PDR 1

TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401
500C Chestnut Street Tower II

March 15, 1979

Mr. L. C. Rouse, Chief
Fuel Processing and Fabrication Branch
Division of Fuel Cycle and Material Safety
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Rouse:

In the Matter of the Application) Docket No. 70-2443
Tennessee Valley Authority

The Tennessee Valley Authority (TVA) hereby requests an amendment to its special nuclear materials license, SNM-1716, dated March 25, 1977, for Sequoyah Nuclear Plant unit 1. Our application was dated December 2, 1976, and the supplements thereto were dated February 23, March 8, June 3, 1977, and April 14, 1978. We request the following underlined changes in our application:

1. Section 1.2, "Storage Condition," Subsection 1.2.1, "Storage Area," page 5, paragraph 3, be changed to read, There is storage racks for 800 fuel assemblies in the spent fuel pit storage space but all racks will be removed except storage capacity for 220 fuel assemblies. The fuel shall be stored in an array such that K_{eff} will be less than 0.95. The spent fuel storage facility shall be capable of withstanding loads imposed by the dead load of the fuel assemblies, the maximum uplift force from the spent fuel bridge hoist, and loads from 1/2 SSE and SSE earthquakes.

2. Subsection 1.2.2, "Storage Area Activities," pages 6 and 7 paragraphs 3 and 4, be changed to read, During fuel-handling inspection, and spent fuel pit investigation, the refueling floor will be enclosed by a temporary barrier. The location of this barrier is shown in figure 2A. Activities in the vicinity of this area will be restricted as follows:

   a. No overhead work in the vicinity except fuel pit investigation activities

   b. No painting, grinding, sandblasting, or similar activities in the vicinity

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c. No crane operation directly over the stored fuel other than those required for fuel handling, inspection, or spent fuel pit investigation

d. No construction or test work which adversely affects fire protection, power, or lighting in the fuel-handling area.

When fuel-handling, inspection, or spent fuel pit investigation activities are not being performed and fuel is stored in the storage racks, metal covers will be placed over the new fuel storage vault or the spent-fuel pool. During this time, there will be no restriction on activities in the fuel-handling area with the exception that the auxiliary building crane will not be permitted to carry loads over the stored fuel in either the spent fuel pool or new fuel storage vault except during spent fuel pit investigation activities. Remaining construction and testing work will not affect the safety of storage because of the protection afforded by the covers over the racks.

3. Subsection 1.2.5, "Access Control," pages 8 and 9 be changed to read, New fuel shipping containers will be received and unloaded in the cask loading area. During unloading, handling, and inspection activities, an armed security guard will be stationed in the fuel-handling area to provide surveillance and control. In addition whenever the metal covers are removed from either the New Fuel Storage Vault or the Spent Fuel Pit, an armed security guard will be stationed in the fuel-handling area to provide surveillance and control. Access to this area will be limited to those persons authorized by the plant superintendent. After the inspected fuel has been placed in either the new fuel storage vault or the spent-fuel storage pool, or the metal covers are in place, these areas will be equipped with intrusion alarms and patrolled by a guard at intervals not exceeding four hours when unattended.

4. Section 2.3, "Accident Analysis," page 12, be changed to read, Electrical interlocks and mechanical stops are provided on the auxiliary building crane which prevent movement of heavy loads over the spent fuel storage pool. All operations which must be carried out with the crane can be performed without bypassing the electrical interlocks, except those involved in installing and removing the spent

fuel pit gates, fuel-handling and inspection, and spent fuel pit investigation activities. All fuel-handling operations are conducted in accordance with approved detailed instructions, under the direction of a responsible supervisor. Spent fuel pool investigations will be performed in a manner to ensure the integrity of the fuel stored in the spent fuel pit. However, an analysis of a fuel-handling accident is given in the Sequoyah FSAR, Subsection 15.4.5.

TVA is requesting this amendment in order to complete the investigation of the feasibility of a change to high density fuel racks. For this investigation we need to remove all but 220 storage locations from the spent fuel pit. In order to minimize the impact on operation of unit 1, 29 racks comprising of 580 locations will be removed before fuel loading. If higher density racks are found to be technically and economically suitable, the changeover would begin after unit 1 fuel load and would be completed before unit 2 startup. Therefore, it would be appreciated if your review and approval of our amendment to remove 29 existing racks from the spent fuel pit be completed by April 2, 1979.

