ATTACHMENT D

AA SYDCOL, LLC

CONTAINER MANAGEMENT PLAN

[40 CFR 270.15]

October 20, 2021

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June 25, 2021

1.0 INTRODUCTION

This Attachment describing process information on containers (Container Management Plan) has been prepared in support of the Sydcol RCRA Part B permit application for the Facility. A list of all acronyms and a definition of key terms used in this description is provided with General Information provided in Attachment A of the RCRA Part B permit application.

The Facility is a waste transfer station in Yuma, Arizona that will accept a variety of hazardous and non-hazardous wastes with separate waste management units for hazardous and non-hazardous wastes. The Facility will consolidate, bulk, repackage, and store the wastes for shipment to approved off-site reuse, treatment, and/or disposal facilities, fuel blenders or wastewater treatment plants. The Facility will not be the designated Facility for any hazardous wastes temporarily stored at the Facility. Figure 1 illustrates the site location, and Figure 2 provides a site plan for the Facility.

Sydcol uses the warehouse building as well as the northern 185 feet and the western 75 feet of the Facility as a solid waste transfer station involved in storing, consolidating, and repackaging non-hazardous wastes and shipping them off site to reuse, treatment, and/or disposal facilities. Designated areas in the southern portion of the Facility are used as a transfer station for hazardous wastes (including universal wastes) and used oil. This section provides process information concerning the hazardous waste management activities conducted at the Facility.

Hazardous wastes will typically be transported to the Facility in tankers, roll-offs, and/or smaller containers (e.g. 55-gallon drums, totes) on flat-bed trucks, van trailers, or other vehicles. Hazardous wastes will be liquid, semisolid, and/or solid in nature and will be processed and stored in roll-off or end dump containers or smaller containers such as drums or totes. Consolidated wastes may be transferred to tanker trucks or containers of various capacities. No stationary tanks, waste piles, surface impoundments, or containment buildings will be used for management of wastes accepted at the Facility. No treatment equipment, including incinerators, boilers, industrial furnaces, or other equipment will be used at the Facility. Further, the Facility will not have any landfills, drip pads or other areas where wastes would be treated and/or disposed.

Acceptable wastes include characteristic wastes (D wastes), listed wastes (F, P, and U wastes), flammable and combustible materials (such as used oil, waste fuels, etc.), contaminated soil, universal wastes (such as batteries, mercury-containing equipment, mercury-containing lamps/bulbs, and certain pesticides), metal-containing filter cake, and other wastes listed in the WAP.

Containerized wastes, including lab packs, accepted at the Facility may be staged and/or stored prior to consolidation or shipment offsite in accordance with the procedures outlined below. Site

developments include three HWMUs where wastes are staged, consolidated, and stored. These units are described as follows:

- HWMU1 includes a concrete pad with a shade structure adjacent and west of the main building;
- HWMU2 includes a concrete pad northwest of the main building; and
- HWMU3 includes a concrete pad north of the main building.

Hazardous wastes in tanks or containers subject to hazardous waste transporter requirements in 40 CFR §263 may be stored in a designated transfer storage area for up to 10 days prior to removal from the site. The designated 10-day storage area for temporary storage of tanks or containers on transfer vehicles is the SWMU area along the northern and western portions of the Facility but not the warehouse building. Hazardous wastes being consolidated for off-site transport will be staged in a designated waste consolidation area in one of the HWMUs where liquid waste containers are consolidated into bulk tanks for transport. All hazardous wastes at the Facility that are not in transportation will be stored within the HWMUs.

The waste management units are constructed and maintained to isolate incompatible hazardous wastes processed at the Facility. Smoking or open flames are allowed only in designated areas that are so marked. Any work involving open flames (i.e. welding) must be performed under a safe work permit ("hot work" permit) consistent with OSHA standards for welding, cutting, and brazing.

2.0 CONTAINERS

2.1 Container Description

All containers used at the Facility must comply with the requirements described in 49 CFR 178 Subpart L – *Non-Bulk Performance-Oriented Packaging Standards* and/or 49 CFR 173.32 – *Requirements for the use of Portable Tanks*. Typical container sizes shipped to the facility are 55-gallon steel or plastic drums and 275 to 330-gallon plastic intermediate buck containers (IBCs, totes). Typical lab pack containers will be from 1-gallon to 85-gallon steel, fiber, plastic containers, or 1-cubic yard (or larger) boxes. The Facility will accept any DOT-approved containers provided they are compatible with the hazardous waste they contain and have the necessary physical and mechanical properties to ensure they can be safely handled and stacked without being damaged.

Lab pack documentation will include a packing list that indicates the contents of the lab pack. Each hazardous waste container will receive an additional Sydcol label which will contain a unique identification number, the date the container arrived at the Facility, the hazard classification for the waste, and other information used to process the container. Sydcol labels identify containers by the manifest number, line-item number on the manifest, and individual container number under the manifest using the label provided in Appendix A or with a universal product code (UPC) system suitable for digitally scanning container information. The identification number will be entered into Sydcol records along with the waste profile data, conformance test results (if any), and incoming and outgoing manifests. Containers that have gone through processing and are ready to ship offsite will be labeled in accordance with DOT regulations and are manifested in accordance with Federal and State regulations. Containers of used oil will be labelled "Used Oil" consistent with 40 CFR §279.54(f)(1).

A check in sheet is prepared for each hazardous waste shipment that indicates the container type and contents, whether solid, liquid, or a mix of solid and liquids. All containers are inspected upon receipt at the Facility to confirm container quantity and labelling matches the record on the manifest, confirm the accuracy of the check in sheet, and to evaluate the condition of the container. Should a container be found to exhibit conditions suggesting imminent failure or be leaking, the container will be repackaged. Repackaging containers will be checked to assure compatibility with the waste in the damaged container. The generator will be notified and additional information will be obtained so the container can be processed or shipped back to the generator. An example of the check-in sheet is provided in Appendix B. Check-in sheets will be maintained in a file on-site for a minimum of 3 years.

The number of containers to be stored in each HWMU area is described below in Subsection 4.0.

2.2 Containers with Free Liquids

2.2.1 Storage of Containers with Free Liquids

Containers with free liquids can be stored in HWMU1, HWMU2, or HWMU3. Waste containers with free liquids may be placed directly on the HWMU surface in HWMU1 or HWMU2. Containers with free liquids in HWMU3 must be placed on containment pallets engineered and prefabricated to have secondary containment for 10 percent of the total volume of the containers on the pallet or the volume of the largest container, whichever is greater.

All HWMUs have secondary containment curbs on three sides and concrete floor surface that is sloped to drain to one side of the unit with a 10-mil HDPE liner underlying the concrete slab. The HDPE liner for HWMU1 and HWMU2 is incorporated into the secondary containment system by extending the liner on all sides to the top of the concrete slab with leak-proof, welded seams on all corners and edges.

Containers of liquid hazardous waste will be consolidated in HWMU1 or HWMU2. Tanker trailers are parked adjacent to the secondary containment of the HWMU when transferring waste liquids to or from smaller containers within the HWMU.

Lab packs typically consist of small containers packed with absorbent into larger shipping containers. The shipping container provides a secondary containment for the wastes such that lab pack containers may be placed in any HWMU.

