

# START

## 2727-WA SRE SODIUM STORAGE BUILDING

### 1.0 INTRODUCTION

#### 1.1 Purpose

The purpose of this synopsis is to support the request for withdrawal by the U.S. Department of Energy-Richland Operations Office (DOE-RL) and Westinghouse Hanford Company (WHC) of the Washington State Hazardous Waste Management Act (Chapter 70.105 RCW) Part A Permit Application for the 2727-WA Sodium Reactor Experiment (SRE) Sodium Storage Building. Information presented below will demonstrate the 2727-WA SRE Sodium Storage Building did not store dangerous or mixed waste and there are no current plans to store dangerous or mixed waste at this facility.

#### 1.2 Previous Application Submittal

A Part A permit application was previously submitted on November 25, 1987 by DOE-RL and WHC to the Washington State Department of Ecology for the 2727-WA SRE Sodium Storage Building. This document was submitted as a protective filing because it was uncertain if the SRE sodium was a dangerous waste according to the Washington Administrative Code (WAC) 173-303. The SRE sodium was determined not to be a dangerous waste after the Part A permit application was submitted.

### 2.0 FACILITY DESCRIPTION

The 2727-WA Facility is a prefabricated metal building with a concrete floor. The interior floor plan of the building is shown in Figure A-1. The metallic sodium is stored in 158, fifty-five gallon steel drums. The drums were purged of air and internally blanketed with nitrogen when filled at Atomics International. The drums are stored on noncombustible pallets (2" steel channels set atop 8" concrete blocks) and cover approximately one-fourth of the floor. The design capacity of the 2727-WA Building is approximately 635, fifty-five gallon drums.

### 3.0 PROCESS INFORMATION

#### 3.1 Operations History

The sodium was used by Atomics International (AI) as the primary coolant in sodium reactor experiments. After use by AI, the SRE sodium was shipped to Hanford in 1977 and stored in the 2727-WA building.

The sodium was intended to be shipped from Hanford for use as a coolant in the Clinch River Breeder Reactor. When that project was canceled, the sodium became available for other use. Current plans call for the sodium to be shipped to the Idaho National Engineering Laboratory (INEL) to be

