

PERMIT ATTACHMENT 2
FACILITY DESCRIPTION

2.0 FACILITY DESCRIPTION

2.1. Introduction

The White Sands Missile Range (WSMR) is a U.S. Army installation that supports missile development and test programs for the Army, Navy, Air Force, other government agencies, and foreign allies.

WSMR is the largest land-area military installation in the United States, comprised of nearly 3,200 square (sq.) mi (5,631 sq. km) of land. The installation is approximately 99 mi (159 km) long and 25 to 40 mi (40 to 64 km) wide. The installation is comprised of a large complex of test ranges, launch sites, impact areas, and instrumentation sites required to develop and test tactical and strategic weapons and weapons systems. WMSR is located in Doña Ana, Socorro, Lincoln, Otero, and Sierra Counties, New Mexico. The headquarters (Main Post) area is located at the southwestern corner of the installation, approximately 27 miles (mi) (43.4 kilometers (km)) east-northeast of Las Cruces, New Mexico and 45 mi (72.4 km) north of El Paso, Texas.

Wastes are generated at multiple locations across the installation and initially managed at waste accumulation points without a Permit, in accordance with the requirements specified in 20 NMAC 4.1.300 incorporating 40 CFR §262.34.

To facilitate disposal, the Hazardous Waste Storage Facility (HWSF) is used for storage of containers prior to off-site transportation and disposal.

2.2. Unit Location

The HWSF is located 8 miles east of the Main Post, approximately 1600 feet from the southern Facility (WSMR) boundary. A map showing the location and the surrounding area is presented in Figure 2-1 in accordance with 40 CFR §270.14.

2.3. Unit Boundaries

The HWSF boundary is defined as the chain link security fence shown on Figure 2-2.

2.4. Unit Description

The HWSF is comprised of multiple indoor and outdoor container storage areas. Figure 2-2 shows the unit and surrounding land. The following features are indicated as specified by 40 CFR §270.14(b):

- Map scale and date
- Orientation of map
- Unit boundaries
- Distance to nearest residential buildings.

A Solid Waste Management Unit (SWMU) is located adjacent to the Permitted Container Storage Unit or Permitted Storage Unit (PSU). It is listed as SWMU 89, Former Acid Neutralization Unit at Hazardous Waste Storage Facility. The open-topped concrete tank was used to evaporate liquid chemical waste generated at the WSMR photo labs. When not being used for evaporation, the unit was sometimes used as a storage pad for damaged polychlorinated biphenyl (PCB) transformers.

2.5. Surrounding Land Uses

Surrounding areas are controlled by the US Army. No other facilities, military housing, or public roads are located within 1,600 feet from the HWSF.

2.6. Road Systems

The traffic system serving White Sands consists of approximately 800 miles of motor vehicle roads including paved and graveled roads. The HWSF is located off a paved road approximately 1,500 feet south of Range Road 2. The road is approximately 20 feet wide with a 2 feet wide gravel shoulder. Range Road 2 is the main east-west military route in the south Range area. It extends from Range Road 1 in the Main Post area to the east range boundary for a distance of approximately 24 mi. Range Road 2 is approximately 22 feet wide two-lane, two-way all weather paved road with 6 feet shoulders. Range Road 2 is lightly travelled by WSMR personnel driving between Headquarters and the test areas. The Road to the HWSF dead ends at the unit and is only traveled by personnel working at the unit.

2.7. Geology

The geology of WSMR consists predominantly of the Tularosa Basin and the surrounding mountain ranges. The San Andres, San Augustin, and the Oscura Mountains border the Tularosa Basin on the west while the Sacramento Mountains form the eastern border. The average elevation of the Tularosa Basin is 4,000 feet above mean sea level. The majority of WSMR property, including the area around the HWSF, is located within the Tularosa Basin. The Tularosa Basin contains thick sequences of Tertiary and Quaternary age alluvial and bolson fill deposits. These sediments, more than 5,000 feet thick in some areas, consist mainly of silt, sand, gypsum, and clay weathered from the surrounding mountains.

