Part II.B. Containers

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Part II.B. Containers

Attach the requirement of either a. or b.

a. *Demonstrate compliance with 264.175(c) by attaching:*

(1) Test procedures and results or other documentation or information to show that the wastes do not contain free liquids; and

(2) A description of how the storage area is designed or operated to drain and remove liquids or how containers are kept from contact with standing liquids.

The container storage unit at the Triumvirate Environmental Services, Inc. facility stores wastes containing free liquids. Therefore, this application does not address item a. shown above.

The application continues with paragraph b. on the next page.

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II.B.1 SECONDARY CONTAINMENT SYSTEM

b. Demonstrate compliance with 264.175(b) by attaching a description of the containment system which includes: Basic design parameters, dimensions, and materials of construction;

The floor surface level of the container storage unit is four feet above the natural ground level. The base that supports the floor consists of fill material compacted in accordance with appropriate engineering practices. Side walls surround the fill material to keep it in place. The floor of the unit consists of a 6-inch reinforced concrete slab, free of cracks, having adequate strength to support the static and dynamic loads to which it is subjected.

The storage unit area is of rectangular shape, 87 feet long along the west side and 60 feet long on the north and south sides. The east side of the area is 90 feet long. This side is longer than the west side because there is a concrete block wall (minimally rated as a two hour fire wall) along the west half section of the north wall which was built 3 feet inside the unit and isolates the north building from the container storage unit. An office is located on the southeast corner that occupies a 20.75-foot section along the east side and a 17.66-foot section of the south side of the unit area. Figures 1 D 1 and 1 D 1a have been included as references and are for informational purposes to show the containments described in this section. The figures are for information purposes only and they are not to scale.

The unit floor has several roll-over berms and curbs designed to segregate wastes of different types stored in containers in the unit. Roll-over berms allow forklift access to the cells to deposit and withdraw drums on pallets. Curbs separate the secondary containment systems of contiguous cells. The roll-over berms were formed and poured over sections of the floor cut out of the slab. Two 3.5-inch high and 5-feet-wide roll-over berms are provided in the container storage unit. A 72.25-foot-long berm is located along the east side. The other berm is 42.33 feet long located along the south wall. Curbs 3.5 inches high and 8 inches wide were built of concrete poured over reinforcement rods secured to the floor by pins screwed into the concrete slab. There are five curbs separating six cells along the south wall of the unit and nine curbs along the east wall. A bonding agent was applied to the floor before the concrete was poured to increase adherence and prevent the formation of a gap between the floor and the bottom of the curb. Figure I D Ia shows the location of roll-over berms and curbs in the container storage unit area.

A protective coating resistant to solvents and corrosive liquids was applied to the floor surface of the container storage unit. The thickness and the quality of the coating material not only makes the floor sufficiently impervious to contain leaks, but also protects the floor material from attack by aggressive chemicals and from wear caused by equipment traffic over the area. Product specification for the coating material is

included in Exhibit II.B.1.-1, the MSDS for 1-Part Epoxy Concrete & Garage Floor Paint Slate Gray. The facility may use other materials that provide similar results.

(2) *How the design promotes drainage or how containers are kept from contact with standing liquids in the containment system;*

Secondary containment systems in the container storage unit are located over a floor that is not sloped. The facility stores in the unit waste in containers that are placed on pallets, which keep the containers from contacting any standing liquids.

(3) *Capacity of the containment system relative to the number and volume of containers to be stored;*

In accordance with 40 CFR 264.175(b)(3), the containment system must have sufficient capacity to contain 10% of the volume of the containers stored in the cell. A number of containers in the cell may have little or no liquid; however, for the purpose of this application, it is assumed that 100% of the containers contain 100% liquid waste material.

