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May 24, 1996  
C301-96-2027

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

Gentlemen,

Subject: Saxton Nuclear Experimental Corporation  
Operating License No. DPR-4  
Docket No. 50-146  
Response to the Second Request for Additional Information Regarding  
Technical Specification Change Request No. 57 dated May 5, 1996.

The purpose of this letter is to submit the response to the Second Request for Additional Information regarding Technical Specification Change Request No. 57, which addresses the proposed expansion of permissible work scope at the SNEC facility.

Sincerely,

G. A. Kuehn Jr.  
Vice President SNEC &  
Program Director, SNEC Facility

WGH  
Attachment

- 1) Response to the Request for Additional Information
- 2) Figure 1 Decommissioning Facility Layout
- 3) Revised Proposed Technical Specification page

cc: Administrator, NRC Region I  
NRC Project Manager NRR  
NRC Project Scientist, Region I

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PDR ADOCK 05000146  
P PDR

ADD 1

Question 1: In your response dated April 24, 1996, to question one of our request for additional information, dated March 25, 1996, you discussed the bases of your statement that your requested changes to the technical specifications (TSs) have no effect on flooding and offsite radioactive hazard. Your discussion focused on the construction of the decommissioning support facilities. Please discuss the effects of flooding and offsite radiological hazard of your proposed changes to the TSs to remove asbestos from the facility, remove the old containment vessel (CV) electrical system, and allow for the installation of new compressed air, electrical power, heating, ventilation and air conditioning systems. For example, your 1972 safety analysis discusses the issues of CV buoyancy and structural response of the CV during flooding, and transport of contamination if the CV is breached by flood waters.

Response: Changes to the facility associated with the requested activities will not modify the CV's capacity to withstand flood waters or effect offsite radiological hazard from that described in the "Saxton Decommissioning Plan and Safety Analysis Report" dated April 1972. Existing penetrations will be utilized to run necessary wiring and piping associated with the installation of the decommissioning support systems through the CV wall. The penetrations are located at elevations several feet higher than the referenced flood level and are therefore not susceptible to water intrusion.

With regard to radiological hazard, the asbestos and defunct electrical system removal will be performed in accordance with approved radiological work instructions. The removed materials will be packaged in strong tight containers and shipped as LSA waste. The potential effects of inundation of the site remain essentially the same. The radioactive hazard from material remaining at the site has been diminished (currently determined to be approximately 1500 curies) through radioactive decay during the 24 years since the submittal of the report. Greater than 90% of the remaining radioactivity is attributable to activation of the reactor vessel and is contained within the vessel's metal matrix. This leaves only minor quantities of radioactive material available for dispersal within the CV and possible offsite transport during a breach of the CV during flooding.

Questions relative to potential buoyancy concerns with the SNEC facility CV were also addressed by the "Saxton Decommissioning Plan and Safety Analysis Report". That report demonstrates the negative buoyancy of the containment vessel in its present configuration is assured up to a projected flood level of 826.7 feet (values are given as above mean sea level). This flood level occurs with a projected frequency of approximately once every 3,500 years. The maximum observed flood level at the SNEC facility site was 809.5 feet during the 1936 flood. The assurance of negative buoyancy under these conditions

does not include the effects of soil adhesion in preventing upheaval and hence is very conservative. The force required to drive set objects is usually > 10 - 15 times that required for free objects due to the effects of soil adhesion according to the report.

According to Army Corps of Engineer and U. S. Geologic Survey data, the 100 year flood recurrence level at the facility site is below the 812 feet 225 year flood recurrence level. Therefore under both normal and realistic flood conditions the negative buoyancy of the CV is assured. In its present condition, the CV weight including all components and structural materials is 3,249 tons. At a postulated 100 year flood recurrence level of 811 feet, the buoyant force acting on the CV is 2,583 tons. This leaves a margin of 666 tons of negative buoyancy at the 100 year flood recurrence level.

Applying a safety factor of 1.1 as prescribed by NUREG 0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants", results in a weight of 2,841 tons needed to preclude floatation ( $1.1 \times 2,583 = 2,841$ ). This results in a negative buoyancy of 408 tons at the 100 year flood recurrence level ( $3,249 - 2,841 = 408$  tons).

Since the total weight of all equipment associated with the CV is approximately 175 tons and all equipment could be removed while still maintaining negative buoyancy, removal of the asbestos and old electrical system has been determined to have no significant impact on the negative buoyancy value of the CV. Installation of the decommissioning support systems and equipment will compensate for much of the mass removed.