2.2.2 Determination of Free Liquids in Containers

Depending on container type, some hazardous waste materials such as powders and debris can be visually determined to be absent of free liquids. Cubic yard boxes, super sacks, and containment totes can be visually observed for free liquids. For containers of purportedly solid waste materials that cannot be visually evaluated, a minimum of 10 percent of the containers from each shipment will be randomly selected and opened for visual inspection to confirm there are no free liquids in the container. Determination of free liquids will be made so as to confirm whether or not the contents pass the Paint Filter Test (SW-846 9095) as noted in the WAP. Alternatively, containers may be placed in areas with secondary containment (HWMU1, HWMU2, or on containment pallets in HWMU3). Lab packs may be placed in HWMU1, HUMU2, or HWMU3.

Waste materials that are determined to be without free liquids will be stored in HWMU1, HWMU2, or HWMU3.

3.0 CONTAINER MANAGEMENT PRACTICES

Facility staff will direct each vehicle transporting hazardous waste to the designated receiving area prior to unloading and checking in waste containers. Incoming containers are unloaded from transport vehicles using forklifts or hand conveyance equipment and placed in HWMU1, which is designated as the check-in station as shown in Figure 2. Wastes may be checked in in other areas within one of the HWMUs if the designated check-in station is not available to receive the containers for check in.

Containers are transported within the Facility using various mechanical equipment including forklifts, bobcats, drum dollies, and lab carts. Once the waste is classified and labeled, it is moved from the check-in station to the appropriate area within HWMU1, HWMU2, or HWMU3 for storage, consolidation, or shipment offsite. Employees are trained in the proper techniques for moving containers to ensure that the containers are handled in a manner that would not cause the container to rupture or leak.

3.1 Initial Inspection and Waste Classification

All incoming waste undergoes waste acceptance procedures in accordance with the procedures described in the WAP. This includes an inspection of the shipment, including containers, lab packs, and tanker trucks; review of the waste manifest, pre-acceptance waste profile information, and other information with the manifest; and conducting fingerprint analyses to verify waste characteristics as applicable. The waste acceptance analysis may include additional sampling of the waste materials for laboratory testing.

Waste accepted at the Facility will be tracked through the entire receiving, storage, staging, consolidation, and off-site shipping using the Sydcol electronic data base. The Facility Manager is responsible for directing where the containers are to be stored at the Facility.

Sydcol will make a determination of acceptability within 30 days of receipt of waste. If circumstances necessitate more than 30 days, Sydcol will document the reasons for the additional time. All wastes rejected will be sent to an alternative facility or returned to the generator within 60 days of the rejection.

3.2 Container Storage

All containers used for storage of wastes will be made of or lined with a material that will not react and is compatible with the material to be placed in the container. During the initial inspection, incoming wastes are segregated for chemical compatibility based on analyses performed in

accordance with the WAP, knowledge of the waste, supplemental analyses, and compatibility information from chemical literature. During the consolidation process, incompatible wastes will not be placed in the same container, or in an un-washed container that previously held an incompatible waste. Non-lab pack containers of incompatible wastes will not be stored adjacent to each other and will be separated by an aisle, berm, a wall, containment pallet, or other appropriate means. Lab pack containers inherently provide secondary containment and may be stored within the same storage and secondary containment area. Lab packs with incompatible wastes stored in the same HWMU should be separated by aisles, berms, or other containment structures.

During storage, containers will be single or stacked and placed in rows. Aisles between rows will be 3 feet plus the width of any equipment with a minimum width of 4 feet. A space of 18 inches will be maintained between stored containers and around the perimeter of each HWMU. Containers may be stacked provided the capacity of the storage area volume is not exceeded, there is sufficient containment volume, and the lower containers or any pallet structures are capable of supporting the load of the second container. Individual containers will always be stacked such that smaller containers are on larger containers. The maximum height of stacked containers (not including any pallet height) will be limited to 9 feet. No more than two 55-gallon drums or two 330-gallon totes will be stacked on each other.

All containers are to be maintained in a closed condition, with the tops secured during storage except when samples are obtained or when waste is added to or removed from the container.

All storage areas will be inspected at least weekly for the presence of leaking containers, deterioration of containers, condition of secondary containment pallets or other notable conditions. If a container is found to be leaking, the wastes will be consolidated into another container with compatible wastes or transferred to a larger over pack container. The results of all inspections and any remedial activities will be recorded on an inspection log. Information on the inspection log will be entered into the Facility data base to track the transfer of any waste from one container to another. All container storage areas are outdoors and well ventilated.

3.3 Container Handling

When moving hazardous waste containers within the Facility, Sydcol will use designated equipment that may include small front-end loaders, forklifts, or drum carts designed specifically for drum handling. Drums are also sometimes moved manually. Personnel moving drums will be trained in the proper use of container handling equipment, including the capacity limits of handling equipment.

Prior to moving containers, handling personnel will determine the most appropriate sequence in for moving containers within the Facility. Attention shall be given to equipment access needs, Facility traffic, and visibility limitations. Containers will be checked to ensure they are closed and sealed prior to moving. Exercise extreme caution in handling drums that are not intact and tightly sealed.

3.4 Waste Consolidation

Liquid and non-liquid wastes are consolidated into DOT-approved containers including but not limited to tanker trucks and bulk and non-bulk containers (i.e., tote tanks or drums). Consolidation operations are performed under the supervision of the Facility Manager or other qualified professional in all four HWMUs. All waste transfer operations are conducted by personnel trained in proper material transfer practices and response to spills.

During consolidation, it is often necessary to place the liquid portion of a waste in one consolidation container and the solid portion into another consolidation container. The consolidation process can also include phase separation where liquids are separated from liquids and solids are separated from solids. The wastes will be pumped, poured, dumped, or scooped from one container to another. Waste consolidations may require testing to assure wastes are compatible.

Transportation tanks are labelled with the maximum fill volume allowable in the transport tank. When consolidating liquid wastes into transportation tankers, the tank will be gauged to allow visual identification of the fill level in the tank. Rate of filling is governed by the maximum vacuum created by a set standard on each vacuum trailer as well as the fluid viscosity of the liquid waste. Each tank will be filled with a minimum of 4 percent of the tank capacity left unfilled to provide headspace and minimize the potential for overfilling or spilling during transfer. The gauge will be marked with a maximum fill line.

When consolidating wastes in drums or totes, 2 to 3 inches of headspace will be left in each drum to prevent overfill. Translucent polyethylene totes have a maximum fill line on the exterior of the tote to indicate when the tote is at capacity. When consolidating solid wastes in roll-off containers, the container will be filled to no more than 1 to 2 inches from the top of the container and covered with a tarp or hard cover.

Solid and liquid waste consolidation from small containers such as drums to large containers such as lab packs, totes or roll offs can occur in all three HWMUs. The consolidation process can involve the following:

- Transferring wastes from one container to another without removing the waste from the container. An example of this type of transfer would involve moving a liquid in a lab pack into a larger lab pack or transferring one-gallon cans of paint into a larger container;
- Transferring the contents of small containers into a larger container by pouring the waste liquid into the large container. An example of this would be the transfer of liquids in one-gallon containers into a 55-gallon container.
- Transferring the contents of smaller containers such as drums into larger containers such as totes.
- Transferring the contents of containers, typically 55-gallons or higher in volume, into a tanker trailer. An example of this process would be pumping from the smaller container into a tanker truck using the pump on the tanker truck or a portable pump from the container.

The wastes in both consolidation containers will be tracked in the Facility data base.