The container storage unit stores a maximum number of 824 —55-gallon drums, or equivalent, in three sub-units. The south sub-unit is located along the south wall of the unit and consists of six separate cells, each capable of storing up to 24 —55-gallon drums or equivalent. The east sub-unit holds 240 —55-gallon drums, or equivalent, in nine cells located along the east wall of the unit, and the northwest sub-unit stores 440 —55-gallon drums in the northwest corner of the unit in one large cell. The northwest sub-unit is provided with a secondary containment system that occupies the rest of the area of the container storage unit to the north of the south sub-unit and to the west of the east sub-unit. The fire wall, the office walls, and the wall on the south side of the unit are made entirely of concrete block. The rest of the walls of the unit are made of sheet metal, but there is a continuous concrete curb four inches high running along the inside of these walls. The concrete block walls and the concrete curb along the sheet metal walls complete the secondary containment walls for some of the cells.

Containment Volume 1

As shown in Figure I D 1a, six cells are located along the south wall of the unit (the south sub-unit). The secondary containment systems having two widths; the width of the cell at the west end is 87 inches while the rest are 74 inches wide. All six cells have the same length and depth. Since every cell stores the same volume of waste, containment volume calculation is needed only for the cells having the shortest width (74 inches).

Width: 74" (6.166'), Minimum height of roll-over berms and curbs: 3.5" (0.292')
Length: 158" (13.166')

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Wall to floor/roll-over berm intersect length: 158" (13.166'), Half roll-over berm width: 30" (2.5')

13.166' x 6.166' x 0.292' = 23.70 cu. ft.
2.5' x 6.166' x 0.292'/2 = 2.25 cu. ft.
Volume of Containment without pallets =25.95 cu. ft. x 7.48 gal/cu. ft. = 194.11 gal.
Volume Displacement of 3 Pallets: 3 x 5.40 gal/pallet = 16.20 gal. Volume of Containment with Pallets: = 177.91 gal.

Cell Maximum Storage Capacity: 24 x 55 gal/drum = 1,320 gal Minimum

Required Containment Volume: 1,320 gal x 0.1 = 132 gal

The volume of the secondary containment (177.91 gallons) is greater than 10% of the maximum storage capacity (132 gallons).

Containment Volumes 2 and 2a

The east container storage area has nine cells along the east wall of the unit (the east sub-unit) featuring secondary containment systems with three different widths; the cell at the north end is 208 inches wide; the cell at the south end is 80 inches wide; and the remaining cells are 64 inches wide. All nine cells have the same length and depth. The eight southern-most cells each store the same volume of waste. The cell at the south end is 80 inches wide, and the seven cells to the north each have a 64-inch width. Therefore, calculations demonstrating that the 64-inch-wide cells meet the 10% secondary containment volume requirement also demonstrate that the cell 80 inches wide complies with the same requirement. The containment volume calculation is also needed for the cell at the north end that is 208 inches wide and stores twice as much as the other eight cells.

Containment Volume 2

Width: 64" (5.333'), Minimum height of roll-over berms and curbs: 3.5" (0.292') Length: 152" (12.666')
Wall to floor/roll-over berm intersect length: 152" (12.666'), Half roll-over berm width: 30" (2.5')

12.666' x 5.333' x 0.292' = 19.72 cu. ft.
2.5' x 5.333' x 0.292'/2 = 2.25 cu. ft.
Volume of Containment without pallets =21.97 cu. ft. x 7.48 gal/cu. ft. =164.36 gal.
Volume Displacement of 3 Pallets: 3 x 5.40 gal/pallet = 16.20 gal Volume of Containment with Pallets: = 148.16 gal.

Cell Maximum Storage Capacity: 24 x 55 gal/drum = 1,320 gal

Part II.B. Containers

Minimum Required Containment Volume: 1,320 gal x 0.1 = 132 gal

The volume of the secondary containment (148.16 gallons) is greater than 10% of the maximum storage capacity (132 gallons).

Containment Volume

Width: 208" (17.333'), Minimum height of roll-over berms and curbs: 3.5" (0.292';
Length: 152" (12.666')
Wall to floor/roll-over berm intersect length: 152" (12.666'), Half roll-over berm width: 30" (2.5')

12.666' x 17.333' x 0.292' = 64.10 cu. ft.
2.5' x 17.333' x 0.292'/2 = 6.33 cu. ft.
Volume of Containment without pallets = 70.43 cu. ft. x 7.48 gal/cu. ft. = 526.82 gal.
Volume Displacement of 6 Pallets: 6 x 5.40 gal/pallet = 32.40 gal. Volume of Containment with Pallets: = 494.42 gal.

