manhole.

SSGS Discharge Tunnel

- Cleaned and dewatered the Discharge Tunnel to support FSS.
- Started the Discharge Tunnel FSS.
- Isolated the discharge tunnel from the seal chambers and spray pump pit.
- Installed a Spray Pump room access stairway.

SSGS Footprint

- Maintained and prepared the SSGS footprint for FSS.
- Started the SSGS footprint FSS.
- Completed surveys of piping systems in the SSGS footprint and tunnels.

SSGS Seal chambers

- Cleaned and remediated the SSGS Seal Chambers.
- Completed FSS of Seal Chambers.

SSGS Steam tunnel

- Remediated concrete in the remaining section of steam tunnel.

Site Open Land Areas

- Started characterization of land areas near the east property line and open field.
- Completed land survey to establish Penelec property line.

Balance of Plant

- Completed removal of the SNEC Tank Farm water processing systems.
- Relocated overhead power lines.
- Relocated the Site Supervisor Trailer, Rad Con Count Room Trailer, and Rad Con Break Trailer to the Warehouse concrete pad.
- Started FSS of Penelec Line Department building.
- Complete the FSS of the Southwest Garage concrete pad.

Other

- Continued to ship radioactive waste.
- Removed remnants of the Weir pipe.
- Completed the FSS of the CV below the approximately 804' elevation and the SSGS debris/soil piles.
- Started survey of concrete pieces that were removed from the CV soil pile.
- Demobilized the west water processing sedimentation field.

- C. Section 3.8.2.3 - Results of surveys and monitoring performed in accordance with Technical Specifications Sections 3.6.2.1 (Radioactive Effluent Controls Program) and 3.6.2.2 (Radiological Environmental Monitoring Program):

The results of the Radiological Environmental Monitoring Program are contained in the 2003 Radiological Environmental Monitoring Report.

- D. Section 3.8.2.4 - The following is a review of the performance of access control and surveillance measures:

Access Control

1. A uniformed SNEC Site Watchman (Unarmed Security Officer) continues to provide access control to the site during normal work hours. Site personnel continue to display security badges during normal work hours when working on SNEC property. Temporary badges are issued to visitor personnel. A site escort is required until the visitor receives Site Specific Access Training in accordance with 10CFR19.12.
2. SNEC Facility Management is responsible for maintaining access control to the Exclusion Area. The Exclusion Area (Decommissioning Support Facility and Containment Vessel) is maintained locked and a security alarm system is activated during non-working hours.

There were no break-ins or known attempted break-ins at the SNEC Facility during the year 2003.

NOTE: The Decommissioning Support Facility (DSF) was dismantled in October of 2003 and the security alarm was removed. The DSF was administratively controlled as part of the site Exclusion Area.

Surveillances

All Technical Specification surveillances were performed in the required frequency as described in TS Section 3.5.3.1, unless specifically noted below. The following surveillance inspections were reviewed for this report:

1. Verification that Exclusion Area access points are secured at the completion of each authorized entry.

Two Exclusion Area security deficiencies were identified in 2003. A description of each event is listed below.

Deficiency 1

Upon closing and securing the Containment Vessel (CV) on 7/18/03, the First Energy Dispatch (alarm station) was called to verify that the CV door intrusion alarm was clear. The Dispatch reported that the alarm had not cleared and it had been in an alarm condition for the past several days. Rad Con personnel re-entered the CV and inspected the alarm trip switch and door. The trip switch was found in the continuous alarm mode position, which made it impossible for the Dispatch to be notified during an unauthorized intrusion event. There was no visible evidence of CV intrusion during the period that the alarm system was not operable. This deficiency was a violation of the SNEC Facility Technical Specifications, Section 1.1.3.2, which states the following:

The Containment Vessel (CV) and the Decommissioning Support Facility (DSF) shall be equipped with an intrusion alarm system. Intrusion alarms will be activated whenever the site is not manned. Operability shall be verified in accordance with Section 3.5.3.1.b.

The root cause was determined to be inadequate personnel training and insufficient cooperation by the First Energy Dispatch. Corrective actions included CV intrusion alarm training for all responsible individuals, operability testing of CV alarms, and management evaluation of changing alarm companies. The event and corrective actions were documented on a SNEC Corrective Action Program (CAP) Form and a Licensee Event Report (LER) was submitted.

Deficiency 2

Upon initial entry of the Decommissioning Support Facility (DSF) on 9/10/03, a Rad Con Technician noticed that the DSF intrusion alarm system was not armed overnight, when the site was not manned. There was no visible evidence of DSF intrusion during the period that the alarm system was not operable. This deficiency was also in violation of the SNEC Facility Technical Specifications, Section 1.1.3.2 and was reported to the NRC in an LER.

The root cause was narrowed down to two possibilities. They are:

- Attention to Detail - The Rad Con Technicians may have entered the wrong codes during arming of alarms on the previous work day.
- Equipment Failure - The Count Room Trailer was also found unarmed on the morning of 9/10/03. Since both the DSF and Count Room Trailer alarms were found unarmed, a system malfunction (i.e., power failure) may have occurred overnight, which deactivated both alarms.

Corrective actions included a procedure change to require a second individual to verify that the DSF and CV intrusion alarms are armed at the end of daily operations, operability inspection of the DSF alarm system by the alarm company, and additional training for personnel who activate/de-activate site intrusion alarm systems.

2. Verification of the operability of the Exclusion Area intrusion alarms performed quarterly.
All surveillance inspections were performed satisfactorily in the year 2003.
3. The Station Ventilation System Effluent Particulate Monitor channel checks, source checks, channel test and channel calibration shall be performed at a frequency specified in the SNEC Facility Offsite Dose Calculation Manual (ODCM).

There were no surveillance deficiencies involving Station Ventilation System Effluent Particulate Monitor channel checks, source checks, channel test, and channel calibration in 2003.

4. The Station Ventilation System HEPA filter will be tested to verify efficiencies in accordance with the requirements of the ODCM.

There were no surveillance deficiencies involving Station Ventilation System HEPA filter testing in 2003.

NOTE: The Station Ventilation System was removed from service and disassembled in October 2003.