3.5 Staging of Outgoing Containers

Containers ready for off-site transport will be staged in a designated area within a specific HWMU selected at the time of staging. The staging area will be inspected both before staging and after loading each shipment. Records from the Facility data base are assembled, waste manifests are prepared, and each container receives a new DOT label. Containers are loaded onto flat-bed trucks, tractor trailers, or other vehicles appropriate for transportation of hazardous waste.

In the event outbound wastes need to be staged outside of a HWMU, all containers will be loaded into transport within 24 hours of being staged outside of a HWMU.

3.6 Container Reuse

Some containers received at the Facility will be used as bulking containers. Additional labels are placed on the container identifying the added contents. Used containers that are empty consistent with 40 CFR §261.7 (RCRA empty) may be returned to the generator, recycled, or disposed of. For RCRA empty containers that are reused, the existing labels will be removed and the container relabeled to clearly identify the new contents in the container. If labels cannot be readily removed from the empty container, the label is painted over to render it illegible.

4.0 SECONDARY CONTAINMENT SYSTEM DESIGN AND OPERATION

Hazardous wastes are stored and processed in three areas at the Facility: HWMU1, HWMU2, and HWMU3. Each HWMU has been designed and constructed with secondary containment curbs around three of the perimeter sides and with a floor surface that slopes to one side of the unit. A figure showing the design details of the floor slabs and containment for the HWMUs, including height of containment curbs, floor surface slopes, and containment volumes is presented in Figure 3. An estimate of maximum storage capacity is provided in Figure 4.

The concrete slabs for HWMU1 and HWMU2 will be underlain by a 4-inch aggregate base, which in turn will be underlain by a 60-mil HDPE geomembrane liner with sides raised and anchored to the concrete containment curb with 2-inch battens as shown in Figure 3. Seams at the corners of each HWMU will be extrusion welded so as to provide full containment within the HDPE geomembrane liner. The liner underlying the aggregate base material will be protected by a non-woven geotextile liner installed immediately above the HDPE geomembrane liner. The containment systems within HWMU1 and HWMU2 meet the design and operation requirements for secondary containment provided in 40 CFR §264.175.

HWMU3 provides adequate secondary containment as per 40 CFR 264.175, however the pad is underlain by a 10-mil clear poly liner that is not raised on the sidewalls of the containment slab. Hazardous waste may be stored in drums or totes in HWMU3 on containment pallets engineered with secondary containment sufficient to store the contents of the largest container stored on the pallet or 10 percent of the total contents stored on the pallet, whichever is greater.

The HWMUs will not be designated for storage of specific types of waste. Incompatible wastes will not be stored within 20 feet of each other, and flammable liquids will not be stored within 25 feet of a strong oxidizer waste. Table 1 lists incompatible wastes for determining separation.

4.1 Containment System Drainage

Waste containers are located outdoors on concrete pads engineered with a slope and perimeter berm to provide secondary containment. HWMU1 has a metal shade structure which minimizes precipitation accumulation within the HWMU. Liquids from unanticipated leaks, spills, or precipitation will collect in accumulation area on the south side of HWMU1, the west side of HWMU2, and on the north side of HWMU3. Contained liquids will be removed from HWMUs using a vacuum truck to extract liquids collected along the berm at the low end of the pad. Design drawings showing the height of containment curbs and the slopes for the floor surfaces are presented in Figure 3.

4.2 Containment System Capacity

Two storage scenarios were considered to evaluate storage capacity; (1) standard-sized 55-gallon drums placed over the entire pad spaced 12-inches apart, placed in groups of 16 with 4-foot access aisles every

fourth drum, and (2) standard IBC 330-gallon totes placed over the entire pad, spaced 12-inches apart, placed in rows with aisles after every second tote. Aisles were assumed to be 11-feet wide, as representative of the minimum aisle width for a standard, narrow-aisle counterbalanced forklift. An 18-inch buffer from the secondary containment berm was established along the perimeter of each pad. Industry-standard containment pallets were assumed for drum and tote storage on HWMU3.

The HWMU1 container storage area is a concrete pad approximately 50 feet wide by 100-feet long. Secondary containment is provided by concrete curbs on three sides of the concrete pad, and the pad is sloped at 0.5 percent from north to south to provide a curb depth of 6 inches at the south end of the pad. The storage area is sufficiently designed to store up to 600 55-gallon drums (33,000 gallons) or 180 totes (up to 39,600 gallons). Total secondary containment capacity is 9,350 gallons. Storage of the maximum capacity of drums will displace 1,762 gallons, reducing the total containment capacity to 7,588 gallons, exceeding the required secondary containment capacity of 3,300 gallons when storing drums at full capacity. Totes are elevated on a steel frame pallet for forklift loading, effectively eliminating displacement. The containment capacity of 9,350 gallons exceeds the secondary containment requirement of 3,960 gallons when storing totes at full capacity. . Secondary containment calculations for HWMU1 are included in Figure 3. Maximum HWMU` storage capacity is illustrated in Figure 4 for drum storage and Figure 5 for tote storage.

The HWMU2 container storage area is a concrete pad approximately 100 feet wide by 85-feet long. Secondary containment is provided by concrete curbs on three sides of the concrete pad, and the pad is sloped from east to west at 1 percent to provide a curb depth of 10.2 inches at the west end of the pad. The storage area is sufficiently designed to store up to 1,100 55-gallon drums (60,500 gallons) or 320 totes (up to 105,600 gallons). Total secondary containment capacity is 27,022 gallons. Storage of the maximum capacity of drums will displace 2,745 gallons, reducing the total containment capacity to 24,270 gallons, exceeding the required secondary containment capacity of 6,500 gallons when storing drums at full capacity. The containment capacity of 27,022 gallons when storing totes on steel pallets exceeds the secondary containment requirement of 10,560 gallons when storing totes at full capacity. Secondary containment calculations for HWMU2 are included in Figure 3. Maximum HWMU` storage capacity is illustrated in Figure 4 for drum storage and Figure 5 for tote storage.

The HWMU3 container storage area is a concrete pad approximately 50 feet wide by 200 feet long. Drums or totes of liquid hazardous waste will be stored on containment pallets engineered to provide adequate secondary containment for the drums or totes within the sump of the pallet. The storage area is sufficiently designed to store 1,512 55-gallon drum equivalents (83,160 gallons) or 252 tote equivalents (83,160 gallons) on secondary containment pallets. The pad itself provides tertiary containment capacity is 18,750 gallons. Tertiary containment calculations are included in Figure 3.

Table 2 summarizes containment capacities for each of the HWMUs when storing drums. Table 3 summarizes containment capacities for each of the HWMUs when storing totes.

4.3 Control of Run-on

The hazardous waste storage and processing activities at the Facility are conducted in contained areas. The Facility is located in a relatively flat area of Yuma County and has been graded to drain to low areas around the perimeter of the site. A perimeter berm has been constructed around the property boundary to prevent off site stormwater from running onto the site or for site stormwater to run off from the site. All HWMUs are constructed above grade to prevent stormwater from running into the containment area. This will mitigate the run-off of hazardous waste from the Facility. General drainage features for the site are shown in Figure 2.

The HWMU1, HWMU2, and HWMU3 storage areas are designed to slope from the front end of the concrete pad to concrete berm at the back of the pad with tapered concrete berms on the sides of the pad to contain stormwater run-off within the pad. Each of the outdoor HWMUs have been constructed above the surrounding grade to eliminate run-on from areas outside the units.