2.8. Geohydrology

The WSMR Main Post obtains its potable water supply from an aquifer located in the upper bolson deposits. The majority of ground water recharge to this aquifer occurs through the coarse, unconsolidated Tertiary/Quaternary alluvial fan deposits and arroyos along the eastern flank of the Organ, San Augustin, and San Andres Mountains. Ground water flow direction is generally toward the center of the Tularosa Basin. To the east, near the HWSF, ground water becomes more mineralized, primarily with sulfate and chloride.

Four monitoring wells are located in the vicinity of the Permitted Container Storage Unit or Permitted Storage Unit (PSU). These four wells penetrated very similar lithologies consisting primarily of heterogeneous bolson-fill deposits of interbedded sand gravel, silt and clay. Depth to groundwater is approximately 230 feet below ground surface (bgs) and groundwater generally flows south-southeast. The groundwater is highly saline and nonpotable and has a total dissolved solids (TDS) concentration of greater than 15,000 milligrams per liter (mg/L). The nearest production well yielding potable water is in the Main Post area, more than 8 miles west of the PSU.

2.9. Seismic Standards

The HWSF is not located in a county designated in 40 CFR §264 Appendix VI for seismic considerations; therefore, the HWSF is exempt from seismic considerations.

2.10. Flood Plain Standards

The HWSF is located above the 100-year flood plain boundaries. No permanent surface water of constant flow conditions is located in the area. The HWSF is located on relatively flat terrain. Topographic contours are illustrated on Figure 2-1. No permanent surface water of constant flow conditions is located in the area.

2.11. Container Storage Procedures

When containers are received at the unit, they are unloaded and handled in a manner to minimize potential damage to the container and potential hazards to the workers. A forklift is used for most container handling operations. Containers are also inspected, weighed, and recorded on a log. Doing so ensures that the waste is held in the appropriate container and the integrity of the container has not been compromised.

Containers holding hazardous waste will be kept closed, except when it is necessary to add or remove waste. Aisle space will be maintained for unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment in case of emergency.

Incompatible wastes will be segregated to ensure that they cannot mix in the event of a leak or accidental release. Containers will be compatible with the waste to be stored as required by this Permit.

2.12. Container Storage Area

The HWSF consists of indoor and outdoor container storage areas (Figures 2-2 through 2-5), including a large metal building, multiple portable storage units, concrete pads, and gravel parking areas. Containers may be stored outdoors, inside of building S22895, or inside of the portable storage units.

Building S22895 provides approximately 1,760 sq feet of enclosed floor space that will be used for container storage. Five portable metal storage units are also located at the HWSF. The storage units vary in size, approximately 7 feet by 8 feet and 15 feet by 8 feet.

A concrete pad extends outside surrounding the north, east, and south sides of building S22985. This area may also be used for container storage.

A dirt and gravel parking area extends outside of the buildings and concrete pad within the boundary of the HWSF. The ground surface in the area is level, suitable for safe vehicular movement and may also be used for container storage.

2.13. Spill Containment

Containers that contain free liquids will be stored using secondary containment in accordance with Permit conditions. Containment methods include the use of portable spill containment pallets, temporary berms, the built-in containment of the storage units, or the concrete containment area inside of building S22895.

Building S22895 has a built-in containment area consisting of a reinforced pit measuring 47 feet by 11 feet by 15 in. deep. The concrete will be maintained free of cracks or gaps and are sufficiently impervious to contain liquids until the collected material is detected and removed.

The portable metal storage units have floors that are continuously welded and coated to provide corrosion resistance. The internal spill containment systems within the portable storage units have a capacity exceeding 25% of the total storage capacity.

Spilled or leaked material will be removed from the secondary containment systems as needed to prevent overflow. Spill cleanup supplies will be kept at the facility.