Cell Maximum Storage Capacity: 48 x 55 gal/drum = 2,640 gal Minimum

Required Containment Capacity: 2,640 gal x 0.1 = 264 gal

The volume of the secondary containment (494.42 gallons) is greater than 10% of the maximum storage capacity (264 gallons).

Containment Volume 3

The area occupied by the large cell located in the northwest corner (the northwest sub-unit) of the unit is bordered by the wall of the unit at the west, a roll-over berm on the south side, a section of the wall of the office, and a roll-over berm at the east and the north wall of the unit, including the concrete block wall (minimally rated as a 2 hour fire wall) along the north side. Figure I D 1a shows the area. To simplify the calculation of the containment volume, it is assumed that the cell ends where the floor meets the roll-over berms entering the south and east containment cells.

Area of the Container Storage Unit: 1,116" x 720" = +803,520 sq. in.
Area Occupied by Fire Wall: 368" x 36" = -13,248 sq. in.
Area Occupied by South Sub-Unit: (158" + 60") x 508" = -110,744 sq. in.
Area Occupied by Office: 212" x 249" = -52,788 sq. in.
Area Occupied by East Sub-Unit: (152" + 60") x 867" = -183,804 sq. in.
Area Occupied by Northeast Sub-Unit: 442,936 sq. in.
Minimum Height of Roll-Over Berms and Curbs: 3.5"
Volume of Containment Without Pallets: 1,550,276 cu. in.
(1,550,276 cu in./1,728 cu. in. per cu. ft.) x 7.48 gal per cu. ft. = 6,711 gallons

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Volume Displacement of 55 Pallets: 55 x 5.4 gal/pallet = 297.00 gallons

Volume of Containment with Pallets: = 6,413 gallons

Cell Max. Storage Capacity: 440 x 55 gal/drum = 24,200 gal

Minimum Required Containment Capacity: 24,200 gal x 0.1 = 2,420 gal

The volume of the secondary containment (6,413 gallons) is greater than 10% of the maximum storage capacity (2,420 gallons).

Containment Volume 4

This containment represents the Stabilization and Consolidation Area is identified in figure II.A.5. The northeast corner of the unit is 25' (300") by 22' (264"). The other part of the area is 75' (900") by 30' (360"). Both areas are surrounded by roll-over berm and curb that is, at least, 3.5" high.

Area of the northeast corner: 300" x 264" = 79,200 square inches
Cubic inches of the northeast corner: 79,200" x 3.5" = 277,200 cubic inches

Area of the rest of the unit: 360" x 900" = 324,000 square inches
Cubic inches of the rest of the unit: 324,000" x 3.5" = 1,134,000 cubic inches

Total cubic inches: 1,134,000 + 277,200 = 1,411,200 square inches

Total volume in gallons: 1,373,400 cubic inches x 0.004329(cubic inches to gallons conversation factor) = 6,109.08 gallons

(4) Provisions for preventing or managing run-on; and

The floor surface of the container storage unit is four feet above natural ground level.

(5) How accumulated liquids can be analyzed and removed to prevent overflow.

Liquids spilled in any cell of the unit will spread onto the cell area, and, depending on the amount of waste spilled, the level may rise above the floor surface or will only wet the area where it spreads. The selection of sampling methods that may be used to collect samples from spills occurring in a cell depends on the nature and the media of the waste spilled. Collection of samples from spills in the container storage unit does not necessarily constitute a problem.

Removal of standing liquids in a container storage cell may be accomplished with the use of absorbent materials and/or pumps driven by air or hand. Solid materials

will be removed manually. There is adequate space around the cells to operate equipment necessary to remove spilled waste. Since the height of the roll-over berms and curbs providing secondary containment for the cells is smaller than the height of the walls and curbs that surround the unit, a spill overflowing a cell will be contained by the secondary containment of the adjacent cells and will not overflow the unit until the secondary containment system for every cell is overflowed.