4.4 Removal of Liquids from Containment Systems

Liquids from unanticipated leaks, spills, or precipitation will collect against the containment berm on the south side of HWMU1, the west side of HWMU2 and on the north side of HWMU3. Accumulated liquids in these areas will be removed within one business day of detection by pumps, vacuums, absorbents, or other methods. Stormwater runoff collected from the HWMU surface areas will be analytically tested for hazardous waste characteristics. Runoff that exhibits a toxicity characteristic or exceeds a presumptive contained-in concentration will be profiled for disposal as a hazardous waste. Rainwater with concentrations of constituents in excess of presumptive contained-in thresholds will be presumed to be a listed hazardous waste and profiled for disposal. Rainwater that contains concentrations of compounds below toxicity characteristic levels and below presumptive contained-in thresholds will be profiled for disposal as a non-hazardous solid waste. Additional compound-specific contained-in thresholds may be submitted to ADEQ for consideration as a contained-in quantity on a case-by-case basis.

Recovered liquid wastes from spills and stormwater collected from HWMU containment areas will be placed in containers and reintroduced to the processing schedule. As shown on the site plan in Figure 2, all the containment areas of HWMU1, HWMU2, and HWMU3 are accessible on at least three sides.

Information and data concerning the quantities of liquid recovered from leak, spill, and precipitation events will be recorded in the Facility records data base. Records will include the quantities and types of wastes recovered and the container numbers involved in the incident.

TABLES

Table 1
Examples of Incompatible Wastes

Type A wastes	Type B Wastes	Type A wastes	Type B Wastes
Group 1: Potential consequences from mixing Type A with Type B:	**Heat generation; violent reaction.**	**Group 4: Potential consequences from mixing Type A with Type B:**	**Fire, explosion, or violent reaction.**
Acetylene sludge	Acid sludge	Alcohols	Concentrated 1-A or 1-B wastes
Alkaline caustic liquids	Acid and water	Aldehydes	Group 2-A wastes
Alkaline cleaner	Battery acid	Halogenated hydrocarbons	
Alkaline corrosive liquids	Chemical cleaners	Nitrated hydrocarbons	
Alkaline corrosive battery fluid	Electrolyte, acid	Unsaturated hydrocarbons	
Caustic wastewater	Etching acid liquid or solvent	Other reactive organic compounds and solvents	
Lime sludge and other corrosive alkalies	Pickling liquor and other corrosive acids		
Lime wastewater	Spent acid		
Lime and water	Spent mixed acid		
Spent caustic	Spent sulfuric acid		
Group 2: Potential consequences from mixing Type A with Type B:	**Fire or explosion; generation of flammable hydrogen gas.**	**Group 5: Potential consequences from mixing Type A with Type B:**	**Generation of toxic hydrogen cyanide or hydrogen sulfide gas.**
Aluminum	Any waste in 1-A or 1-B	Spent cyanide and sulfide solutions	Group 1-B wastes
Beryllium			
Calcium		**Group 6: Potential consequences from mixing Type A with Type B:**	**Fire, explosion, or violent reaction.**
Lithium		Chlorates	Acetic acid
Magnesium		Chlorine	Other organic acids
Potassium		Chlorites	Concentrated mineral acids
Sodium		Chromic acid	Group 2-A wastes
Zinc powder		Hypochlorites	Group 4-A wastes
Other reactive metals and metal hydrides		Nitrates	Other flammable and combustible wastes
Group 3 - Potential consequences from mixing Type A with Type B:	**Fire, explosion, or heat, flammable/toxic gas generation.**	Nitric acid, fuming	
Alcohols	Any concentrated waste in 1-A or 1-B	Perchlorates	
Water	Calcium, lithium, potassium	Permanganates	
	Metal hydrides	Peroxides	
	SO_2 Cl_2, $SOCl_2$, PCl_3, CH_3 $SiCl_3$	Other strong oxidizers	
	Other water-reactive waste		

Table 2
HWMU Storage Capacity (Drums)

HWMU Capacities	**HWMU1[1]**	**HWMU2**	**HWMU3[2]**
Area (square feet)	5,000	8,500	10,000
Drum stacks (2 drums/stack)	300	550	NA
Pallets (4 drums/pallet)	NA	NA	189
Estimated storage capacity (Drum-equivalent)	600	1,100	1,512
Estimated storage capacity (gallons)	33,000	60,500	83,160
Required spill containment (10%) (gallons)	3,300	6,050	8,316
Total containment (cubic feet)	1,250	3,613	2,500
Total containment (gallons)	9,350	27,022	18,700
Maximum displacement area (square feet)[3]	942	1,727	1,578
Average displacement depth (feet)	0.25	0.21	0.25
Maximum displacement (cubic feet)	236	367	395
Maximum displacement (gallons)	1,762	2,745	2,951
Effective containment capacity (gallons)	7,588	24,276	15,749
Required Containment w/displacement (gallons)	5,062	8,795	11,267
Capacity for precipitation (gallons)	4,288	18,226	7,433
Capacity for precipitaton (inches)	5.50	3.44	1.19

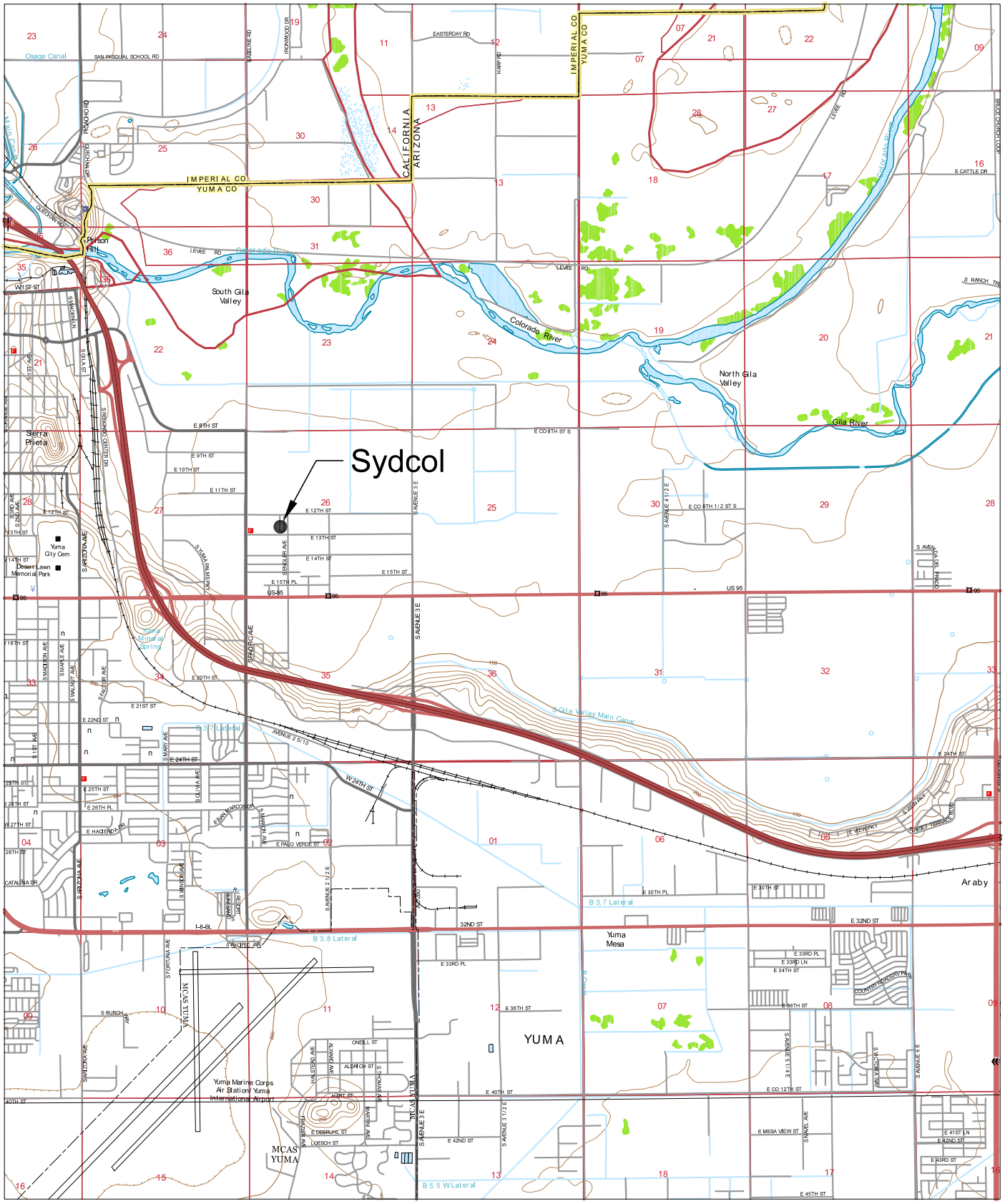
Notes:
NA: Not applicable
1: HWMU1 is 75% covered from shade structure. One-quarter of area subject to precipitation.
2: Secondary containment for HWMU3 is provided by pallet structures. Containment values shown are tertiary containment capacities.
3: Assume displacement area of drum = 3.14 square feet, pallet = 8.35 square feet.

