

SAXTON NUCLEAR EXPERIMENTAL CORPORATION

SAXTON NUCLEAR FACILITY

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

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STATE OF NEW JERSEY     )  
                                  ) SS:  
COUNTY OF OCEAN        )

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 part of this request, proposed replacement pages for Appendix A are also included.

SAXTON NUCLEAR EXPERIMENTAL CORPORATION

BY: *John J. DeBlasio*  
President, SNEC

Sworn and Subscribed to before me  
this 12<sup>th</sup> day of January 1995.

*Diana M. DeBlasio*  
Notary Public

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

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

IN THE MATTER OF  
SAXTON NUCLEAR EXPERIMENTAL FACILITY

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

CERTIFICATE OF SERVICE

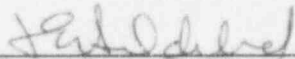
This is to certify that a copy of Technical Specification Change Request No. 55 to Appendix A of the Operating License for Saxton Nuclear Facility has, on the date given below, been filed with executives of Liberty Township, Bedford County, Pennsylvania; Bedford County, Pennsylvania; and the Pennsylvania 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, Bureau of Radiation Protection  
PA Department of Environmental Resources  
Fifth Floor, Fulton Building  
Third and Locust Streets  
P. O. Box 2063  
Harrisburg, PA 17120

SAXTON NUCLEAR EXPERIMENTAL CORPORATION

BY:   
President, SNEC

DATE: 11-1-79

**Question 1** *In your letter of October 28, 1994, your reply to Question 1 discusses an inspection of the Saxton containment vessel that was carried out by the TMI Fire Protection Engineer. Please provide us with a copy of the inspection report. You state that any fire can be effectively fought by personnel at the site using available hand held extinguishers without off-site assistance. What is the basis of your statement? Was this a finding of the Fire Protection Engineer inspection?*

A copy of the TMI Fire Protection Engineer's report is included as Enclosure 3. In that no major fire safety concerns were noted during the inspection of the Saxton Containment Vessel and that appropriate actions will be taken concerning the minor concerns identified, the statement that any fire can be effectively fought by personnel at the site using available hand held extinguishers without off-site assistance was concluded by the Fire Protection Engineer although not a specific finding of the inspection.

In regard to the specifics of the minor concerns:

1. The oil in the pump gear boxes will remain there until it can be characterized and disposed of: most likely by incineration through contract with a third party.
2. Anti-Cs previously stored in plastic bags in the Containment Vessel have been transferred to steel drums for storage. Used Anti-Cs will be routinely stored in plastic bags until a drum fraction is collected and then transferred to drums.
3. A "Control of Hot Work" procedure has been developed and is currently in the review and approval cycle. It will be issued prior to the performance of hot work at the site.

**Question 2** *In your letter of October 28, 1994, your reply to Question 2, Item 13, discusses Sections B.1.a.3 through B.1.a.6. However, your proposed technical specifications (TS) only contains Section B.1.a.3 through B.1.a.5. Please explain.*

A revision to the originally proposed text resulted in the deletion of a subsection. The reference to the section in Question 2, Item 13 was written based on the early version and did not reflect the change.

**Question 3** *Your proposed TS B.1.b discusses the SNEC Technical Support Project Team. Is this the box in Figure 2 labeled Technical Support under the President GPUNC? Your request of August 8, 1994, showed SNEC Technical Support under the SNEC President. Please explain and clarify this issue.*

The box in Figure 2 labeled Technical Support under the President GPUNC is the portion of the organization discussed in TS B.1.b. The figure included in the request of August 8, 1994 depicted the SNEC organization prior to the evaluation of the contribution of Technical Functions (TF) Division personnel to the effort. In the interim between the submittal

and the response to the request for additional information, work previously considered for contractors was allocated to GPUN and the figure was revised. Figure 2 now identifies the project nature of the efforts of technical groups within GPUN working in support of SNEC decommissioning.

*Question 4 Your proposed TS B.2.a concerns the establishment of a radiation safety committee.*

- a. The proposed TS states that the committee will consist of four members. Consider adding flexibility to the TS by having the committee consist of at least four members. This would allow addition[al] expertise to be added to the committee if required.*

It was initially intended that additional expertise would be provided by "experts" in support of the designated committee membership. Revising the text such that the committee "consists of at least four members", both meets the initial intent and provides a ready replacement for any member leaving the committee (a violation of Technical Specifications would not occur should a vacancy suddenly occur). The text has been revised.