Part II.B. Containers

II.B.2 IGNITABLES AND INCOMPATIBLES

2. *Attach sketches, drawings, or data demonstrating compliance with 264.176 (Special requirements for ignitable or reactive wastes) and 264.177 (Special requirements for incompatible wastes) where applicable.*

The entire perimeter of the container storage unit is located at least 15 meters from the facility's property line (II.A.5). Consequently, wastes stored in the unit are also located beyond the required property line set-back distance.

Wastes accepted at Triumvirate Environmental Services, Inc. are stored, consolidated, repacked, or treated. All storage is in containers, including waste managed through the 10-day transfer area. Consolidation consists of pouring containers together into shippable drums. Re-packaging consists of removing inner containers from outer containers and placing them in appropriate containers for outbound shipments. Treatment consists of stabilization of wastes in roll-off boxes with cement or other suitable material approved by The Department. Containers containing RCRA metals (D004-D008, D010-D011), may be stabilized using cement or other suitable material approved by the department. An example would be lead contaminated sandblast grit. Procedures to prevent incompatible wastes from being consolidated in the same container are described in the Waste Analysis Plan and the Waste Compatibility and Test Manual.

Containers used to consolidate waste are usually new or reconditioned. When a used drum is utilized to accumulate waste, waste previously held in the drum is removed. Hazardous waste will not be placed in an unwashed container that previously held an incompatible waste or materials (40 CFR 264.177(b)).

The facility stores incompatible wastes in cells that are separated by berms and curbs. A separation of at least two feet is provided between rows of pallets located inside two adjacent cells. Berms and curbs provide a physical barrier that prevents leakage from the drums in a cell from reaching other cell areas. Wastes stored in one cell belong to one hazard class or group of compatible hazard classes. A more extensive description of the method used by the facility to maintain incompatible waste separation is included in the next section.

Part II.B. Containers

II.B.3 SEGREGATION AND SEPARATION

3. *Where incompatible wastes are stored or otherwise managed in containers, attach a description of the procedures used to ensure compliance with 264.177(a) and (b) (Special requirements for incompatible wastes) and 264.17(b) and (c) (General requirements for ignitable, reactive, or incompatible waste)*

The facility stores incompatible wastes in containers in the container storage unit and consolidates some of these wastes in containers in two areas of the facility. When incompatible wastes are stored in the container storage unit, the facility follows a system designed to keep incompatible wastes apart. Consolidation operations include procedures designed to screen and test wastes to prevent the consolidation of incompatible wastes in the same container. This section discusses the systems used by the facility for storing containers and consolidating waste in a safe manner in accordance with the requirements of 40 CFR 264.177(a) and (b), as well as 40 CFR 264.17(b) and (c). Storage and consolidation operations and solidification/stabilization operations are addressed separately.

THE CONTAINER STORAGE UNIT

This unit stores hazardous waste in drums placed on pallets. Pallets holding up to four 55-gallon drums each are, at the most, double-stacked and arranged in rows. Every cell is designated with the compatible hazard classes of wastes stored in it. The designated classes for each cell are based on a compatibility system established by the Department of Transportation (DOT). DOT regulations require the use of this system to control hazardous materials during the course of transportation. Triumvirate Environmental Services, Inc. has decided to utilize this system described by 49 CFR 177.848, Segregation of Hazardous Materials, because the system is easy to understand, use, and communicate.

The DOT segregation system uses a chart to identify materials that may be stored together based on the hazard class assigned to each material. Triumvirate Environmental Services, Inc. gives careful consideration to the assignment of the hazard class to waste materials during the approval process. The chart shown in Table II.A.4.b.-2 is a modified copy of the DOT chart. The chart shown in this section deletes hazard classes that are not accepted at the facility (divisions 1.1 through 1.6 - explosives, and class 7 - radioactive). 'Where the chart indicates "x" at the intersection of a hazardous class row and column, these hazard classes will not be stored in the same cell. Where the chart indicates "o" at the intersection of a hazard class and column, these hazard classes may be stored in the same cell with certain restrictions (e.g., a lab pack containing hazardous class 5.2 material can be stored in the same cell with a container of hazard class 8 corrosive liquids).

