SAXTON NUCLEAR EXPERIMENTAL CORPORATION

SAXTON NUCLEAR FACILITY

Operating License No. DPR-4
Docket No. 50-146
Technical Specification Change Request No. 53, Rev. 2

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

SAXTON NUCLEAR EXPERIMENTAL CORPORATION

BY: J Erdel Delvecchio

President, SNEC

Sworn and Subscribed
to before me this 6th
day of March, 1992.

Kathleen E Dunlop
Notary Public

KATHLEEN E. DUNLOP
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires Dec. 4, 1994

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. 53, Rev. 2 to Attachment A of the Operating License for the 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 Resourres, 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: 3/6/92

REQUEST FOR ADDITIONAL INFORMATION
SAXTON NUCLEAR EXPERIMENTAL CORPORATION
DOCKET NO. 50-146

1. Question No. 2 in our request for additional information (RAI), dated February 9, 1988, concerned the apparent transfer of the property that the facility is located on, from the Saxton Steam Generating Station to the Pennsylvania Electric Company. Your answer stated that the ownership of the Saxton site will revert to PENELEC once the site is released by NRC for unrestricted access. Release of the property is not being authorized by the proposed amendment. Please clarify the ownership of the site in technical specifications A.1., A.2., A.3., and B.2.d.

   RESPONSE: The Saxton site is a tract of land which was deeded from Penelec to the Saxton Nuclear Experimental Corporation in 1959. The 1.148 acre tract is located wholly within Penelec property. The Saxton property will revert to Penelec after termination of the part 50 license and dissolution of the Saxton Nuclear Experimental Corporation, following final site release. This is not expected to occur before the year 2000. Technical specification B.2.d refers to the "Saxton Steam Generating Station Property." This station was demolished following the cessation of Saxton operations. This change is reflected in the revised technical specification B.2.b in Technical Specification Change Request No. 53, Revision 2 by referring to the Penelec Line Department headquartered on Penelec property vs. Saxton Steam Generating Station property.

2. In technical specification B.2., you proposed changing the door to the Exclusion Area to a gate. Do you still want to make this change?

   RESPONSE: The Control and Auxiliary Building (C&A) forms a portion of the boundary to the exclusion area. The doors to this building were maintained locked. Following demolition of the C&A Building, a new fence will form the exclusion area boundary which will have an access gate that will be maintained locked. See response to question #7.

3. Several specifications refer to sections of 10 CFR Part 20. What will happen to these specifications when the new Part 20 takes effect January 1, 1993?

   RESPONSE: SNEC will comply with the new 10 CFR Part 20 when it takes effect. A future technical specification change request will be submitted if the numbers of the part 20 sections currently referenced in our technical specifications change.

4. Technical specification B.4.d. refers to the Saxton Nuclear Experimental Reactor Facility Radiation Protection Manual. Your proposed technical specifications refer to the Saxton Nuclear Facility Radiation Protection Plan. When was the manual replaced by the plan? Please provide a copy of the plan.

RESPONSE: The Saxton Nuclear Experimental Facility had a Radiation Protection Manual that was written in 1961. This manual contained radiation and contamination limits, and procedures for access control, performance of surveys, operation of counting instrumentation, etc. In 1981 a Radiation Protection Plan (RPP) and Radiological Controls Procedures Manual (RCPM) replaced the Radiation Protection Manual. The Radiation Protection Plan sets forth the philosophy and policies which are then implemented through the RCPM. The RPP and RCPM were implemented to reflect the latest NRC Regulatory Guides and Standards, radiation and contamination limits, updated models of radiation instrumentation, etc. A copy of the latest Radiation Protection Plan is included for your information.

5. For technical specifications B.5.a., the 24 hour notification should also be provided to the NRC Operations Center. A copy of the 15 day follow-up report should be sent to the Document Control Desk.

   RESPONSE: Technical specification B.5.a in TSCR No. 53, Revision 2 has been changed to include 24 hour notification to the NRC Operations Center and a 15 day follow-up report will be sent to the Document Control Desk. For technical specification B.5.a.3, the reporting requirements will be deleted for Containment Vessel samples. Containment Vessel sample results will continue to be reported as described in technical specification B.5.b.

6. For technical specification B.5.b., a copy of the annual report should be sent to the Document Control Desk. There is currently no time limit for submittal of the annual report to NRC. Please propose a maximum interval after the end of the calendar year within which the annual report shall be submitted to NRC.