Containers that do not contain free liquids may be stored on the concrete pads or on the soil parking areas within the HWSF. Surface features in the vicinity of the HWSF consist of sandy areas and sand dunes. Terrain surrounding the storage areas is graded to prevent stormwater run-on and promote adequate drainage during precipitation events.

2.14. Security and Access

The HWSF is enclosed with a chain-link fence with barbed wire on top and may be entered only through two gates. The gates are locked when the facility is not in use. Signs are posted near each gate that read as follows in both English and in Spanish: "DANGER, UNAUTHORIZED PERSONNEL KEEP OUT."

Additional signs may be posted when appropriate such as "POLYCHLORINATED BIPHENYLS (PCB'S), DANGER!, CANCER SUSPECT AGENT, AUTHORIZED PERSONNEL ONLY".

Warning signs will be legible from a distance of at least 25 feet (8 m).

2.15. Precautions and Emergency Preparedness

Precautions will be taken to mitigate hazards to workers and to minimize potential damage to the facility or waste storage containers. Building S22895 and the portable storage units are placarded to identify hazards associated with each building.

Waste will be protected from sources of ignition or reaction. Signs are posted on three outside walls of Building S22895 that read as follows: "NO SMOKING WITHIN 100 FEET OF BUILDING".

The storage buildings are electrically grounded and have explosion proof lighting.

Building S22985 is equipped with a spill kit, portable fire extinguishers, emergency shower and eyewash, and water hose. The building also has two roll-up doors that accommodate vehicle entry into the building if needed.

The portable storage units are equipped with ventilation systems, explosion proof lighting, fire protection systems, and electrical grounding systems.

A landline telephone is provided in Building S22985. In the event of an emergency, personnel will dial 911 to directly contact WSMR Emergency Services. The Emergency Services dispatcher will ask the nature of the emergency and will activate the appropriate emergency personnel (Ambulance, Fire, Police, HAZMAT, etc.).

2.16. Inspection Schedule

Inspections will be conducted weekly as described in Permit Attachment 5 to ensure safety and emergency equipment are in proper working order, containers are structurally sound, and the communication and alarm systems are operable. Deficiencies shall be documented.

If an inspection reveals that non-emergency repair or maintenance is needed, the remedial action will be accomplished on a schedule that ensures that the problem does not lead to an environmental or human health hazard. If the deficiency constitutes an emergency involving hazard to human health or the environment, remedial action shall be initiated immediately.

2.17. Traffic Patterns

Waste is transported to and from the HWSF via Range Roads 2 and 15. Traffic density ranges from 200 to 1,000 motor vehicles per day. About 95 percent of this traffic consists of cars and pickups. The rest of the time, traffic is light. There is no traffic within the HWSF area other than the occasional motor vehicle transporting hazardous waste to and from the HWSF.