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Table II.I.A.4.b.-2

Segregation Table for Hazardous Material

Class or Division	2.1	2.2	2.3 gas	2.3 gas	3	4.1	4.2	4.3	5.1	5.2	6.1 liquids PG I Zone A	8 liquids only	9 H.S
Flammable gases 2.1			X	0							0	0	
Non-toxic, non-flammable gases 2.2													
Poisonous gas Zone A..... 2.3	X				X	X	X	X	X	X		X	
Poisonous gas Zone B..... 2.3	0				0	0	0	0	0	0		0	
Flammable liquids..... 3.			X	0					0		X		
Flammable solids 4.1			X	0							X	0	
Spontaneously combustible materials 4.2			X	0							X	X	
Dangerous when wet materials 4.3			X	0							X	0	
Oxidizers..... 5.1			X	0	0						X	0	
Organic peroxides..... 5.2			X	0							X	0	
Poisonous liquids PG 1 Zone A 6.1	0				X	X	X	X	X	X		X	
Corrosive liquids 8			X	0		0	X	0	0	0	X		
Hazardous substances..... 9													

Note: Codes X and 0 indicate prohibitions and restrictions as noted below.

- An "X" in the table indicates that these materials may not be loaded, transported, or stored together.

- An "0" indicates that these materials may not be transported or stored together unless separated in such a way that, in the event or leakage from packages under normal transportation conditions, the hazardous materials could not commingle. Regardless of the methods of separation employed, Class 8 (corrosive) liquid materials may not be loaded above Class 4 (flammable solid) materials or Class 5 (oxidizing) materials.

- Cyanides or cyanide mixtures must not be loaded or stored with acids or acidic materials. The reaction of cyanides with acids releases deadly hydrogen cyanide gas.

- When the 172.101 Table or 49 CFR 172.402 requires a package to bear a subsidiary hazard label, segregation appropriate to the subsidiary hazard must be applied when that segregation is more restrictive than that required by the primary hazard. However, hazardous materials of the same class may be stored together without regard to segregation required for any secondary hazard if the materials are not capable of reacting dangerously with each other and causing combustion or dangerous evolution of heat; evolution of

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flammable, poisonous, or asphyxiate gases; or formation of corrosive or unstable materials.

When containers arrive at the facility, the drums are removed from the transportation vehicle and arranged in a row for testing and/or inspection, depending on whether the waste is to be accepted at the facility. During the inspection, facility operators review and verify that the hazard class displayed on the hazardous waste label on every container is correct by comparing it to the electronic tracking system which prints bar-code labels for all waste that is terminated at the facility. The electronic tracking system is a system that tracks every inbound and outbound manifests to Triumvirate Environmental Services, Inc. Upon review of the hazard class and shipping label the drum is transferred to the appropriate cell in accordance with the DOT segregation system.

Flammable liquids that are classified by the National Fire Protection Association NFPA 30 as Class IA are accepted in containers that do not exceed 55 gallons. Table II.A.4.b.-2 indicates that wastes having divisions 2.1 (flammable gases) and 4.1 (flammable solids) and class 9 may be stored in the same cell with class 3 wastes because these wastes are compatible with each other. Spontaneously combustible wastes (division 4.2) are stored in small quantities, mainly inside lab pack containers. Waste in Division 4.3 Dangerous When Wet will be stored in a special cabinet such as a "hazmat storage locker." This cabinet is designed to protect wastes from water in the event of sprinkler activation, fire hose or other problem involving water. This cabinet is equipped with a dry chemical suppression system. It will hold four 55-gallon drums and may be placed in the northernmost cell in the east container storage area or other convenient location. It has a containment capacity of 72 gallons. A sketch of the "hazmat storage locker" is provided as Exhibit II.B.1.2. Organic peroxides (5.2) accepted by Triumvirate Environmental Services, Inc. for management is considered safe to handle. These peroxides are stored in the unit in small amounts usually as part of lab packs. The Waste Analysis Plan details the acceptance of organic peroxides. Oxidizing waste materials (5.1) may be accepted by the facility. The 5.1 materials are generally stored separately from wastes containing a significant proportion of organic constituents. Oxidizers (5.1) and organic peroxides (5.2) are compatible with each other.