   RESPONSE: Technical specification B.5.b in TSCR No. 53, Revision 2 has been changed to include a time limit for submittal of the annual report to the NRC. The annual report shall be submitted to the NRC within 6 months after the end of the calendar year.

7. During our meeting of February 3, 1992, you stated that a new fence was erected in front of the Control and Auxiliary Building. Please update Figure 1 to reflect the new fence.

   RESPONSE: Figure 1 in TSCR No. 53, Revision 2 has been updated to reflect the new fence.

8. Please provide additional information of the steps to be taken to prevent onsite dirt from entering the basements of the buildings to be demolished.

RESPONSE: It is our intention to use only "clean fill" from off-site to fill void areas among the rubble in the basements of structures. Concrete rubble from the structures, already surveyed and released, will be used along with stone and soil from off-site. We will minimize co-mingling of surrounding soils and debris with these fill areas by a combination of administrative controls, mechanical barriers and supervisory oversight. The contract with the demolition contractor will reflect the requirement to use only clean fill from off-site (except for released concrete rubble) in void areas and that they are responsible to prevent co-mingling of adjacent soils and debris. The SNEC Soil Erosion and Sedimentation Control Plan, along with the SNEC Demolition Plan will contain the actual prescriptive methods used to prevent co-mingling. These may include the use of mechanical barriers such as: fabric matting, hay or straw, or clean surface stone layers installed over the soil surrounding and adjacent to susceptible structures along with the use of product binders with surfactant additives used to stabilize and consolidate soil surfaces. Lastly, constant oversight by SNEC management and radiological controls technicians will be provided to guard against on-site dirt from entering the demolished structure's basements.

Revision 3 to the SNEC Final Release Survey of the Reactor Support Buildings has been submitted to specify that offsite fill will be used as backfill for the RWDF basement and yard pipe tunnel rather than using onsite soil that satisfies the environmental pathways analysis.

9. Please state the criteria you will use and the basis of the criteria for release of debris from the site that will not be treated as radioactive waste.

RESPONSE: The release of debris from site as non-radioactive wastes are dependent upon the item(s) meeting the following contamination level limits:

- <100 cpm above background for total (fixed and smearable) beta-gamma contamination as measured with a pancake G-M detector (equivalent to <5000 dpm/100 cm^2 total beta-gamma); and,
- <100 dpm/100 cm^2 for total (fixed and smearable) alpha contamination; and,
- <1000 dpm/100 cm^2 for smearable beta-gamma contamination and,
- <20 dpm/100 cm^2 for smearable alpha-contamination

That debris which is likely to be contaminated but is of such size, composition, construction or location as to make surveys impractical are presumed to be contaminated in excess of the limits stated above and are treated as radioactive waste.

The basis for such limits are as follows:

- These limits are widely accepted throughout the industry.
- These practices are in compliance with INPO guidelines (91-014)
- The release limits represent the minimum level of activity that can be routinely detected and fit the definition of a "good monitoring program" as described in NRC IE Information Notices 81-07 and 85-92.
- The program in use closely follows the draft Health Physics Society Standard P/N 13.12 "Surface Radioactivity Guides for Materials, Equipment, and Facilities to be Released for Uncontrolled Use".

10. Your Plan of Action to Disposition the Filled Drum Storage Bunker submitted on January 31, 1991, states that timbers will be released from the site for unrestricted use using the release criteria in Regulatory Guide 1.86. Regulatory Guide 1.86 is for residual radiation levels for the termination of license. Please state the release criteria and the basis of the criteria that will be used to release timbers from the site not as radicactive waste.

RESPONSE: The release limits to be used for unrestricted release of materials and equipment are stated in the Radiation Protection Plan and in the Response to Question #9 above. The bases for the criteria are NRC IE Information Notices 81-07 and 85-92. Revision 3 to the SNEC Final Release Survey of the Reactor Support Buildings Report amends the Plan of Action to Disposition the Filled Drum Storage Bunker section to reference these NRC IE Information Notices.

I. Technical Specification Change Request No. 53

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

Replace pages A-1, A-2, A-3, A-4, and Figure 1.

II. Reasons For Change

This Technical Specification Change Request(TSCR) requests NRC authorization to remove the SNEC facility reactor support buildings and structures from the SNEC TS. The reactor support buildings and structures covered by this TSCR are the Control and Auxiliary(C&A) building, the Radioactive Waste and Disposal Facility(RWDF) building. the Refueling Water Storage Tank, the earthen filled Drum Storage Area, and the Pipe Tunnel. Additionally, this TSCR clarifies numerous sections in the TS, while deleting others.