- b. What are the minimum qualifications of committee members?*

Personnel comprising the committee shall satisfy the requirements for Independent Review Organization Members as specified in ANSI/ANS-3.1-1987 section 4.7.1.

- c. You list the items that the committee will review. Please consider adding the review of license and TS changes to the list of items. This will allow changes to the license and TS to receive an independent review.*

License and TS changes have been added to the list of items the committee will review based on the appropriateness of the practice. These documents receive a routine "independent review" by GPUN personnel performing independent safety review in accordance with GPUN Corporate Administrative Procedure 1000 ADM 1291.01. A copy of the procedure is included as Enclosure 4.

- d. Your proposed TS states that meeting minutes will be distributed to the SNEC President but has no time limit for this to be accomplished. Please propose and add a time limit to the TS for distribution of committee meeting minutes.*

Minutes of the Radiation Safety Committee meetings will be issued and distributed to the SNEC President within 30 days of the meeting date. TS section B.2.a.3 has been revised to include this requirement.

**Question 5** *In your letter of October 28, 1994, your reply to Question 7 discusses proposed audit activities at Saxton. Please provide a copy of procedure 1110-ADM-7218.01 and 1000-ADM-7218.01. Your proposed TS B.2.b. states that audits will be performed in accordance with procedures. Does this mean the two procedures requested above?*

Yes, procedures 1110-ADM-7218.01 and 1000-ADM-7218.01 respectively establish and delineate the methodology defining the conduct of the GPUN audit program and provide guidance to the response to GPUN QA audit reports and findings. Copies of each procedure are included as Enclosures 5 and 6.

**Question 6** *In your letter of October 28, 1994, your reply to Question 8 discusses SNEC Procedure 6675-ADM-4500.07 for the development of procedures. Please provide a copy of this procedure.*

A copy of procedure 6675-ADM-4500.07 is included as Enclosure 7.

**Question 7** *In your letter of October 28, 1994, your reply to Question 12 discusses procedure 6575-SUR-4523.01 for facility inspection. Please provide a copy of this procedure.*

A copy of procedure 6575-SUR-4523.01 is included as Enclosure 8.

**Question 8** *Figure 1 of your proposed TS is not the figure in your existing TS. Please explain your reasons for changing Figure 1.*

The previous version of the Saxton Nuclear Facility Layout, Figure 1, was a hand drawn figure. The figure was transferred redrawn and maintained as a CAD file. The information provided by the figure has been revised in the following ways:

- 1 the SNEC property line has been included,
- 2 the Containment Vessel Pipe Tunnel is now identified as a Concrete Tunnel,
- 3 the personnel access gate in the east fence which has always existed and was not previously shown. The gate provided access to the Penn Elec line shack from the SNEC site. It has not been used in recent memory and remains locked,
- 4 the remnants of the steam tunnel from the containment building to the Saxton Steam Electric Station are now depicted on the southwest side of the containment building,
- 5 concrete equipment pads located on the west side of the containment building are now depicted,
- 6 the labels for the personnel access, emergency access and equipment access doors have been eliminated.

**Question 9** *In proposed TS B.4.a.2 you use the initialism CV without definition. Please define or spell out the initialism.*

The words Containment Vessel have been used throughout the Technical Specifications except section B.4.a.2 where the initialism was inappropriately used. The initialism has been replaced with the words "Containment Vessel" to maintain consistency.

**Question 10** *Please correct the spelling of preceding in TS B.2.a.1.*

The spelling of "preceeding" in TS B.2.a.1 has been corrected.

**Question 11** *Your application of August 8, 1994, discusses flooding of the Saxton site. Analysis that has been performed was briefly discussed. Please provide a copy of this analysis or if you are referring to an analysis that is already in the docket for Saxton, please reference the analysis.*

The Flooding Analysis was docketed as a part of the Saxton Decommissioning Plan and Safety Analysis in 1972. A copy of the document is included as Enclosure 9 for your convenience.