When solid (non-hazardous) wastes are stored in the container storage unit, they will be clearly marked so they will not be confused with hazardous waste. There is no permanently designated separate storage area for solid wastes. When non-hazardous solid wastes are stored within the container storage unit, their volumes will be counted toward the total capacity of permitted hazardous waste.

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Currently Triumvirate Environmental Services, Inc. does not store flammable wastes in the container storage unit. Flammables may be stored contingent upon NFPA upgrades and The Department approval of those upgrades. To minimize the potential for fire in the container storage unit, equipment, and tools used in this area are operated, constructed, and designed in a manner to prevent the generation of sparks. There are no electric motors used in this unit except for the ones used to drive fans and blowers, which also meet the standards for explosion-proof electrical equipment. Forklifts used inside the container storage unit are propelled by internal combustion engines that run on propane gas, which eliminates the possibility of sparks through the tail pipe. Tools used to open drums in this area are made of materials that do not produce sparks upon impact or friction with hard or metal surfaces. Other equipment, such as drills, is air-driven. Smoking is not permitted in the hazardous waste management areas at the facility. Smoking is allowed outside of the hazardous waste management areas only.

The container storage unit is operated in a manner that minimizes the generation and concentration of flammable gases due to emissions from drums stored in it. Drums stored in this unit are kept closed except when opened for sampling, inspection or transfer of contents. The bung hole plugs of the drums to be sampled are initially loosened so that the plugs can be easily removed by hand. The plugs are not removed until the drum is actually sampled or inspected. Contingent upon NFPA upgrades a hand-held explosion meter will be kept on-site to detect high concentrations of flammable vapors.

CONSOLIDATION AND STABILIZATION OPERATIONS

Triumvirate Environmental Services, Inc. consolidates and stabilizes compatible hazardous wastes at the facility inside the Waste Consolidation and Stabilization Area. These consolidation and stabilization areas are identified in Figure II.A.5. Re-packaging of non-reactive wastes may occur in the Waste Consolidation and Stabilization Area or the container storage unit.

Triumvirate Environmental Services, Inc. is authorized to consolidate compatible hazardous wastes stored in containers into larger bulk containers. Hazardous waste which can be disposed of together at an approved hazardous waste facility will only be consolidated together. Only hazardous wastes that have passed the acceptance procedures described in the Waste Compatibility Test Manual will be consolidated. Triumvirate Environmental Services, Inc. will not consolidate acids, inhalation hazards, reactives (D003), or oxidizers. Flammable material which is intended for fuel blending or incineration may be consolidated contingent upon NFPA upgrades. The Waste Compatibility Test Manual will determine compatibility in determining which waste streams will be intended for consolidation. Consolidations will take place in the consolidation and stabilization area, identified in Figure II.A.5.

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The facility does not consolidate or store incompatible wastes in the consolidation areas. Procedures and systems are in use to prevent placement of incompatible wastes in the same container and are outlined in the Waste Analysis Plan. The next paragraphs describe the type of consolidation conducted at the facility and the measures taken to prevent commingling incompatible wastes and to avoid hazardous situations.

Consolidation in Bulk Transport Containers (tankers)

Procedures outlined in the Waste Compatibility Test Manual of the Waste Analysis Plan are followed for consolidation.

Consolidation of Lab pack Containers

Procedures outlined in the Waste Compatibility Test Manual of the Waste Analysis Plan are followed for consolidation.

Drum Consolidation of Non-Labpack Wastes

Procedures outlined in the Waste Compatibility Test Manual of the Waste Analysis Plan are followed for consolidation.

Consolidation of Alkaline liquids

Procedures outlined in the Waste Compatibility Test Manual of the Waste Analysis Plan are followed for consolidation.

Consolidation of Non-Corrosives

Procedures outlined in the Waste Compatibility Test Manual of the Waste Analysis Plan are followed for consolidation.

Stabilization

Stabilization refers to treating wastes containing metals (D004-D008, D010-D011) to render them non-hazardous. An example would be lead contaminated sand blast grit and lead contaminated media from gun ranges.