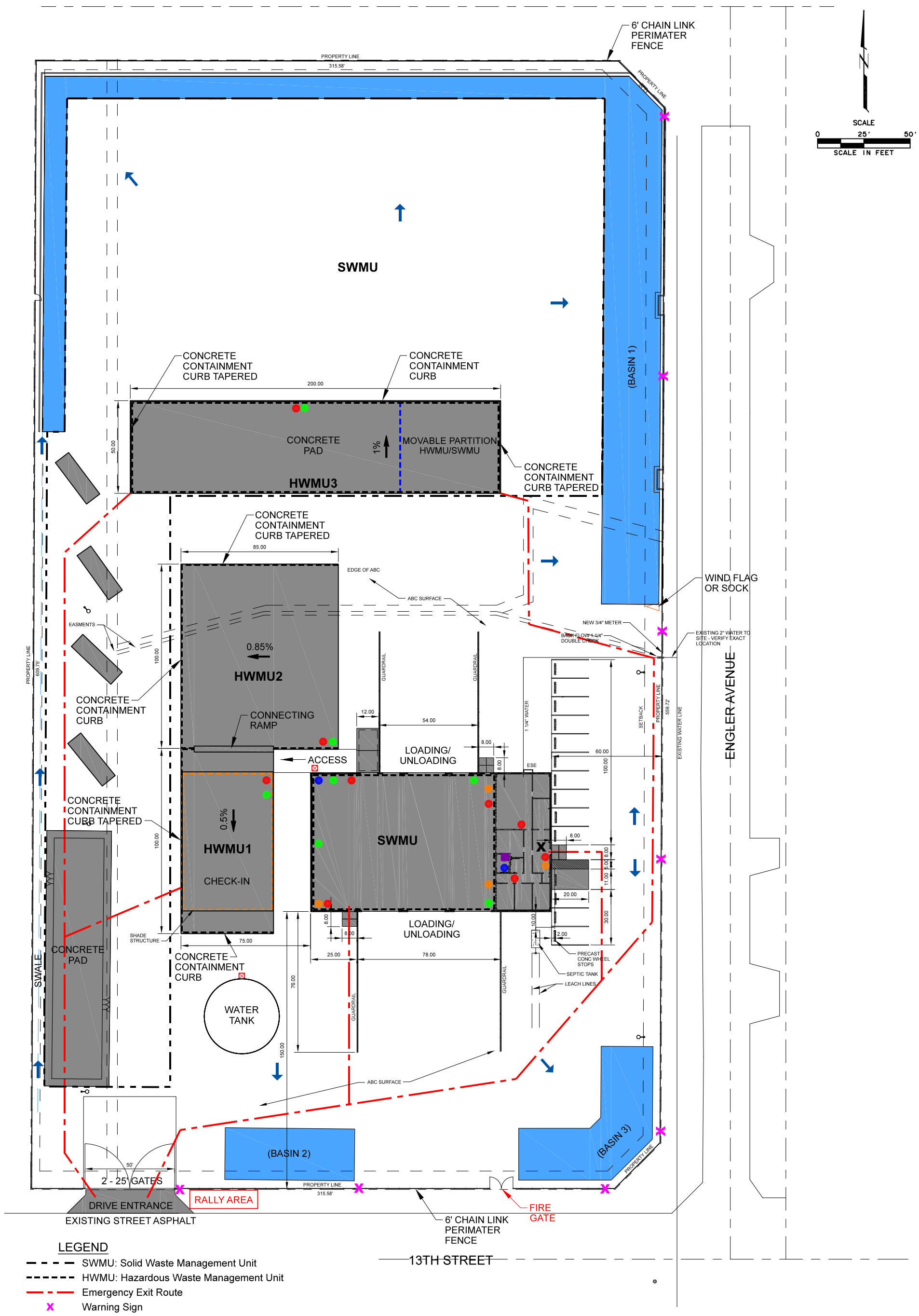
Table 3
HWMU Storage Capacity (Totes)

HWMU Capacities	**HWMU1[1]**	**HWMU2**	**HWMU3[2]**
Area (square feet)	5,000	8,500	10,000
Tote stacks (2 totes/stack)	90	160	NA
Pallets (2 totes/pallet)	NA	NA	126
Estimated storage capacity (Tote-equivalent)	180	320	252
Estimated storage capacity (gallons)	59,400	105,600	83,160
Required spill containment (10%) (gallons)	5,940	10,560	8,316
Total containment (cubic feet)	1,250	3,613	2,500
Total containment (gallons)	9,350	27,022	18,700
Maximum displacement area (square feet)[3]	1,200	2,133	3,363
Average displacement depth (feet)	0.25	0.21	0.25
Maximum displacement (cubic feet)	300	453	841
Maximum displacement (gallons)	2,243	3,390	6,289
Effective containment capacity (gallons)	7,107	23,631	12,411
Required Containment w/displacement (gallons)	8,183	13,950	14,605
Capacity for precipitation (gallons)	1,167	13,071	4,095
Capacity for precipitaton (inches)	1.50	2.47	0.66

Notes:
NA: Not applicable
1: HWMU1 is 75% covered from shade structure. One-quarter of area subject to precipitation.
2: Secondary containment for HWMU3 is provided by pallet structures. Containment values shown are tertiary containment capacities.
3: Assume displacement area of tote = 0.0 square feet, pallet = 26.69 square feet.