## 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 Vice President and 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 Superintendent 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 knowledgeable in radiation monitoring and the radiological



hazards associated with the facility, shall perform radiological surveys necessary to support planned activities within the Containment Vessel if the Containment has been secured (Containment Vessel is sealed except for the breather opening) 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. Each Radiological Controls Technician/GRCS shall meet or exceed the qualifications of ANSI-N 18.1-1971, paragraph 4.5.2 and 4.3.2 respectively or shall be formally qualified through an NRC approved Radiological Controls training program.
2. 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. Radiation Safety Committee

1. The Radiation Safety Committee shall report to the SNEC President. The Committee will consist of at least four members appointed by the SNEC President. Three members shall constitute a quorum. It will be responsible to review all matters with radiological safety implications relative to activities at SNEC. Meetings shall be held at least annually to review and discuss the events of the preceding period.
2. The Committee will review License and Technical Specification changes, characterization and maintenance actions, special nuclear and radioactive material activities, facility changes, quarterly inspection results, audit and NRC Inspection reports and corrective actions for deficiencies identified.
3. Written minutes of all meetings shall be prepared and distributed to the SNEC President within 30 days of the meeting date.

- 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. GPUN audits are performed in accordance with the GPUN audit program procedures. The audit procedures identify areas which may be included in the audit scope. Audit reports shall be forwarded to the President, SNEC within 60 days of completion of the audit.

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.
- B. Written procedures shall be established, implemented and maintained for the activities listed below:
  - 1. Characterization and maintenance activities requiring Health Physics controls consistent with 10 CFR Part 20 requirements.
  - 2. Access control, emergency actions, facility inspections and audits.
  - 3. Radiological exposure control, survey activities and radwaste shipping and handling.
  - 4. Activities which could impact containment integrity and/or could result in a measurable release to the environment.
- C. These procedures shall require that the following actions be taken:
  - 1. All maintenance and characterization work associated with the Containment Vessel under Health Physics control shall 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.
  - 2. Entry into the controlled area of the containment requires that radiation levels and airborne activity surveys be obtained prior to beginning work.
  - 3. All radiation surveys, tests, counting work, radiation exposure control measures and all other work performed in radiologically controlled areas shall conform with the requirements of the Saxton Nuclear Facility Radiation Protection Plan.

4. Facility inspections and access controls shall meet specific requirements of the Technical Specifications.

D. These procedures and any subsequent revisions shall be prepared, reviewed and approved in accordance with the requirements of the SNEC administrative procedure for procedures prior to their initial use.

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 radiation monitoring and the radiological hazards associated with the facility. Inspection and radiation monitoring activities will be conducted concurrently.

1. The radiation monitoring activities 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.

2. The inspection activities shall include:

- a. Verification that the locks at all entrances to the Containment Vessel exclusion area fence are locked.
- b. Verification of the operability of the Containment Vessel intrusion alarm.

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 telephone 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.