The reactor Containment Vessel(CV) is not affected by this TSCR.

The changes to the current TS are summarized below:

TS A.1 has been revised for clarity.

TS A.2 has been revised to reflect that the exclusion area is within the SNEC property, and delete reference to the C&A and RWDF buildings, since they are being removed under this TSCR.

TS A.3 has been revised to reflect that principal activities are carried on within the Pennsylvania Electric Company property and not the Saxton Steam Generating Station property.

TS B.2.a has been revised to reflect that the "gate" to the exclusion area surrounding the CV shall be maintained locked.

TS B.2.b has been deleted since the RWDF will be removed by this TSCR.

TS B.2.c has been deleted since the C&A building will be removed by this TSCR.

TS B.2.d has been revised to replace the term "SSGS," which refers to the Saxton Steam Generating Station, with the term "PENELEC." This section has also been redesignated as TS B.2.b, under this TSCR.

TS B.3.b has been revised to refer to the Containment Vessel only, since it will be the only building remaining.

TS B.4.b has been revised to require that only the Containment Vessel shall be inspected at the lowest level for water. Reference to the RWDF building has been deleted since it will be removed under this TSCR. This section has also been revised to require that a gamma-spectral analysis be performed for any water found at the lowest level of the Containment Vessel. The revision also deletes the requirement to analyze for gross Beta activity. A gamma-spectral analysis provides a more accurate and useful description of the radiological characteristics of the sump water than does gross Beta analysis.

TS B.4.d has been revised to refer to the Saxton Nuclear Facility Radiation Protection Plan instead of the Saxton Nuclear Experimental Reactor Facility Radiation Protection Manual.

TS B.5.a has been revised to indicate that the 24 hour notification will be made to the Administrator of Region 1, and the NRC Operations Center.

TS B.5.a.2 has been revised to refer to the Containment Vessel only, since it will be the only structure remaining.

TS B.5.a.3 has been deleted. This section required a 24 hour notification followed by a 15 day written report when a confirmed analysis of residual water from the Containment Vessel or RWDF building indicated that the activity concentration is above the limits of Table II, 10CFR part 20 for unrestricted release.

Generally, on a quarterly basis, the confirmed value for some isotopes inside the containment vessel exceeded the limits in Table II and were reported, as required. However, this is routinely expected due to the condensation which collects in the sump. The sump water poses no threat to the health and safety of the public or to the environment because there are no release paths to the external environment from the containment vessel sump.

The water in the sump originates from condensation on the inside of the Containment Vessel, and is a consequence of a breather pipe which was installed to permit the vessel to breathe with changes in atmospheric conditions. As such, there is no safety concern and this administrative reporting requirement for this normal and routine condition may be deleted. SNEC will continue to periodically monitor, on a quarterly basis, the containment vessel sump water and report its findings in the required annual report.

TS B.5.b has been revised to include a time limit for submittal of the required Annual Report to the NRC.

TS B.5.b.2 has been revised to delete reference to the RWDF building since it will be removed by this TSCR.

TS Figure 1 has been revised to show the new fence erected in front of the C&A building.

III. Safety Evaluation

In May 1972, the SNEC facility ended power operation and decommissioning and/or maintenance of the facility was begun and has continued since then.

Decontamination was performed in 1987, 1988,and 1989 to ensure that residual contamination was as low as reasonably achievable. A comprehensive final release survey was conducted from October 1988 to June 1989 to verify that residual contamination was within NRC guidelines for unrestricted use. Surface contamination measurements were compared to Regulatory Guide 1.86, "Termination of Operating Licenses for Nuclear Reactors."

The survey results showed that the residual radioactivity is less than the NRC guidelines for unrestricted use. The final release survey results were submitted to the NRC in 1990 and 1991.

An independent confirmatory survey was performed by Oak Ridge Associated University(ORAU) for the NRC during October 1990 and their report submitted to the NRC in June 1991.

The ORAU report states that the results of the confirmatory survey support the findings of the final survey performed by GPUN, and, in ORAU's opinion, confirm that the decontamination efforts have been successful in satisfying NRC guidelines for release for unrestricted use for the C&A building, RWDF building, and pipe tunnel of the SNEC facility. Additional information requested by the NRC in response to ORAU queries were also satisfactorily addressed by SNEC.