Figure 2-1. Location of the Permitted Container Storage Unit

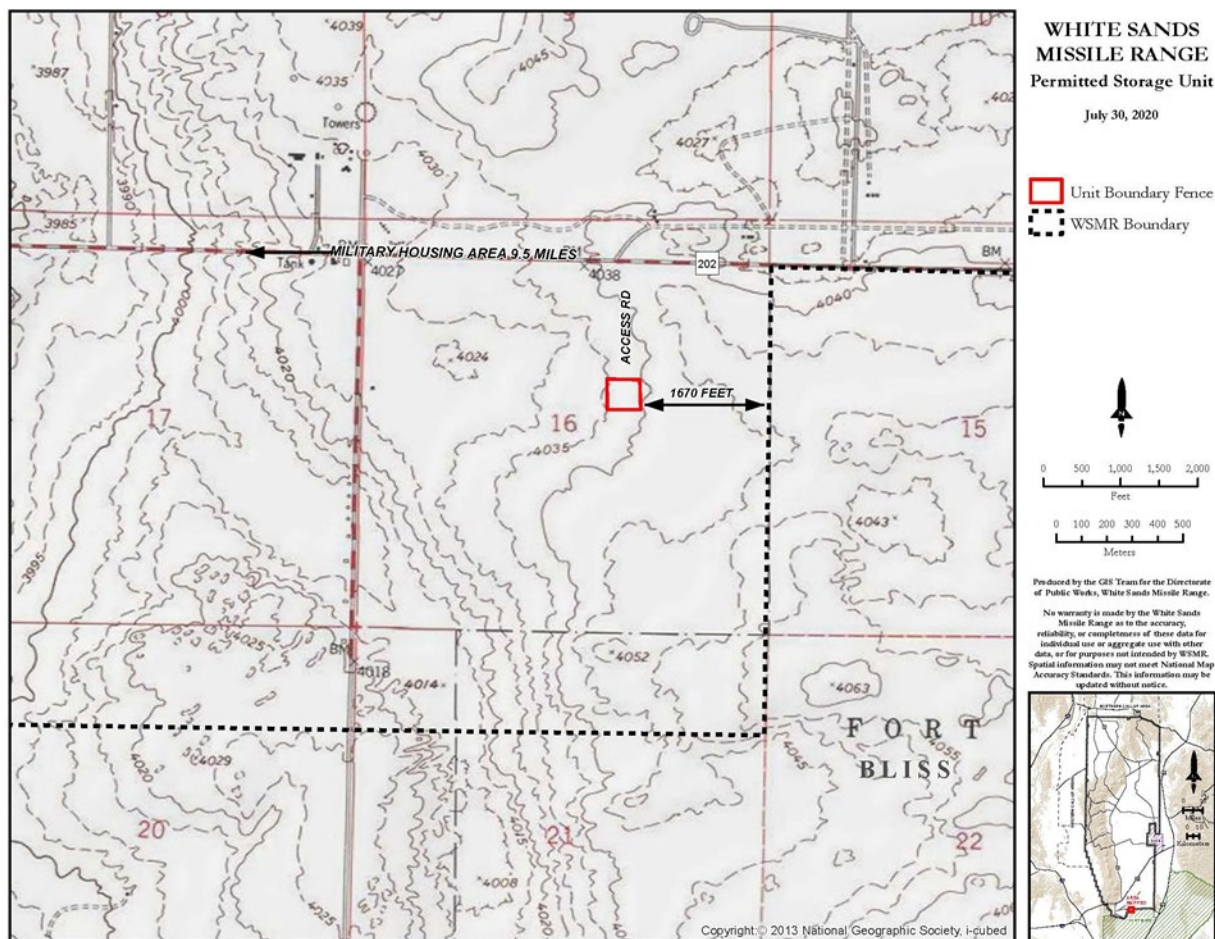


Figure 2-2. Configuration of the Permitted Container Storage Unit (PSU)