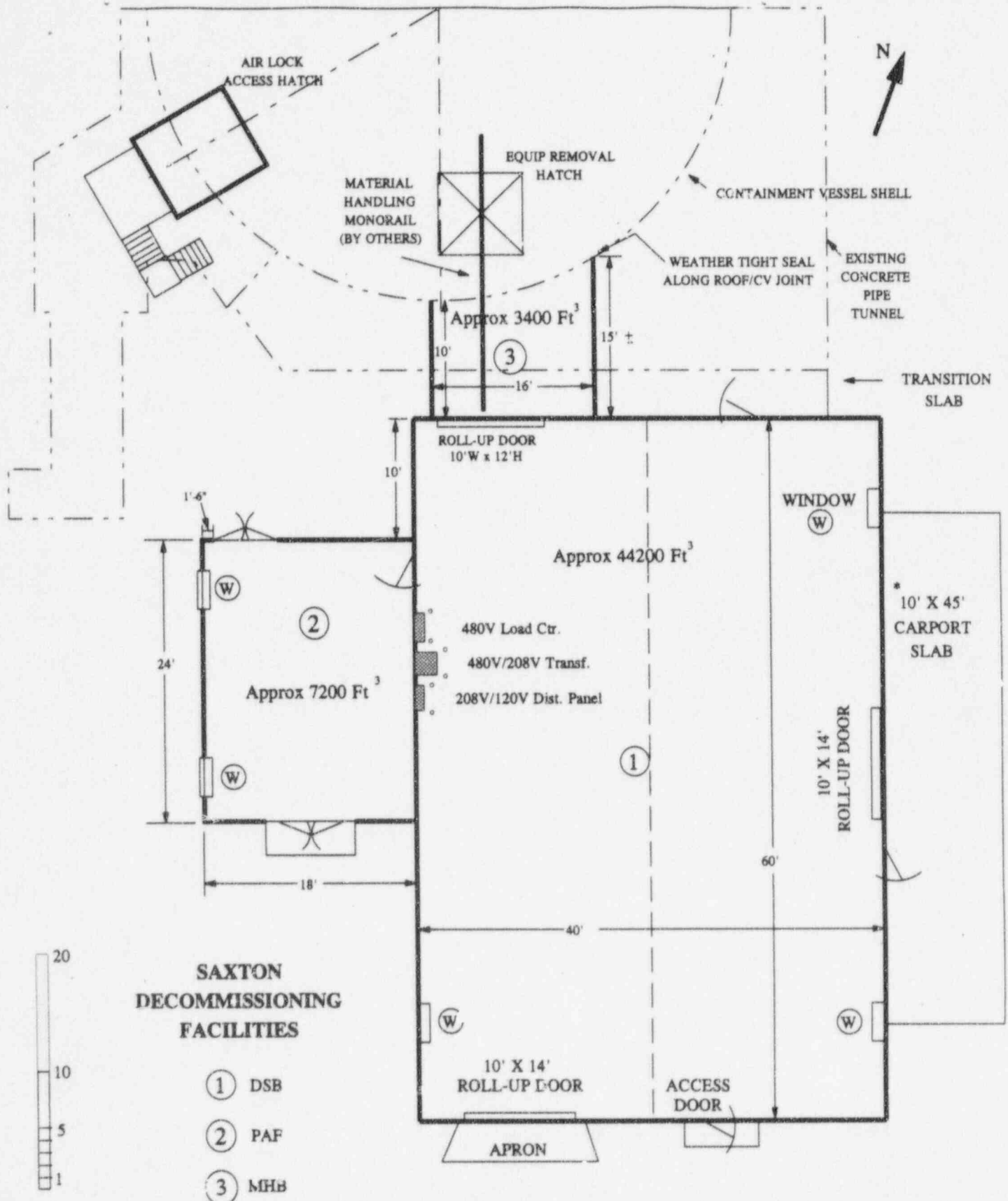
Question 2: What is the size of your proposed decommissioning support facilities?

Response: The decommissioning support facility dimensions are as described below and depicted on Figure 1 (Attachment 2):

- Decommissioning Support building is a 40 by 60 foot, 18 foot high single story structure;
- Personnel Access Facility is a 18 by 24 foot, 16.5 foot high single story structure; and
- Material Handling Bay is 16 feet wide and conforms to the exterior of the CV.

Question 3: In your proposed TS A.3. you said "and actions preparatory to." Did you mean "and actions preparatory to?" If so please correct and submit a revised TS page.

Response: The assumption of our intent was correct. Please find attached the revised TS page.



**SAXTON  
DECOMMISSIONING  
FACILITIES**

- ① DSB
- ② PAF
- ③ MHB

NOTE: ALL DIMENSIONS ARE CONCEPTUAL  
AND SUBJECT TO CHANGE DURING DETAILED DESIGN

\* DESIGNED FOR BOTH  
RE/R LOAD OR SIDE  
LOAD TRACTOR TRLR  
10'W SLAB, 12'W ROOF

**FIGURE 1 (Rev. 1)**

GPU NUCLEAR CORPORATION  
SAXTON NUCLEAR EXPERIMENTAL CORPORATION  
APPENDIX A: TECHNICAL SPECIFICATIONS TO  
AMENDED FACILITY LICENSE NO. DPR-4

A. SITE

1. Location

The Saxton facility is on 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, and
  - 2) the Containment Vessel access 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 Pennsylvania Electric Company property shall report to the Program Director SNEC facility 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 facility, characterization and actions preparatory to major component and facility decommissioning.