It should be noted that several areas were identified by SNEC as hold points, since they were inaccessible during the final release survey. These areas will be surveyed and dispositioned during dismantlement and demolition. The NRC will be notified of the status of each hold point and given the option to review the results before final disposition.

Based on the above discussion, as supported by the referenced reports, it is evident that the reactor support buildings and structures at the SNEC facility are decontaminated to acceptable levels. As such, the buildings and structures covered by this TSCR are eligible for release for unrestricted use, since they do not pose a nuclear safety concern. Their removal from the TS will not have any adverse impact on the health and safety of the public.

IV. No Significant Hazards Consideration

SNEC has determined that the TSCR poses no significant hazards as defined in 10 CFR 50.92. Unrestricted release and removal of the C&A building, RWDF building, Refueling Water Storage Tank, the earthen filled Drum Storage Area, and the Pipe Tunnel from the TS in accordance with the proposed TSCR will not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated. The SNEC facility ended power operation in May 1972. The reactor support buildings and structures covered by this TSCR are not operational, and have been decontaminated to levels consistent with published NRC guidelines. The reactor support buildings and structures are not susceptible to any nuclear accident. Hence, there is no increase in the probability or consequences of any accident previously evaluated.

2. Create the possibility of a new or different kind of accident from any accident previously evaluated. The reactor support buildings and structures covered by this TSCR are not operational and have been decontaminated to levels consistent with published NRC guidelines for termination of operating licenses. As such, the proposed change covered by this TSCR does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Involve a significant reduction in a margin of safety. The reactor support buildings and structures covered by this TSCR are not operational and have been decontaminated to levels consistent with published NRC guidelines for termination of operating licenses. As such, there is no 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 to enable SNEC to physically remove the reactor support buildings and structures covered by this TSCR.

A. SITE

1. Location

The Saxton site is a 1.148 acre tract of land which was deeded from the Pennsylvania Electric Company to the Saxton Nuclear Experimental Corporation and 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 Areas (Figure 1)

The exclusion area shall consist of:

An area within the Saxton Nuclear Experimental Corporation property which is enclosed within a fence and contains the Containment Vessel.

3. Principal Activities

The principal activities carried on within the Pennsylvania Electric Company property are the headquarters for personnel associated with maintaining the electric power distribution equipment and the transmission of electric power by the Pennsylvania Electric Company. The only activities carried on within the Exclusion Area are routine and emergency inspections and maintenance associated with the possession of the Saxton Nuclear Facility.

B. ADMINISTRATIVE AND PROCEDURAL SAFEGUARDS

1. Administrative Organizations

The General Manager of the Saxton Nuclear Experimental Corporation (SNEC) shall have the responsibility for administration of all SNEC functions and for assuring that the requirements of License No. DPR-4 and these Technical Specifications are implemented.

2. Controls

a. Except for authorized entry, the gate to the Exclusion Area surrounding the Containment Vessel shall be maintained locked, the Containment Vessel access door shall be maintained locked and shall be equipped with an intrusion alarm, the grating cover over the Auxiliary Compartment stairwell in the Containment Vessel shall be maintained locked, and the Rod Room door shall be maintained locked.

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

3. Records

In addition to the records required by applicable NRC regulations, including Section 20.401 of 10 CFR Part 20, SNEC shall keep the following:

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

b. Records of entries into the Containment Vessel and reason for entry.

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

d. Records showing radioactivity released or discharged 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. Records of 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.

4. Periodic Inspections

a. A definite inspection schedule shall be established for the facility that will be performed by personnel knowledgeable in nuclear radiation monitoring and the radiological hazards associated with the facility. Inspections will be conducted concurrently with radiation monitoring. The frequency of these inspections shall be no less than quarterly. The records of these inspections shall be maintained on file.

b. The Health Physics inspection shall include a survey of radiation levels and surface contamination in the Containment Vessel. The filter on the ventilation "breather" pipe from the Containment Vessel shall also be changed and counted for activity as a measure of the activity available for release. The Containment Vessel shall be inspected 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.

c. All required maintenance work shall be performed under Health Physics control to minimize any possible radiation exposure involved. If entry into the controlled area of the containment should be necessary, radiation levels, and airborne activity surveys shall be obtained prior to beginning work. All work shall be performed under controls consistent with 10 CFR Part 20 requirements to minimize the radiation exposure of personnel and to prevent the release of radioactivity to the environment.

d. All radiation surveys, tests, counting work, and radiation exposure control measures shall be performed in accordance with written instructions and procedures that conform with the requirements of the "Saxton Nuclear Facility Radiation Protection Plan." Facility inspections, access control, and emergency actions shall be in accordance with written procedures.