The stabilization operation will be performed in a 20 or 30 yard roll-off container located in the Waste Stabilization and Consolidation Area. The roll-off container will be lined. Waste and stabilization media will be mixed thoroughly by using mechanical equipment. Drums will be consolidated into the roll-off while the stabilization media is continuously added to ensure proper mixing. For waste that arrives in roll-off containers, proper mixing is ensured by the use of mechanical equipment mixing the waste and stabilizing agent in proper ratios. Stabilization materials will consist of a mixture of pozzolanic products as needed. Possible examples include: Portland cement or other material

approved by the department. All additives will be contained in a dry and secure portion of the warehouse. Equipment used for stabilization will be decontaminated after each batch. Decontamination involves physically removing contaminates and cleaning the equipment with soap and water. Consolidation of similar wastes may occur prior to stabilization; examples would be soils and sludge's. During the consolidation process, a compatibility test would be completed, as described previously. The sampling of stabilized material is discussed in the Waste Analysis Plan.

Prior to treatment the storage times will follow the hazardous waste storage limits of one year. The oldest container added to the roll-off will be used for the one year time limit. After treatment and verification that the waste is non-hazardous the time limit will follow the non-hazardous regulations for Triumvirate Environmental Services, Inc. If LDR's are not met the waste will be sent offsite for disposal as a hazardous waste.

II.B.4 MANAGEMENT OF CONTAINERS

4. *Attach a description of the procedures used to comply with 264.171 (Condition of containers), 264.172 (Compatibility of waste with containers), and 264.173 (Management of containers)*

Triumvirate Environmental Services, Inc. operates a hazardous waste transportation company that generally conducts waste collections for the facility. Drivers collecting the waste inspect containers for DOT specifications, leaks, and damages before loading the containers onto the transportation vehicles. Containers that do not pass the inspection are not accepted for transport unless the container is over packed or the waste is transferred to a container in good condition. Vehicles collecting the waste carry new, empty containers and over packs to use, if the need arises.

Containers holding waste in storage at the facility comply with specifications in 49 CFR Part 173 Shippers-General Requirements for Shipments and Packaging. Dents and corroded spots are evaluated to determine whether the container can sustain handling at the facility and, for outbound shipments, whether the container will be able to withstand the effect of transportation to the point of destination. Significant damage at locations near seams, and bottom or top ends do not pass the inspection. Bunghole plugs must be tightened, and plug seals must be in good condition and in place. Head gaskets for open-head drums must be well-placed and in good condition, with the head ring closing bolt positioned downward. Drums having wet exterior walls or a wet floor around the bottom are inspected for pinholes that may be causing the drum to leak, the head rings and bung hole plugs are tightened, and the drum walls and floor are dried. If inspections conducted after the drum walls and floor were dried find repeated wetting and a clear cause for the leak is not found, the drums in question must be over packed or the contents transferred to drums in good condition.

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Container types used in the container storage unit to store waste materials are made of different materials, sizes and shapes. Most generators ship their wastes in 55-gallon steel drums. Some customers ship their waste in plastic containers mainly because the waste is corrosive. Almost all waste sludge's from electroplating operations are shipped to the facility in steel, fiberboard boxes and cubic yard bags. The facility stores consolidated corrosive liquids in drums or totes. The total volume of waste stored in a cell may not exceed the maximum storage volume permitted for the cell.

After containers have been inspected upon arrival, the containers are placed on pallets with no more than four drums (55-gallon and larger) per pallet. Drums on a pallet are arranged so that the top surface of the drums provides a reasonable horizontal and uniform resting plane for a second pallet to be placed upon it. Loaded pallets are inspected for head ring bolts to be positioned downward and for other protruding objects that may damage the pallets stacked upon them. Upper pallets are kept in a stable and level position

Pallets are placed between yellow lines painted on the floor of each cell. Pallets are positioned next to the end walls in a manner to prevent damage to the drums and allow visual inspection of the drums closest to the wall. Drums on a pallet are stored with hazardous waste labels faced toward the aisle. Photographs can be found in IB.3-16 through 18.

Drums in the container storage unit are closed at all times except when being sampled or when having contents transferred to another container. Heads and bung plugs shall be replaced and tightened immediately after the sampling and transfer operations are complete.

