SAXTON NUCLEAR EXPERIMENTAL CORPORATION

SAXTON NUCLEAR FACILITY

Operating License No. DPR-4
Docket No. 50-146
Technical Specification Change Request No. 55

This Technical Specification Change Request is submitted in support of Licensee's request to change Appendix A to Operating License No. DPR-4 for Saxton Nuclear Facility. As a part of this request, proposed replacement pages for Appendix A are also included.

SAXTON NUCLEAR EXPERIMENTAL CORPORATION

BY: _____
President SNEC

Sworn and subscribed
to before me this 8th
day of August, 1994.

_____
Notary Public

DIANA M. DeBLASIO
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires 6/5/96

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

IN THE MATTER OF
SAXTON NUCLEAR EXPERIMENTAL CORPORATION

DOCKET NO. 50-146
LICENSE NO. DPR-4

CERTIFICATE OF SERVICE

This is to certify that a copy of Technical Specification Change Request No. 55 to Attachment A of the Operating License for the Saxton Nuclear Facility has, on the date given below, been filed with the executives of Liberty Township, Bedford County Pennsylvania; Bedford County Pennsylvania; and the Pennsylvania Department of Environmental Resources, Bureau of Radiation Protection, by deposit in the United States mail, addressed as follows:

Mr. Donald Weaver, Chairman
Liberty Township Supervisors
R.D. #1
Saxton, PA 16678

Mr. Richard Rice, Chairman
Bedford County Commissioners
County Courthouse
203 South Juliana Street
Bedford, PA 15522

Mr. William Dornsife, Director
PA Dept. of Environmental Resources
Bureau of Radiation Protection
P.O. Box 2063
Harrisburg, PA 17120

SAXTON NUCLEAR EXPERIMENTAL CORP.

BY: [signature]
President, SNEC

DATE: 8/8/94

I. Technical Specification Change Request No. 55

The Saxton Nuclear Experimental Corporation (SNEC) requests that the following revision be made to the SNEC Technical Specifications (TS):

Replace the existing pages in total.

II. Reason for the Change

The existing TS lack sufficient specification to allow expansion of the level of effort at the site beyond the current "routine and emergency inspections and maintenance associated with the possession of the Saxton Reactor Facility."

This Technical Specification Change Request (TSCR) requests NRC approval to allow characterization of the Saxton facility. The change is necessary to allow the collection of radiological data to support best estimates of manpower, equipment and services, radwaste volumes and types, radiation exposure and costs associated with the decommissioning of the facility to be reflected in the decommissioning plan.

Characterization includes prerequisite and concurrent maintenance and/or modification activities necessary to support the radiological data collection. Characterization activities will consist of:

1) Direct radiation measurements using conventional survey instruments. Survey activities will be performed in accordance with the guidance in NUREG/CR-5849, "Manual for Conducting Radiological Surveys in Support of License Termination."

2) Removal of samples (concrete cores, insulation, paint, smears of removable contamination and scrapings of corrosion film from the inside surfaces of plant systems) for detailed radiological analysis.

3) Component disassembly and shield block removal to permit access for the sample/survey activities described above. System component dismantlement and removal from its installed location will not occur beyond that required to permit characterization. In addition to the core bores, permanent changes or modifications to the facility will be limited to those supporting characterization work; providing power for lighting, heat and internal ventilation for personnel and crane operations for shield block removal/ replacement.

4) Toxic/hazardous material evaluation will be performed in addition to the radiological characterization. The materials to be evaluated include but are not limited to lead, lead based paints and asbestos.

The change also revises the content and format of the existing TS making them more consistent with the guidelines for applicable sections of ANSI/ANS 15.1. As a result of that effort existing sections were expanded and new sections were included to address staffing, personnel selection and training, and review and audit. Requirements for records and reports previously dispersed throughout various sections have been compiled in their appropriate sections. Editorial revision is intended to increase clarity.