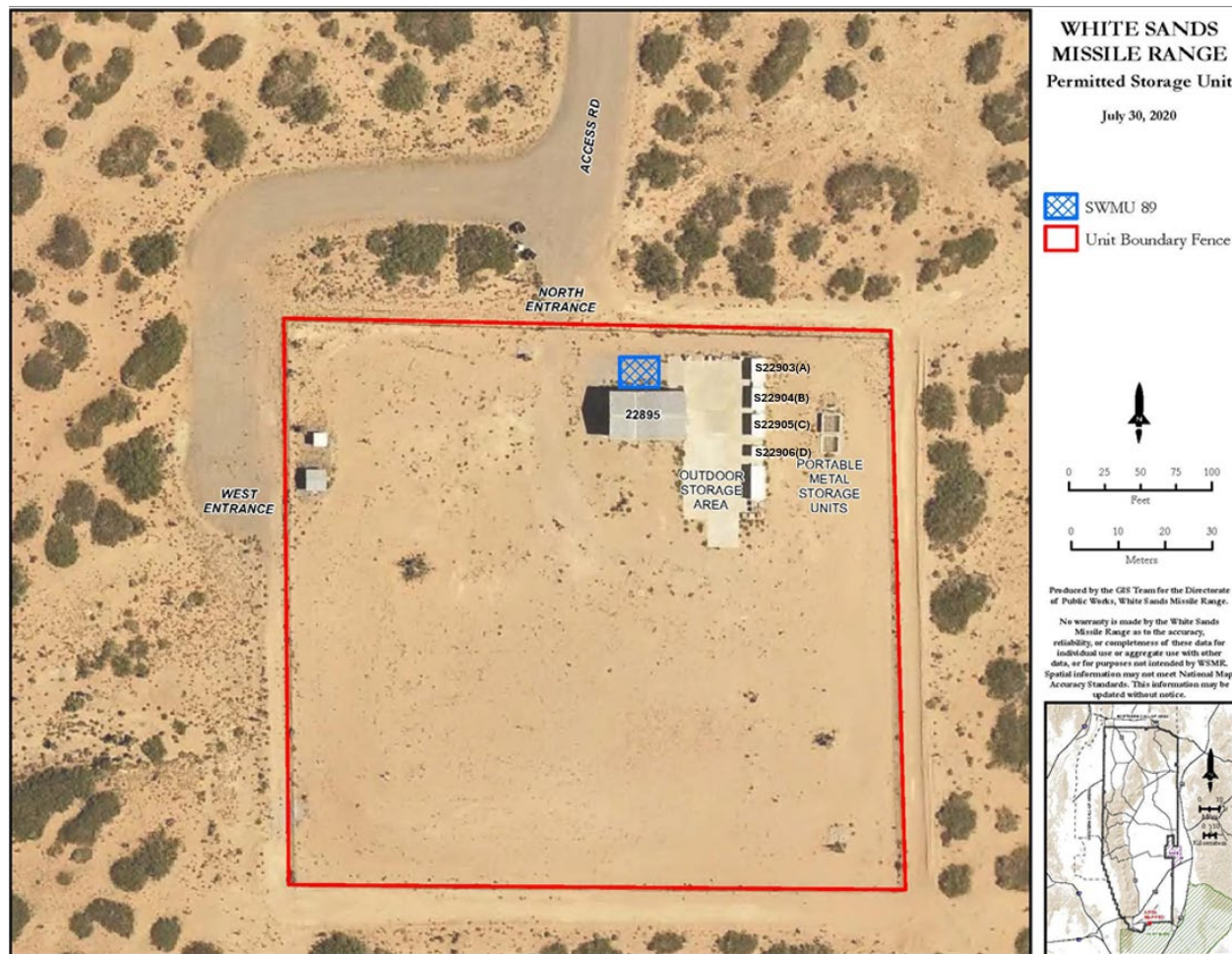


Figure 2-3. Containment area in Building S22895 at the HWSF