FIGURES


Sydcol
IMPERIAL CO
YUMA CO
CALIFORNIA
ARIZONA
Colorado River
Gila River
South Gila Valley
North Gila Valley
Sierra Prieta
Yuma City Cem
Desert Lawn Memorial Park
Yuma Mineral Spring
S Gila Valley Main Canal
B 3.7 Lateral
B 3.8 Lateral
B 5.5 W Lateral
Yuma Mesa
YUMA
Araby
Yuma Marine Corps Air Station/Yuma International Airport
MCAS YUMA
US 95
I-8-BL
E 8TH ST
E 9TH ST
E 10TH ST
E 11TH ST
E 12TH ST
E 13TH ST
E 14TH ST
E 15TH ST
E 20TH ST
E 24TH ST
W 24TH ST
32ND ST
E 40TH ST
E 42ND ST
E 45TH ST
E CO 8TH ST S
E CO 8TH 1/2 ST S
E CO 12TH ST
S AVENUE 3 E
S AVENUE 2 1/2 E
S AVENUE 3 1/2 E
S AVENUE 5 1/2 E
S AVENUE 1 E
S ARIZONA AVE
S MAIN ST
S GILA ST
S FORTUNA AVE
S MARY AVE
S COLMA AVE
S MCKEEN AVE
S MAPLE AVE
S WALNUT AVE
S PACIFIC AVE
S SENDER AVE
S MCLEAN AVE
S MCCAS YUMA
S MCTOWNSEND AVE
S MCTOWNSEND PL
S MCTOWNSEND LN
S MCTOWNSEND WAY
S MCTOWNSEND CT
S MCTOWNSEND TER
S MCTOWNSEND RD
S MCTOWNSEND PKWY
S MCTOWNSEND BLVD



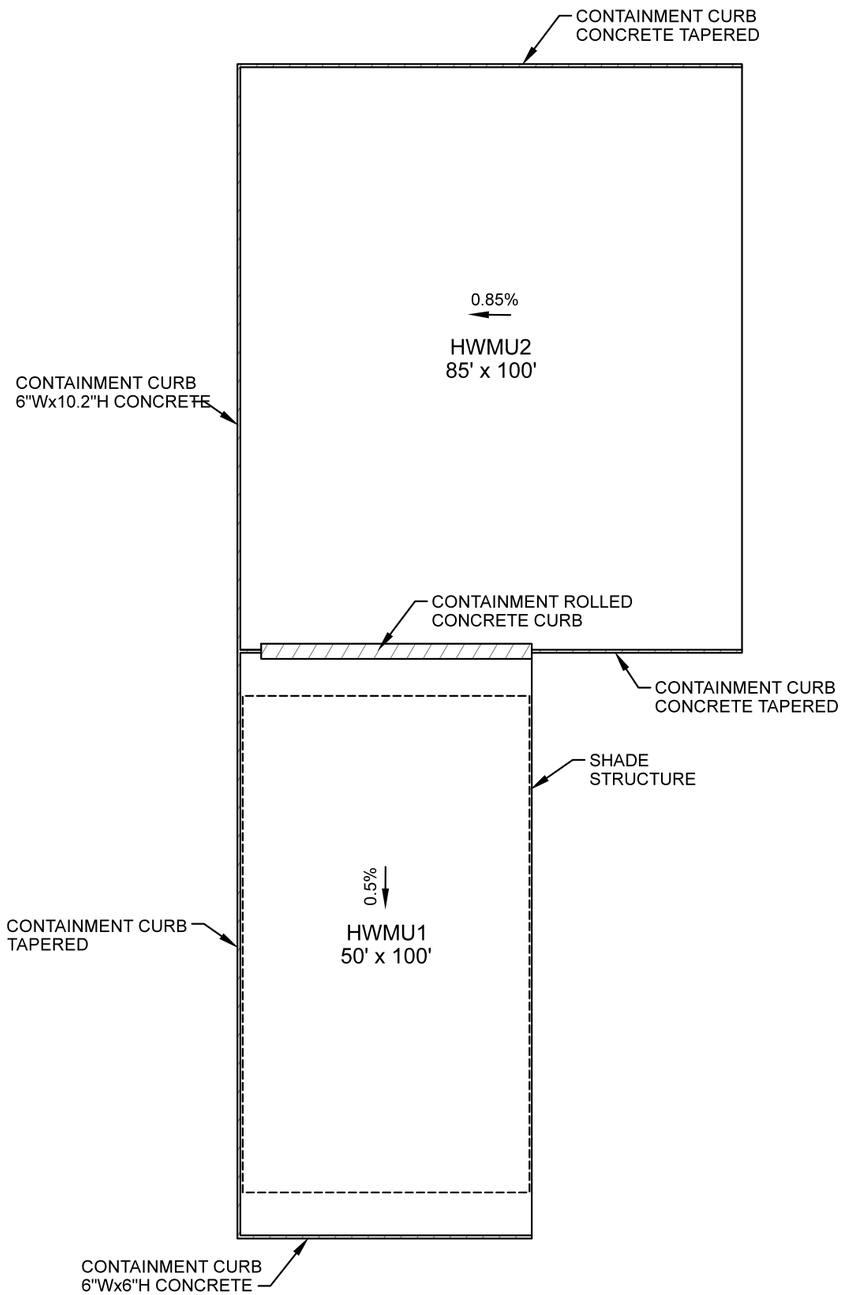
LEGEND

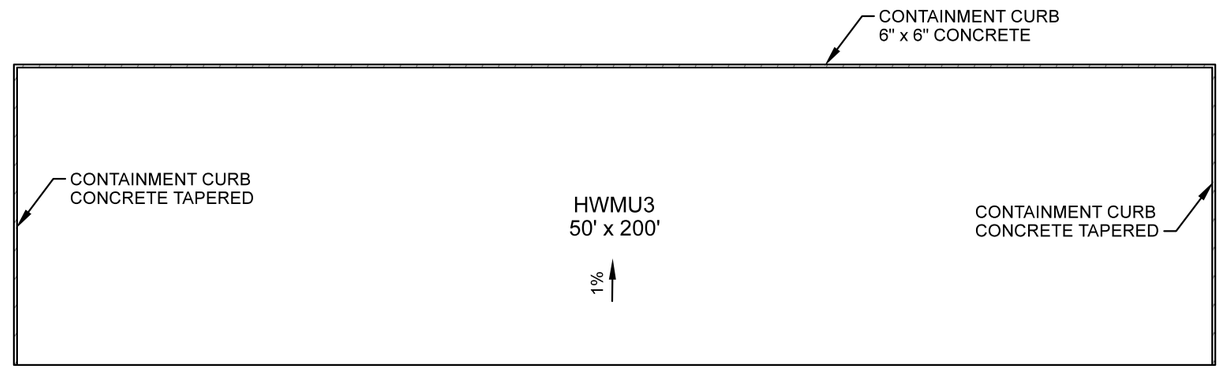
- SWMU: Solid Waste Management Unit
- HWMU: Hazardous Waste Management Unit
- Emergency Exit Route
- Warning Sign
- Spill Kit
- Fire Alarm
- Fire Extinguisher (ABC)
- Eyewash
- Shower
- Facility Report
- Fire Hose Connection
- Concrete Surface
- Drainage Direction
- Drainage Basin