III. Safety Evaluation

Power operation at the SNEC facility was concluded in May 1972 and shortly afterward all systems, components and areas presently requiring characterization were drained and vented. Within the containment vessel (CV), activities have been limited by TS to routine and emergency inspections and maintenance associated with the possession of the Saxton Reactor Facility. Extensive radiological and toxic/hazardous material characterization, as delineated above, is required to provide data indicative of current conditions relative to these concerns. The characterization data will be used for CV decommissioning planning to evaluate appropriate work practices and determine the extent of the contaminated/radioactive waste resulting from decommissioning activities.

Although the activities proposed in this TS revision allow a more diversified work scope than is currently permitted, the condition of the facility will not differ substantially from that which existed for routine activities permitted by current TS sections 4.b., 4.c., and 4.d. Routine quarterly surveillances performed from mid 1975 to the present have identified no evidence of remaining liquids and no change in the radiological condition of the containment vessel and its contents with the exception of natural radiological decay. The characterization activities will not produce any effect which would cause a release of radiological material in excess of 10 CFR 20 limits.

Characterization and supporting activities will be performed in accordance with approved procedures. Implementation of programmatic and procedural controls will effectively limit any disruption to the stable radiological condition of the containment vessel. Based on the knowledge that the activities will not disrupt that stability, it has been concluded that the characterization activities proposed will have no adverse impact on the health and safety of the public.

Changes to the TS resulting from: editorial clarification, the inclusion of the new sections (addressing management and supervisory personnel organization, staffing, personnel selection and training, procedures, review and audit), and the consolidation of requirements for records and reports, clarify intent and are administrative in nature. Similarly updating the references to 10 CFR 20 due to revision of that document in the records section is administrative. As such, these changes do not affect the health and safety of the public.

V. No Significant Hazards Consideration

Accidents evaluated in the 1972 Safety Evaluation as applicable to the Saxton site are fire, flood and radiological hazard. Although there is no fire detection or suppression capability within the CV, the likelihood of fire and its potential to spread is minimal. Significant combustible materials have been removed from the CV and policy dictates that the area inside the exclusion area fence, including the CV will not be utilized for any purpose including storage. Electrical service is secured except during the performance of periodic inspections and the proposed characterization activities.

The potential effects of inundation of the site have been evaluated and found to be minimal. Stress analysis found the CV capable of withstanding extended flood loading above the operating floor without buckling. The CV will also not be made more buoyant during flood conditions while characterization activities are in progress since any weight removed will be insignificant. With the exception of minor soil contamination, all radioactive material is within the CV. Only very limited quantities of that are available for dispersal within the CV. The isotopes which could be released if the vessel were breached by flood waters would be limited to a small amount of contamination not sealed within the Reactor Coolant System. Due to the inherent safety of the site and the surveillance it would receive during a major storm, the potential for the accidental release of byproduct material as a result of flooding is not considered inimical to public health and safety.

Exclusion is the primary safeguard against radiological hazard. Access to areas within the CV is controlled by the locked and alarmed CV personnel access hatch for those areas above the 812.0 foot elevation and the additional locked stairwell grating barrier barring access to areas below elevation 812.0.

SNEC has determined that this TSCR poses no significant hazards as defined in 10 CFR 50.92. Allowing the performance of characterization activities enhances the success of the decommissioning effort by permitting effective evaluation of the radiological condition of the facility.

The administrative changes and inclusion of characterization activities with those already permitted at the facility will not:

1. Result in a significant increase in the probability or consequences of an accident previously evaluated. The activities associated with characterization of the facility will have a minimum impact on the physical condition of the CV as it relates to the risk of fire and has no effect on the risk flooding.

2. In its present condition, the only accidents applicable to the site are those addressed above. The possibility of a new or different type of accident than that previously evaluated in the FSAR will not be created by the implementation of activities permitted by the approval of this TSCR.

3. No margins of safety relevant to the equipment remaining at the facility exist. Activities involved in characterization will not involve a reduction in a margin of safety.

V. Implementation

It is requested that the amendment authorizing this TSCR be issued expeditiously and be effective upon issuance. Completion and submittal of the Decommissioning Plan for SNEC is dependent on data obtained during facility characterization.