There is an open area next to the roll-over berm that provides secondary containment to the series of cells located along the south wall of the container storage unit, which is identified in Figure I D 1 as the staging area. This is the area where the drums are tested and inspected before being placed in the storage cells. Drums are also tested and inspected on the loading dock. Drums that arrive late in the day when there is not enough time to complete the testing and inspection procedures are kept overnight in the staging area until the following day on pallets. The staging area and the storage cell located in the northwest corner of the unit share the same secondary containment system, which is capable of containing 3,719 gallons in excess of the volume required to contain the maximum storage volume allowed in the northwest cell. The excess containment volume for the cell where the staging area is located is equivalent to the secondary containment volume required for 675 55-gallon drums. The staging area does not have space for more than 100 55- gallon drums. The space in the staging area does not add to the permitted storage capacity of the facility.

Handcarts, dollies, tools, and forklifts are made of appropriate materials. Necessary attachments to prevent personnel injury and damage to the containers, equipment, or

structure are used. Floor surfaces upon which the forklifts operate are smooth to facilitate a safe operation. Personnel are trained with an emphasis on safe operation.

II.B.5 INSPECTION PROCEDURES

Attach a copy of the inspection procedures as required in 264.174 (Inspections) and 264.15 (General inspection requirements). [270.14(b)(13)]

The facility conducts weekly inspections in the container storage unit to prevent releases of hazardous waste and to protect human health. The inspection procedures are designed to discover, notify, and remediate physical and compliance problems with containers, markings, containment systems, firefighting and spill control equipment, and any circumstances that may create a hazard. The objective of this program is to reveal and correct conditions that may lead to releases inside or outside the unit, injury to personnel, or threat to human health or the environment.

The weekly inspection requires inspection for cracks and gaps in the secondary containment. Such conditions should be sealed to maintain the integrity of the system. The floor in the area is inspected to detect waste from leaks and spills that should be collected and cleaned up, and debris or other obstacles that should be removed to allow safe passage of personnel and forklifts. Any finding of waste from leaks or spills must be investigated as to the source, and the problem condition must be corrected. The number and size of containers are reviewed to make sure the storage capacity permitted in the container storage area has not been exceeded. Containers are inspected for pinholes or signs of leakage, damage, appropriateness of material, and construction with respect to the type of waste contained. Bung and lid closures are confirmed. Markings are reviewed for completeness of the hazardous waste codes, storage date, and DOT description on the hazardous waste label and the facility barcode label. The hazardous waste codes and hazard class shown in the label are reviewed to make sure the waste is permitted at the facility and compatible with the other wastes in the cell. The containers are inspected to ensure that they are stable and that the label is facing the aisle. Fire extinguishers, spill control, first aid, and shower and eye-wash equipment are inspected to assure immediate operability. The seal on the emergency and safety cabinet indicates whether it has been opened. The seal is checked to make sure that it is intact. Examples of the weekly inspection forms are shown in Figures II B 4 and II B 5.

The weekly inspection ensures that the emergency and personnel safety equipment kept in the cabinet is complete and in good condition. The equipment stored in the cabinet is listed in the contingency plan. The facility may use easy-to-break seals on the doors of the cabinet to reduce weekly inspections to semi-annual inspections. A broken seal is an indication that equipment in the cabinet may have been removed. The facility has the option to use the seals described above and to inspect their integrity on a weekly basis. If seals are found broken, the weekly inspection log should be completed, and missing or faulty equipment should be replaced. A complete inspection of the cabinet should be conducted at least once every six

months even when seals are found intact. A copy of the weekly cabinet inspection report in shown in Figure II B 5.

II.B.6./.7 CLOSURE OF CONTAINER STORAGE UNIT

6. *Attach a copy of the closure plan and where applicable the post-closure as required by 264.112, 264.118 and 264.178. [270. 13(b)(16)]*

7. *Attach a copy of the most recent closure cost estimate 1270.14(b)(15)] and where applicable the post-closure cost estimate [270.14(b)(16)]*

A closure plan and a cost estimate for the container storage unit is contained in section II.K of this application, as required by the hazardous

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waste facility permit application form. Triumvirate Environmental Services, Inc. is not required to have a post-closure plan because it is not a hazardous waste disposal facility. All information requested by items 6 and 7 above is provided in Section II.K of the application.