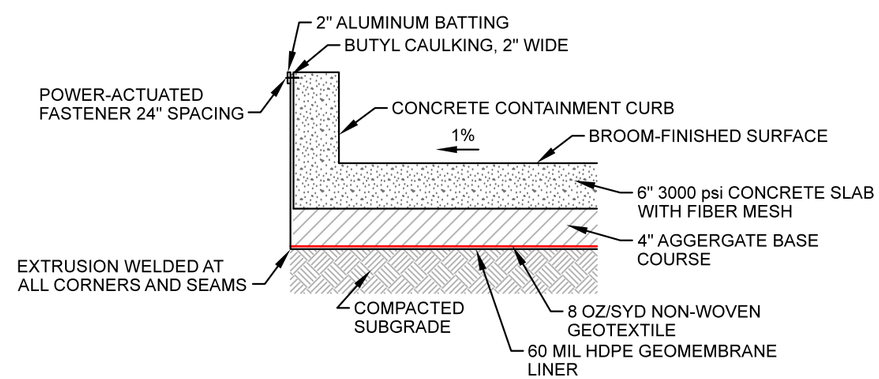
Figure 2
SITE PLAN
Sydcol
2264 E. 13th St.,Yuma, AZ 85365

CLIENT:	APPROVED BY: JGP
PROJECT:	PROJECT NO:
DESIGNED BY: JGP	DATE: 11/5/21
DRAWN BY: TML	DWG/FILE: SYDCOL02
REVISION:	

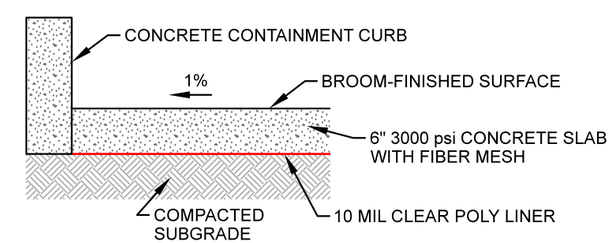
JGP Consulting, PLC
Environmental Compliance Services







HWMU1 and HWMU2 DETAIL



HWMU3 DETAIL

Secondary Containment Volumes

HWMU1 = 0.5' x 50' x 100'/2 = 1,250 cft = 9,350 gallons

HWMU2 = 0.85' x 85' x 100'/2 = 3,613 cft = 27,022 gallons

Tertiary Containment Volumes

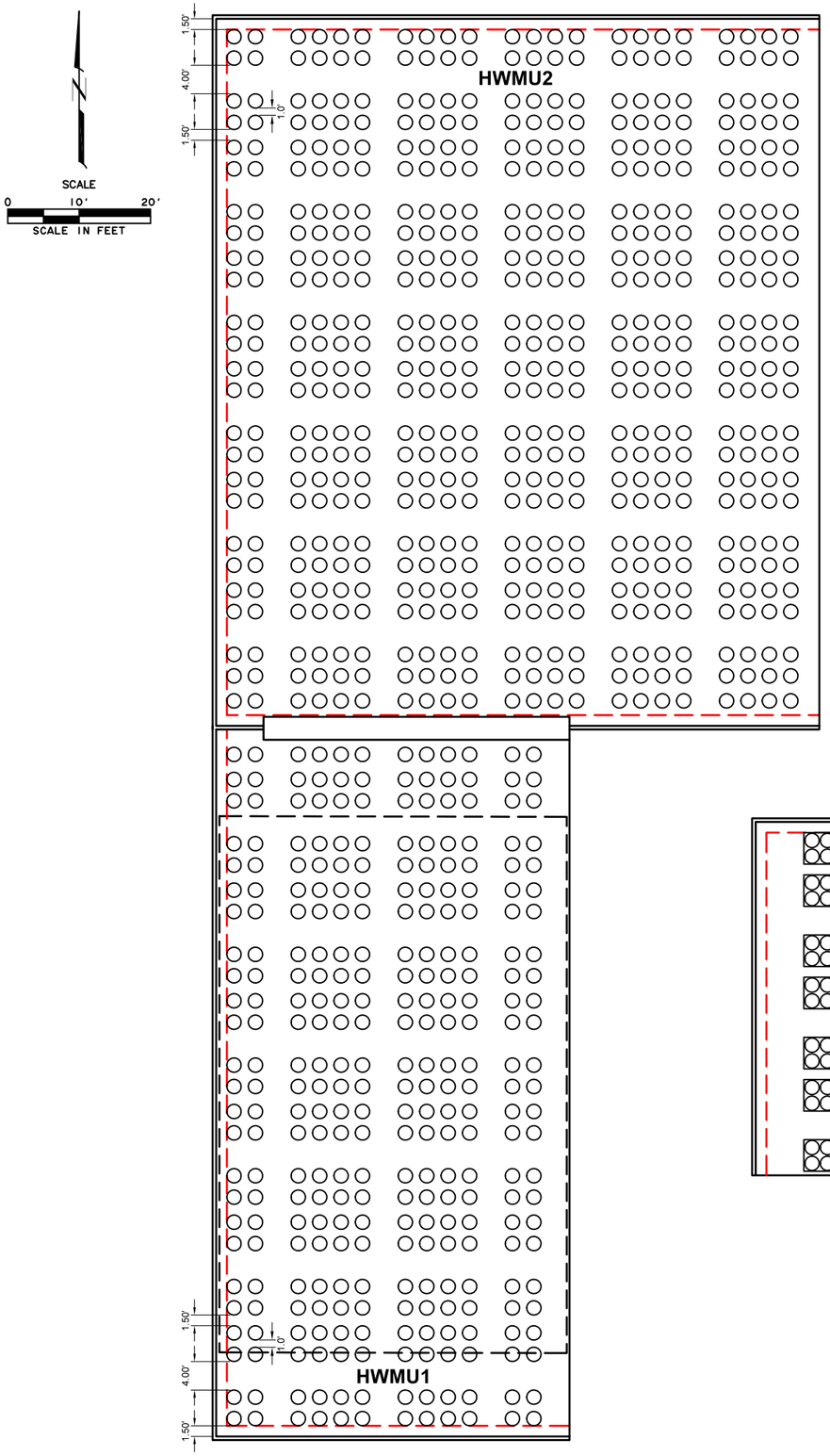
HWMU3 = 0.5' x 200' x 50'/2 = 2,500 cft = 18,700 gallons

Figure 3
CONTAINMENT
Sydcol
2264 E. 13th St.,Yuma, AZ 85365

CLIENT:	APPROVED BY: JGP
PROJECT:	PROJECT NO:
DESIGNED BY: JGP	DATE: 6/24/21
DRAWN BY: TML	DWG/FILE: JGP-SYDCOL09
REVISION:	

JGP Consulting, PLC

Environmental Compliance Services



HWMU Drum Capacity Calculations:			
HWMU	Drum Stacks (2 drums/stack)	Pallets (4 drums/pallets)	Drum - equivalents
1	300	-	600
2	550	-	1100
3	-	189	1512