A. SITE

1. Location

The Saxton site is a 1.148 acre tract deeded from the Pennsylvania Electric Company to the Saxton Nuclear Experimental Corporation (SNEC). It is located within the property of the Pennsylvania Electric Company near the Borough of Saxton, Pennsylvania, in Liberty Township, Bedford County, Pennsylvania. The Pennsylvania Electric Company property consists of approximately 150 acres along the Raystown Branch of the Juniata River.

2. Exclusion Area Controls

a. The exclusion area consists of that portion of the Saxton Nuclear Experimental Corporation property enclosed within the fence containing the Containment Vessel. See Figure 1.

b. Except for authorized entry the following access points shall be maintained locked:

1) the gate to the Exclusion Area fence surrounding the Containment Vessel,

2) the Containment Vessel access door,

3) the grating covering the Auxiliary Compartment stairwell in the Containment Vessel,

4) and the Rod Room door.

c. The Containment Vessel shall be equipped with an intrusion alarm to supplement the multiple physical barriers to intrusion.

d. Employees of the Pennsylvania Electric Company's Line Department headquartered on the Penelec property shall report to the SNEC General Manager or the designated representative any observed indication of change in the facility status as shown by smoke, fire, tornado, flood, or attempted break-in and take any immediate action authorized.

3. Principal Activities

Pennsylvania Electric Company personnel associated with electric power transmission and maintaining electric power distribution equipment are headquartered on the Pennsylvania Electric Company property. Activities permitted within the Exclusion Area shall include routine and emergency inspections, maintenance associated with the possession of the Saxton Reactor Facility and characterization activities associated with the decommissioning of the facility.

B. ADMINISTRATIVE AND PROCEDURAL CONTROLS

Administrative controls relate to the organization, activities, procedures, record keeping, reporting and review and audit considered necessary to provide assurance and evidence that activities within the Exclusion Area are managed in a safe manner. Procedure controls are applicable to activities for which it is considered necessary to provide assurance that they are performed in a safe manner.

1. Organization

SNEC has the responsibility for safely maintaining the Containment Vessel and performing the characterization activities in support of its decommissioning. The organizational structure with reporting and communications lines is depicted in Figure 2.

a. The responsibilities of management and supervisory level personnel are as follows:

1. SNEC President provides management oversight for all Saxton activities and reports to the SNEC Board of Directors.

2. SNEC General Manager is responsible for administration of all SNEC functions and for assuring that the requirements of License No. DPR-4 and these Technical Specifications are implemented.

3. SNEC Radiation Safety Officer (RSO) is responsible for the conduct and oversight of all Saxton Radiation Safety Activities through implementation of the SNEC Radiation Protection Plan. All radiological controls personnel shall have stop work authority in matters relating to or impacting radiation safety.

4. Group Radiological Controls Supervisor (GRCS) directly supervises radiation safety activities. The position reports to the RSO.

5. The SNEC Site Technical Support Manager reports to the SNEC General Manager and provides on-site management and continuing oversight of production activities.

b. The SNEC Technical Support Project Team provides SNEC management with technical support and project management capabilities.

c. Staffing requirements are as follows:

1. At least two individuals, one of which must be a Radiological Controls Technician, shall perform radiological surveys necessary to support planned activities within the Containment Vessel if the Containment has been secured for a period greater than 24 hours.

2. The RSO or a qualified designee shall be present on site whenever entry and/or maintenance or characterization activities within Containment are in progress.

d. Personnel selection and training requirements are as follows:

1. The GRCS shall be a Three Mile Island qualified GRCS.

2. Radiological Controls Technicians shall meet or exceed the requirements of ANSI-N 18.1-1971 or shall be formally qualified through an NRC approved Radiological Controls training program.

3. All personnel conducting maintenance or characterization activities shall be briefed on the SNEC site specific conditions and requirements of the Characterization Plan.