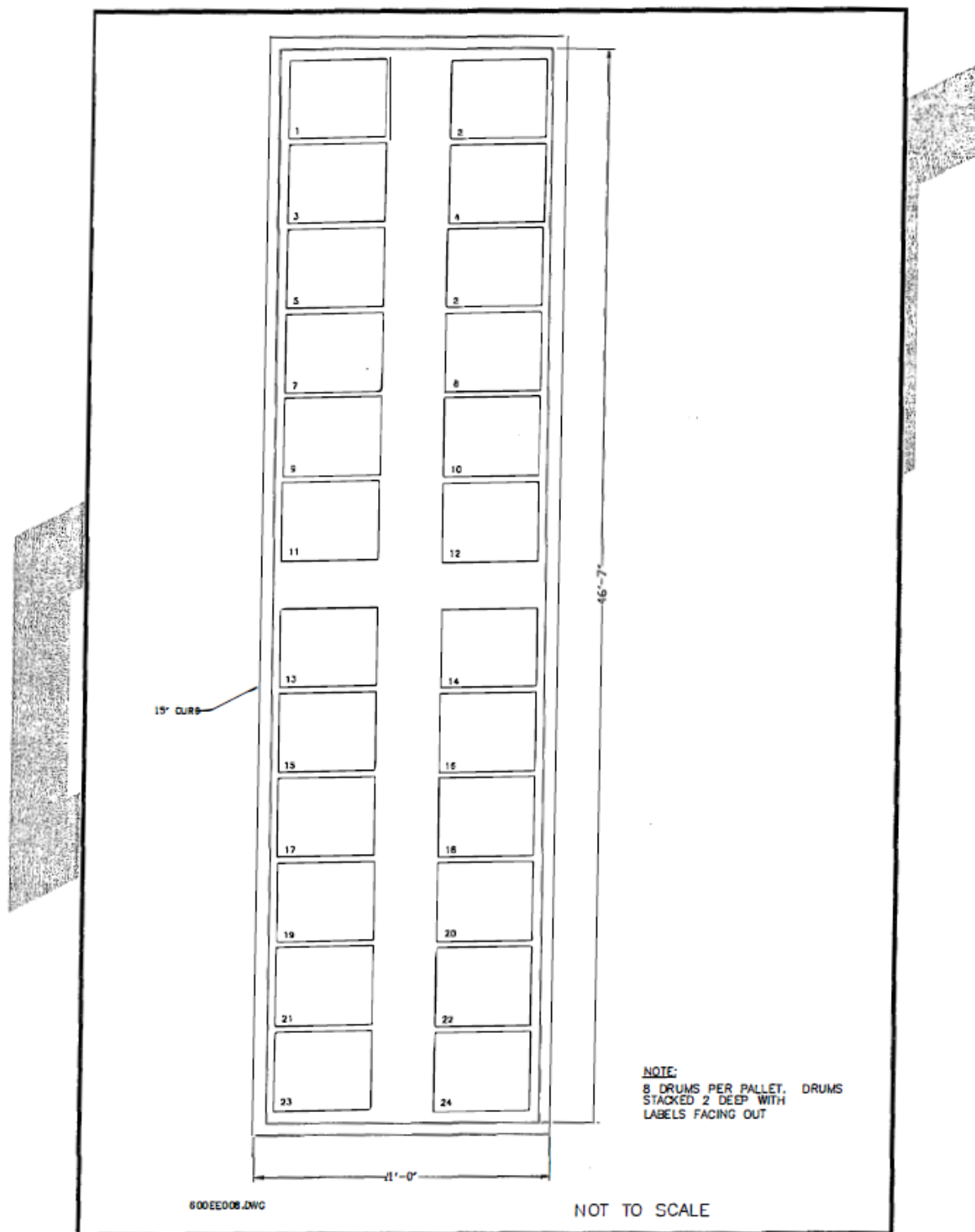
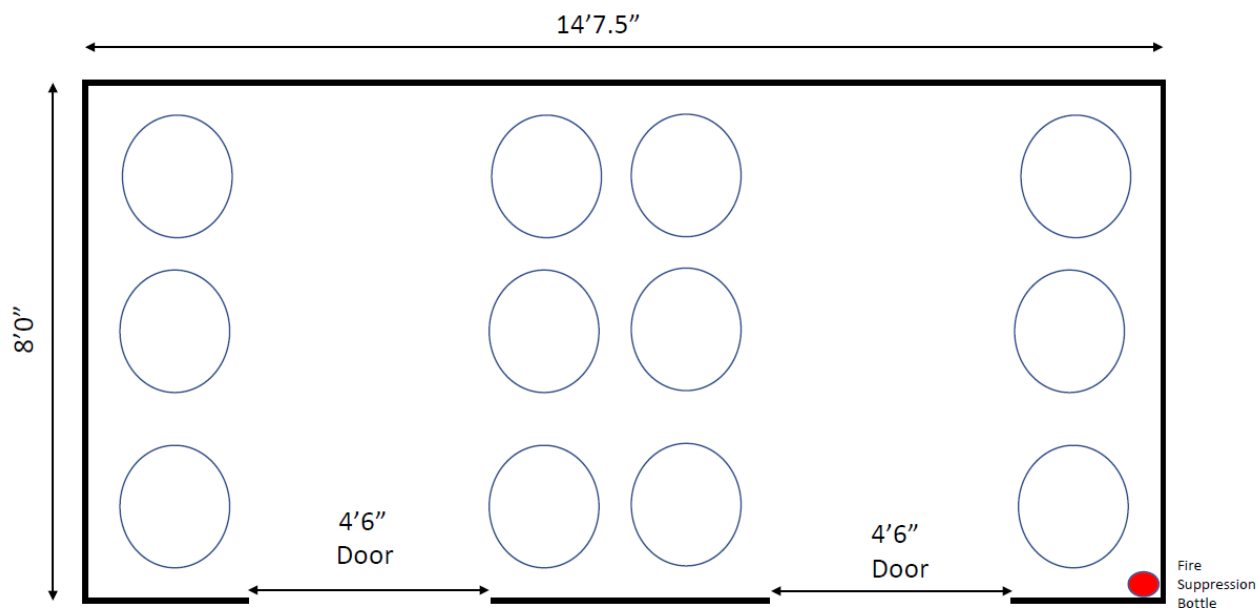