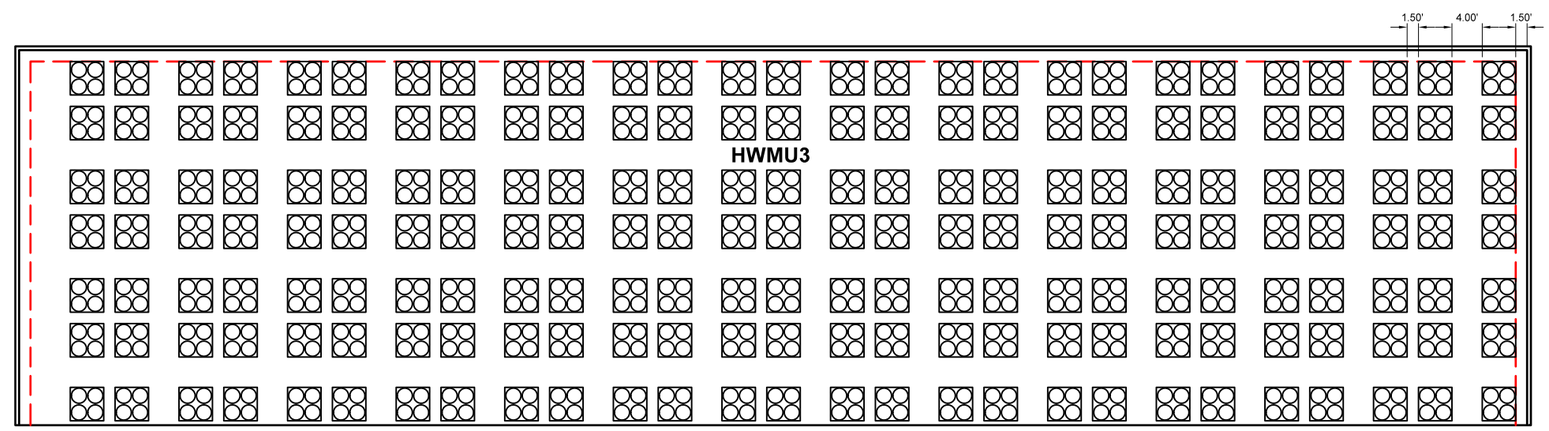
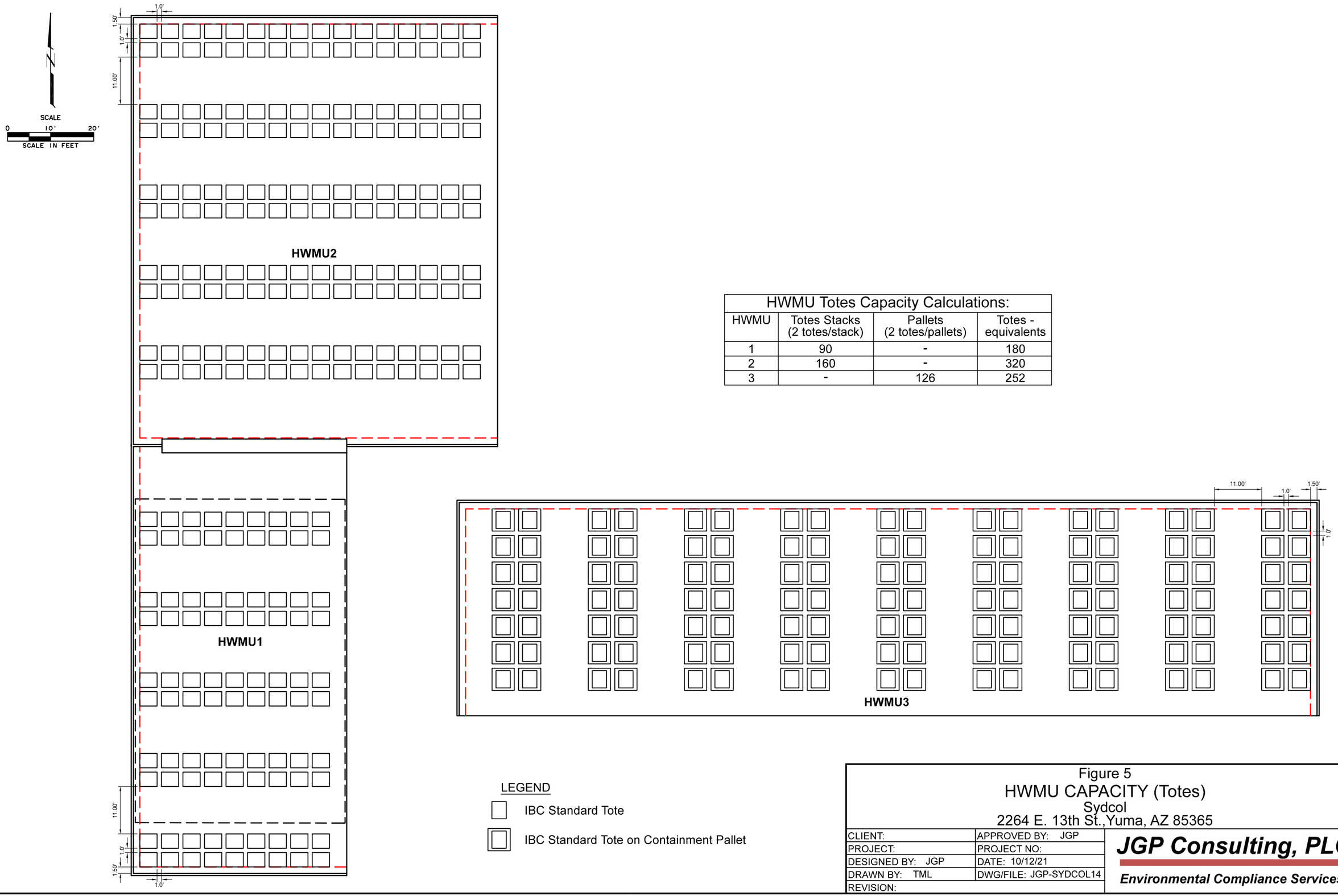


Figure 4
HWMU CAPACITY (Drums)
Sydcol
2264 E. 13th St.,Yuma, AZ 85365

CLIENT:	APPROVED BY: JGP
PROJECT:	PROJECT NO:
DESIGNED BY: JGP	DATE: 10/12/21
DRAWN BY: TML	DWG/FILE: JGP-SYDCOL13
REVISION:	

JGP Consulting, PLC
Environmental Compliance Services



HWMU Totes Capacity Calculations:			
HWMU	Totes Stacks (2 totes/stack)	Pallets (2 totes/pallets)	Totes - equivalents
1	90	-	180
2	160	-	320
3	-	126	252

LEGEND

IBC Standard Tote

IBC Standard Tote on Containment Pallet

Figure 5
HWMU CAPACITY (Totes)
Sydcol
2264 E. 13th St.,Yuma, AZ 85365

CLIENT:	APPROVED BY: JGP
PROJECT:	PROJECT NO:
DESIGNED BY: JGP	DATE: 10/12/21
DRAWN BY: TML	DWG/FILE: JGP-SYDCOL14
REVISION:	

JGP Consulting, PLC

Environmental Compliance Services

APPENDIX A

CONTAINER LABEL

Appendix A

Container Label

CONTAINER ID#:	020719339-1 (3/10)
Date of Arrival:	2-1-2021
Hazard Class:	3
HWMU #:	1

Note: First 9 digits is the manifest #. "-1" is the manifest line item #, "3" is the third drum of "10" total drums in this particular manifest line item number.

APPENDIX B

EXAMPLE CHECK-IN SHEET

AA SYDCOL, LLC

CHECK-IN SHEET

Generator:	**Manifest №:**
Bill to:	**Line item №:**
Profile №:	**№ of containers:**
Waste desc:	**Date received:**
	Management Method:
Special instructions:	
	HWMU No.:

CONTAINER № QTY.	CONTAINER SIZE	CONTAINER TYPE	SOLID	LIQUID	MIXED	SAMPLE TAKEN	PRICE	DATE	ENTIRE	DATE	PARTIAL
TOTALS			S	L	M				“E”		“P’

MATERIALS MANAGEMENT SHEET 1 OF _____ jremitio@cox.net