Figure 1  
Saxton Nuclear Facility Layout

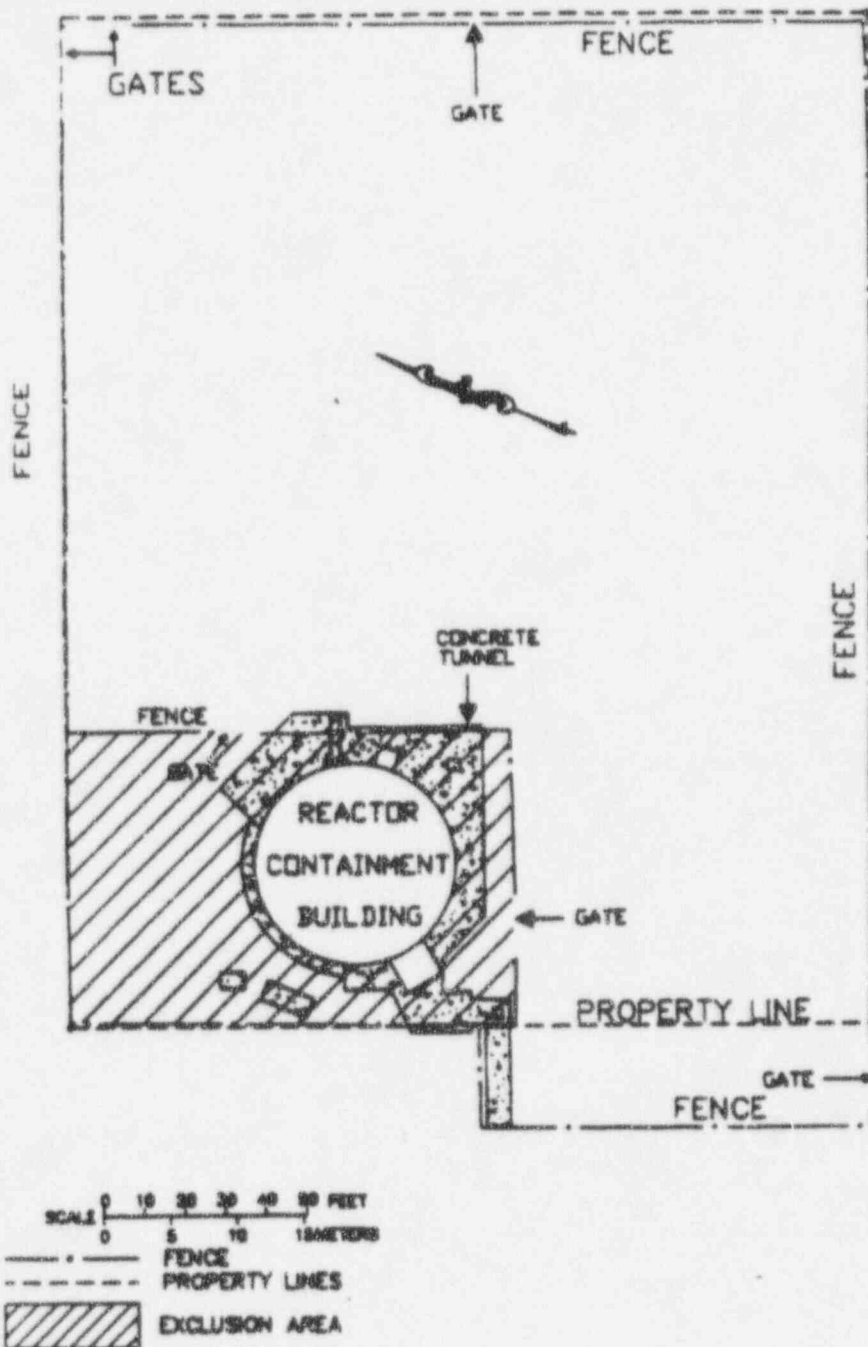
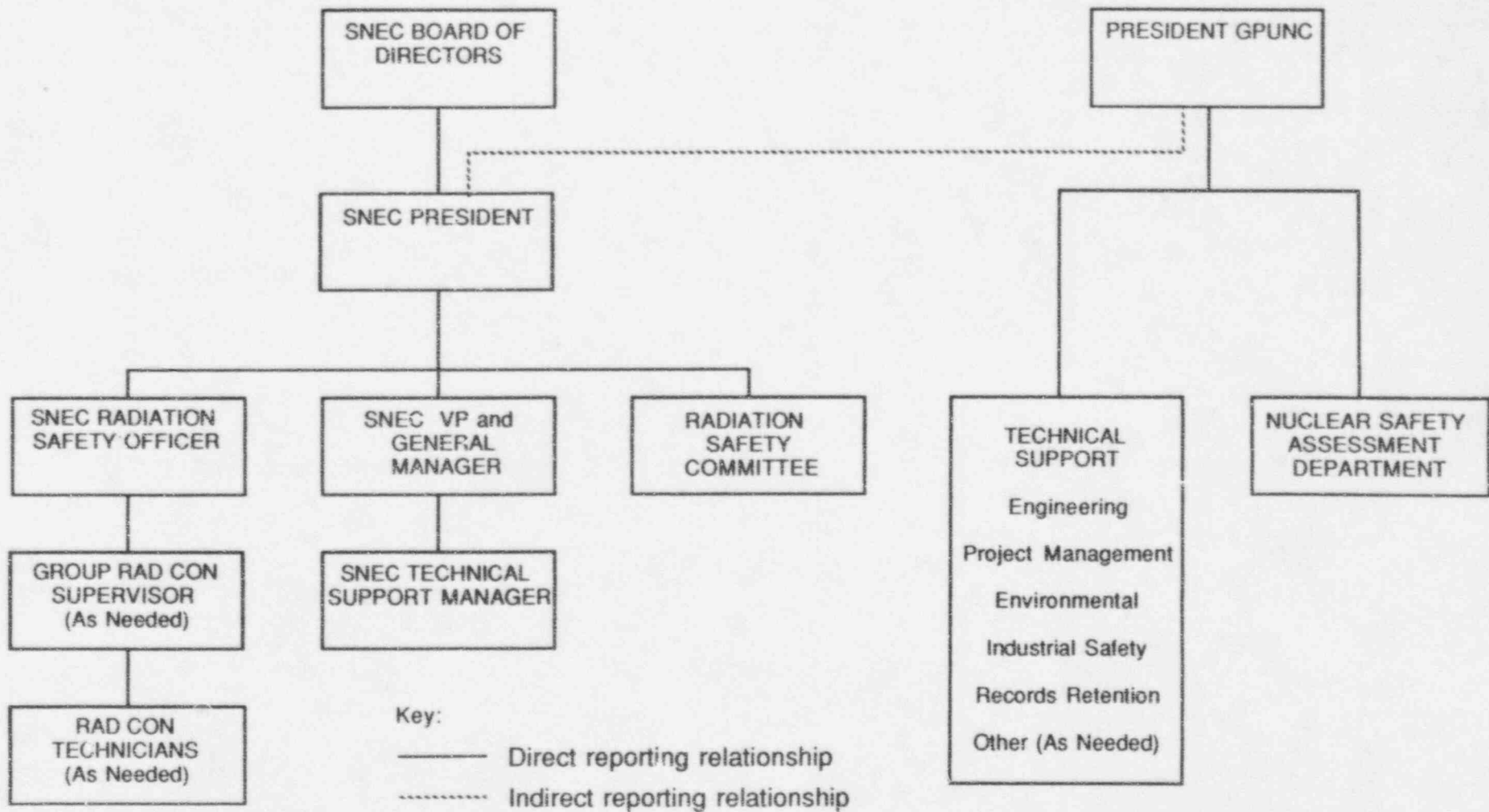