5. Reports

In addition to those reports required by applicable NRC regulations, 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 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 Director, Office of Nuclear Reactor Regulation, 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 staff positions that are designated 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.

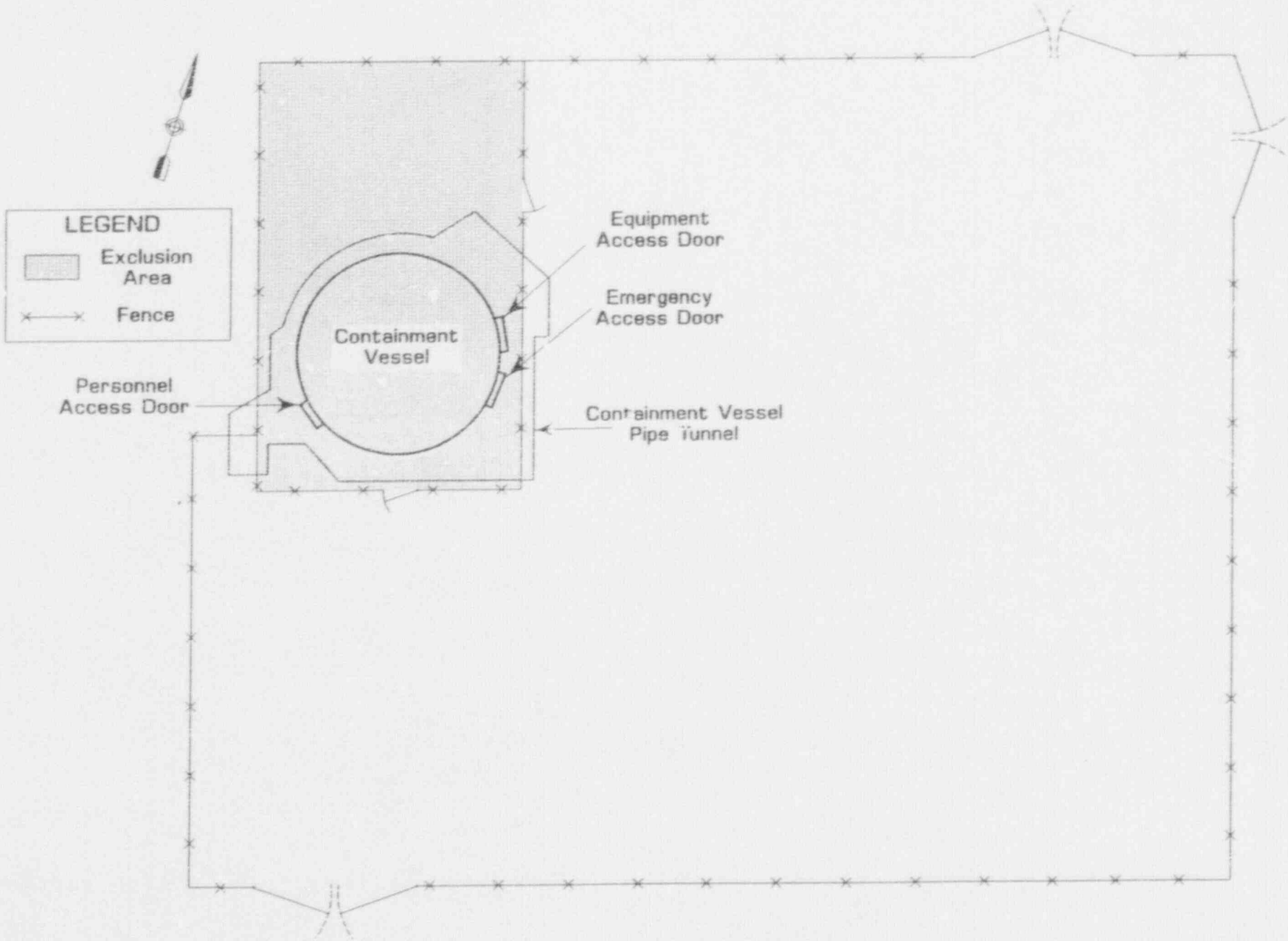

FIGURE 1

No Scale

SAXTON NUCLEAR FACILITY LAYOUT