2. Review and Audit

a. The independent review function is provided by the SNEC General Office Review Board (GORB). The GORB reports directly to the President GPUNC. The review responsibilities of the GORB are delineated in a written charter. The committee is made up of individuals with extensive experience in oversight review of nuclear, radiological, occupational and environmental safety activities. The committee members are key corporate management personnel and consultants independent of the line management responsibilities of SNEC.

b. The audit function is provided by GPUNC and is independent of SNEC management. Audits shall be performed by qualified individuals, as a minimum, for those activities designated within the scope of the SNEC QA Program. Audits are generally conducted biennially, however, frequency is based on the level of activity at the Saxton site. Audits may also be performed at the request of the SNEC President.

3. Procedures

A. Activities which are designated as within the scope of the SNEC QA Program shall be prescribed by written, reviewed and approved procedures of a type appropriate to the circumstances. The SNEC procedure control methodology will be prescribed by an administrative procedure. Procedures shall require that:

1. All maintenance and characterization work associated with the Containment Vessel under Health Physics control be consistent with 10 CFR Part 20 requirements to minimize the radiation exposure of personnel and to prevent the release of radioactivity to the environment.

   Entry into the controlled area of the containment requires that radiation levels and airborne activity surveys be obtained prior to beginning work.

2. All radiation surveys, tests, sample counting, and radiation exposure control measures performed conform with the requirements of the "Saxton Nuclear Facility Radiation Protection Plan."

3. Facility inspections, access controls, and emergency actions be in accordance with written procedures. Facility inspections and access controls shall also meet specific requirements of the Technical Specifications.

4. Inspections

a. Facility inspections shall be performed in accordance with an established schedule at a frequency no less than quarterly. The inspections will be performed by personnel knowledgeable in nuclear radiation monitoring and the radiological hazards associated with the facility. Inspection and radiation monitoring activities will be conducted concurrently.

1. The Health Physics inspection shall include:

   a. Survey of radiation levels and surface contamination in the Containment Vessel.

   b. Replacement of the ventilation "breather" pipe filter and counting the original for activity as a measure of the activity available for release.

   c. Inspection of the Containment Vessel at the lowest level for water. If water is found, a sample shall be taken and analyzed for the isotopic concentration of all significant radionuclides and shall as a minimum include gamma spectral analysis.

5. Records

In addition to the records required by applicable NRC regulations, including subpart L of 10 CFR 20, 20.2101 through 20.2110 inclusive, SNEC shall retain records of the following:

a. Inspections of the decommissioned facility including the results of surveys of radioactivity levels and as-found and as-left conditions of the facility.

b. Entries into the Containment Vessel and the reason for entry.

c. Dates of quarterly inspections and evaluation of the results.

d. Radioactivity releases or discharges into the air or water beyond the effective control of SNEC as measured at or prior to the point of such release or discharge.

e. Design changes and maintenance necessary to maintain the decommissioned facility as described in the Saxton Decommissioning Plan and Safety Analysis Report as revised by SNEC letter dated May 31, 1974 and design changes and maintenance necessary to accomplish characterization activities associated with decommissioning.

f. Characterization study results.

g. Audit reports.

6. Reports

In addition to those reports required by applicable NRC regulations (ie. violation of license or technical specification condition) SNEC shall submit the following:

a. A report of any occurrence of a possible unsafe condition relating to the facility or to the public. For each occurrence, SNEC shall promptly, within 24 hours of discovery, notify by telephon or telegraph, the Administrator of Region I, or designee, and the NRC Operations Center, and shall submit a written follow-up report to the Document Control Desk and the Administrator of Region I within 15 days, which describes the circumstances and the corrective action taken.

These reports shall include:

1) Any unplanned or uncontrolled release of radioactive material from the facility.

2) Conditions arising from natural or man-made events that affect the integrity of the Containment Vessel.

b. An annual report shall be submitted to the Document Control Desk and the Administrator of Region I, within 6 months after the end of the calendar year, of the status of the deactivated facility including:

1) Information relating to changes in those management and supervisory positions designated in section B.1.a as being responsible for the deactivated facility.

2) A summary of entries into the Containment Vessel and reasons for entry.

3) A summary of maintenance and design changes made to the deactivated facility.

4) Results of surveys of radioactivity levels and of water sample analyses.

5) A review of the performance of access control and surveillance measures.