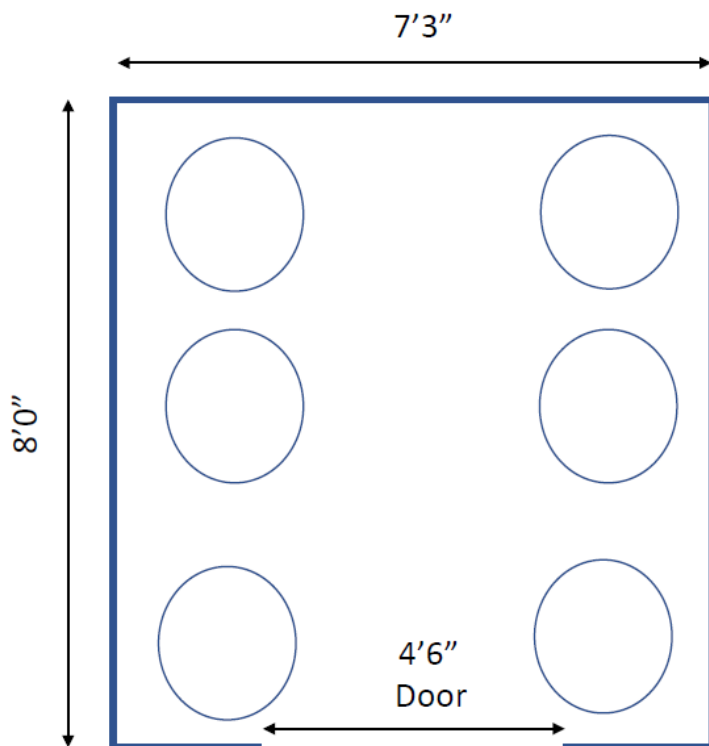
Figure 2-4. Containment Area Buildings S22903(A), 22904(B) & 22905(C)



Maximum Storage 24 55 gallon drums double stacked with 6" between drums and building walls. Buckets and small containers can be placed on the fixed shelves in the building. Building Dimensions are internal dimensions

Not to Scale

Figure 2-5. Containment Area Building S22906(D)



Maximum Storage 12 55 gallon drums double stacked with 6" between drums and building walls. Building Dimensions are internal dimensions
Not to Scale