In accordance with 10 CFR 170.11(a)3 an amendment fee is not required.

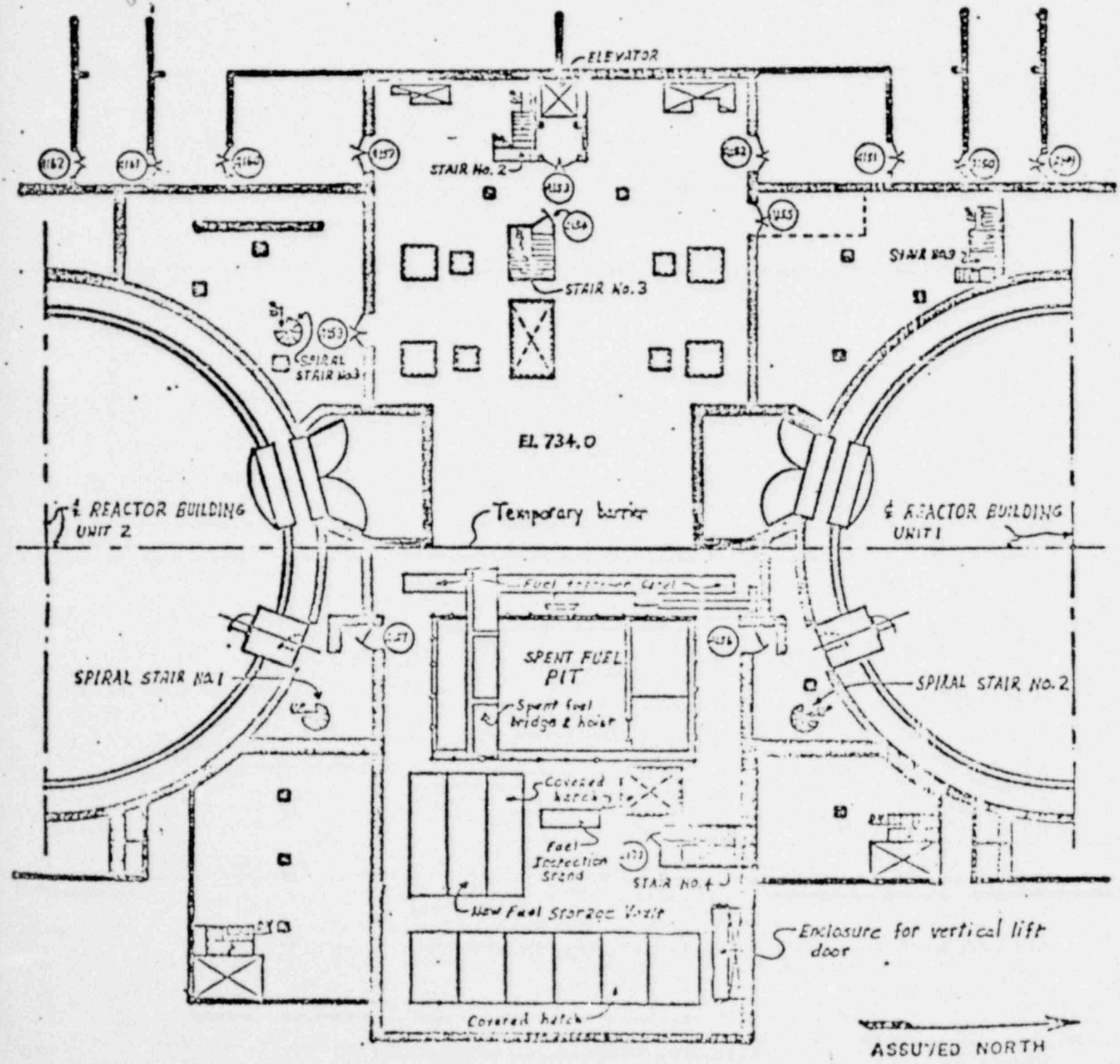
Very truly yours,

J. E. Gilleland
Assistant Manager of Power

Enclosure

ENCLOSURE

FIG. 2A

POOR ORIGINAL

FUEL HANDLING AREA