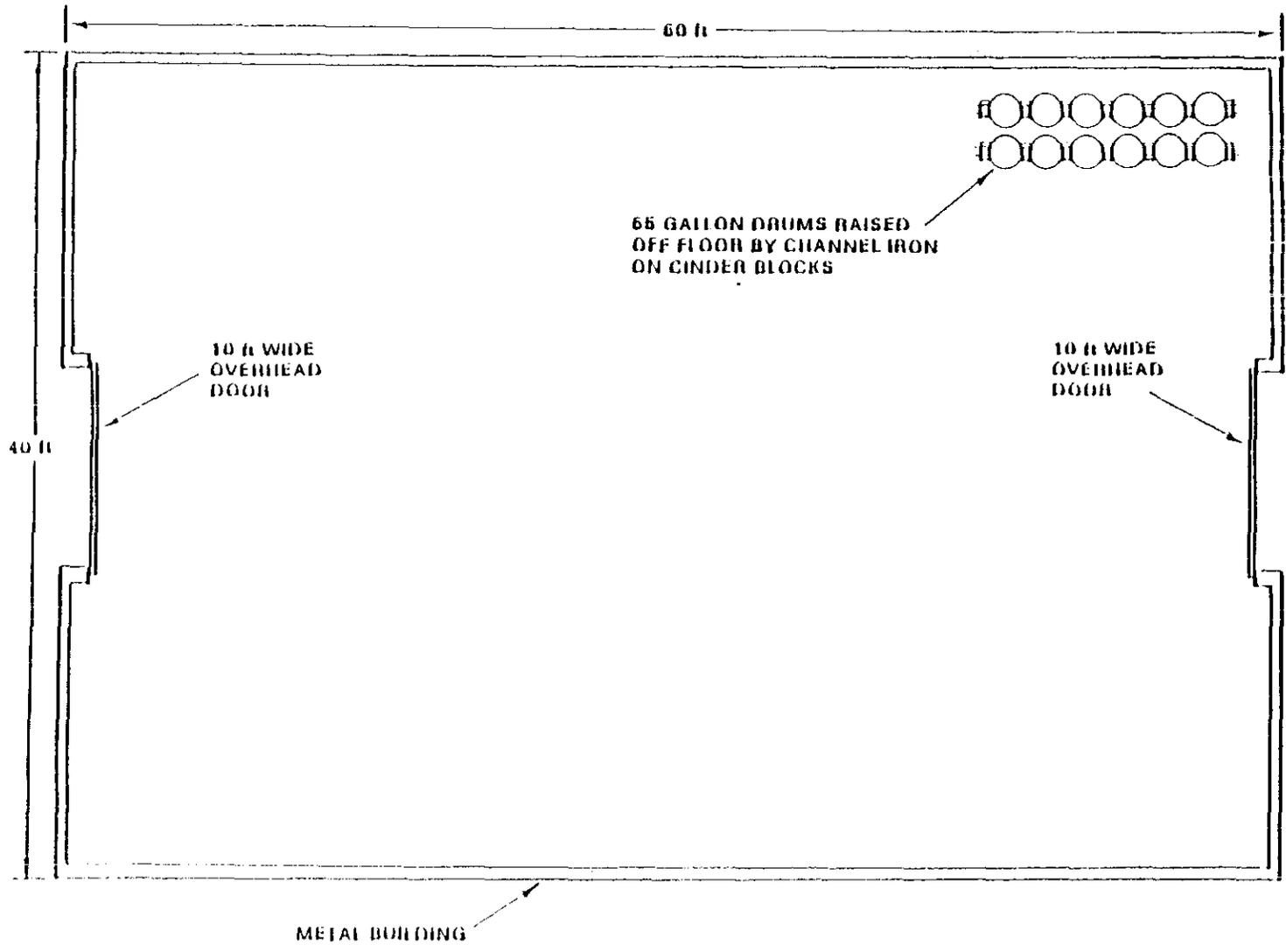


Figure A-1. 2727-WA Storage Facility Floor Plan

converted into sodium hydroxide. The sodium hydroxide will be shipped to Hanford and used to neutralize acid waste from the PUREX plant. Shipment of the sodium stored in the 2727-WA Facility to INEL is scheduled to commence in the third quarter of fiscal year 1990.

### 3.2 Waste Designation

A regulatory analysis was performed on the 2727-WA sodium by the U.S. Department of Energy-Chicago Operations Office (DOE-CH) and by WHC. Both of these analyses concluded the SRE sodium is not a dangerous waste.

According to WAC 173-303-016, a solid waste is defined as a discarded material. A discarded material is any material abandoned, recycled, or considered inherently waste-like.

Abandoned materials are solid waste if they are disposed of, burned, or incinerated. Also, if they are accumulated, stored, or treated before to disposal or burning. Since the sodium stored at 2727-WA will not be disposed of, burned, or incinerated, it is not abandoned material.

Recycled materials include spent materials, commercial chemical products (listed in WAC 173-303-9903), by-products (listed in WAC 173-303-9904), sludge (listed in WAC 173-303-9903), and scrap metal. Recycled materials are also by-products and sludge that exhibit characteristics (described in WAC 173-303-090) or criteria (described in WAC 173-303-084 and 101 through 103) of dangerous waste. These materials are solid waste when they are applied to the land in a manner constituting disposal or burned to recover energy. Except commercial chemical products, these materials are also solid waste when reclaimed or speculatively accumulated.

The 2727-WA SRE sodium does not meet the definition of by-product, sludge, scrap metal, or spent material. The definition of spent material is any material that has been used and as a result of contamination can no longer serve the purpose for which it was produced without processing. Sodium is produced to be used in the production of sodium hydroxide, as well as a reactor coolant. Because the stored sodium can be used for the production of sodium hydroxide without processing, it is not defined as spent material.

The sodium is a commercial chemical product. However, a commercial chemical product is considered a solid waste only if it is applied to the land in a manner constituting disposal, used to produce products that are applied to the land, or burned to recover energy. The sodium will not be used in these ways.

Waste identified by Dangerous Waste Numbers F020, F021, F022, F023, F026, and F028 are considered inherently waste-like and are solid waste when recycled. The 2727-WA sodium is not one of these dangerous wastes. This section of the Dangerous Waste Regulations and the sections cited above demonstrate the 2727-WA SRE sodium is not a solid waste.

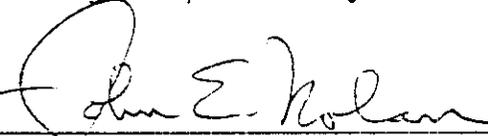
### 4.0 SUMMARY

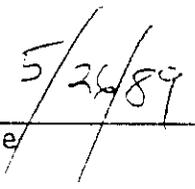
The information supplied above supports the request by DOE-RL and WHC to withdraw the Part A permit application for the 2727-WA SRE Sodium Storage

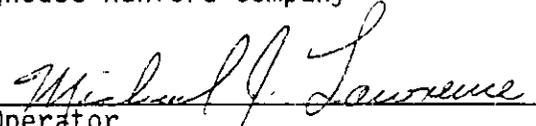
Building. The permit application was originally submitted as a protective filing due to doubt about the waste designation of the stored metallic SRE sodium. Since the submittal, a regulatory analysis by DOE-CH and WHC determined that the SRE sodium is not waste. The 2727-WA Building does not store dangerous waste and there are no plans to use this building for dangerous waste storage.

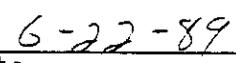
#### 5.0 CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

  
\_\_\_\_\_  
Co-operator  
John E. Nolan, President  
Westinghouse Hanford Company

  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Owner/Operator  
Michael J. Lawrence, Manager  
U.S. Department of Energy  
Richland Operations Office

  
\_\_\_\_\_  
Date