Figure 2

Saxton Nuclear Experimental Corporation (SNEC) Organization



**Subject: SAXTON CONTAINMENT INSPECTION****Date: September 27, 1994****From: R. P. Barth - Engineer Senior I, TMI****Location: Three Mile Island  
3370-94-0109****To: L. H. Porter - Engineer Senior II Nuclear**

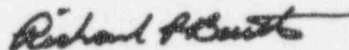
On September 26, 1994, Mr. J. Byrne and I inspected the Containment Structure at the Saxton Station. The items noted during the tour are listed below. I did not see any major concerns in Containment. The items listed provide minor fire concerns.

1. Several pumps in the building have lubricating oil in the gear box. This oil should be drained and removed from the building. If the oil cannot be removed from the building, it should remain in the gear box. The gear box provides better protection for the oil than being stored in a plastic container within the building.
2. The used Anti-C's at the step off pad is the largest concentration of combustibles in the building. As the amount of combustibles increase, 55-gallon drums should be used to store the combustible material. Placing the Anti-C's in the drum and clamping the lid essentially removes the combustibles from the area and reduces the potential for a fire. The long term fix would be to have the combustibles removed from the building as they are being generated.
3. Controls need to be established when grinding or hot work activities are performed in the building. A procedure should be written to outline the protection required during hot work activities. TMI procedure 1410-Y-26, "Control of Hot Work", can be used as a starting point in establishing such a procedure. If you need assistance in determining applicable sections of 1410-Y-26, I can assist you. When performing hot work, the use of weld blankets will be required to protect the number of openings between elevations. During hot work activities, sparks or hot slag must be controlled. Covering the openings between elevations will ensure that the sparks and hot slag will not drop to lower elevations and start a fire.
4. Due to the type of cabling used, there is no increase in the fire loading due to cable insulation. The cables are considered non-combustible due to the type of insulation used and being jacketed with a copper tubing.

L. H. Porter - Engineer Senior II Nuclear  
September 27, 1994  
3370-94-0109  
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The fire concern for the Containment Structure is a result of the transient material introduced into the area, i.e., Anti-C's. As the amount of combustibles increase, the temporary use of 55-gallon drum storage containers will reduce the fire risk. The long-term fix would be to have the combustible material removed as it is generated.

If you have any questions, please call.



R. P. Barth

Extension 8135

pld

cc: R. O. Barley - Manager, Plant Engineering, TMI  
J. J. Byrne - Manager TMI Engineering (PDMS)  
B. A. Good - Environmental Controls Director  
W. G. Heysek - Engineering Assistant Senior III Licensing  
T. A. O'Connor - Lead Fire Protection Engineer, TMI  
CARIRS