NEW YORK STATE
DEPARTMENT OF
ENVIRONMENTAL CONSERVATION

6 NYCRR PART 373
HAZARDOUS WASTE MANAGEMENT
DRAFT PERMIT MODIFICATION
FOR
CWM CHEMICAL SERVICES L.L.C
MODEL CITY FACILITY

RESIDUALS MANAGEMENT UNIT-TWO [RMU-2]
LANDFILL AND RELATED UNITS

NIAGARA COUNTY

DEC PERMIT No. 9-2934-00022/00097
EPA ID No. NYD049836679

VOLUME 2 OF 5

NOTE: Draft modifications are identified by highlighted text or by notes on existing or new pages.

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[*NOTE: Portions of the Volume 2 Table of Contents are being modified. Text proposed for addition is indicated in RED.*]

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Attachments:

ATTACHMENT D

Section D
Containers,
Surface Impoundments
&
Tanks

(The contents of Attachment D have been derived from the Permit application submitted by CWM Chemical Services, L.L.C.)

[*NOTE: Portions of Attachment D are being modified. Text proposed for addition is indicated in RED, and text proposed for deletion is indicated in ~~BLACK STRIKEOUT~~. Drawings, Figures, Plans and whole Pages to be added or deleted are identified by a RED NOTE.*]

APPENDIX D-1

CONTAINERS

APPENDIX D-1
CONTAINERS

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CONTAINERS

This section contains a description of the container storage areas and operations utilized to store and process solid and liquid hazardous wastes received at the CWM Chemical Services, LLC. (CWM) Model City, New York Facility (site). In addition, CWM utilizes these areas to store and process non-hazardous waste.

A. CONTAINER STORAGE AREAS

The site currently maintains (or will maintain once constructed) the following areas for the permanent storage and handling of containerized solid and liquid hazardous wastes.

LOCATION	WASTE TYPE	CONTAINER TYPE	STORAGE CAPACITY	AVAILABLE SECONDARY CONTAINMENT (gallons)	REQUIRED SECONDARY CONTAINMENT (gallons)
Drum Management Building					
Area I	Liquid/Solid	drums	688 55-gal drums	4,675	3,784
Area II	Liquid/Solid	drums	320 55-gal drums	1,989	1,760
Area III	Liquid/Solid	drums	36 55-gal drums	251	198
Area IV	Liquid/Solid	drums	36 55-gal drums	251	198
Area V (Floor Trench System)	Liquid	drums	117 55-gal drums	648	644
	Solid	drums	1,376 55-gal drums	NA	NA
Drum Building West Ramp	Liquid	tankers	2-5,500-gal tankers	22,118	10,104
	Solid	drums	160 55-gal drums	22,118	NA
Truck Loading/Unloading Area & Ramp	Solid	drums	1,040 55-gal drums	NA	NA
Area VI, Sections 1, 2 & 3	Solid	drums	956 55-gal drums	NA	NA
New Drum Management Building					
Area 1 Flammable Storage Area	Liquid/Solid	drums	504 55-gal drums	9,011	2,772
Area 2 Acid Storage Area	Liquid/Solid	drums	1008 55-gal drums	6,667	5,544
Area 3 Caustic Storage Area	Liquid/Solid	drums	1008 55-gal drums	6,915	5,544
Area 4 Poisons Storage Area	Liquid/Solid	drums	96 55-gal drums	1,245	528
Area 5 Oxidizer Storage Area	Liquid/Solid	drums	96 55-gal drums	765	528
Area 6 QA/QC Storage Area	Liquid/Solid	drums	336 55-gal drums	8,459	1,848
Area 7 Fuels Transfer Ramp	Liquid	cargo tanks	2 5,500-gal cargo tanks	23,338	10,681
Area 8 Transformer Area	Liquid/Solid	trans./drums	6 345-gal trans. or 37 55-gal drums	2,065	345
Area 9 Loading Ramp Area	Liquid/Solid	drums	1,040 55-gal drums	95,681	5,720
PCB Warehouse Building					
Area 1	Solid	drums	1,368 55-gal drums	NA	NA
Area 3/6	Liquid	drums	160 55-gal drums	409 (per pan)	220 (per pan)
	Solid	drums	1,358 55-gal drums	NA	NA
South Trailer Parking Area	Liquid/Solid	tankers/rolloffs	58 rolloffs or 5 tankers & 48 rolloffs	82,481	27,500
New Full Trailer Park Area	Liquid/Solid	cargo tanks/ rolloffs	48 rolloffs or 5 cargo tanks	66,583	39,749
Stabilization Facility Trailer Parking Areas					
Trailer Parking Area I	Solid	rolloffs	6 rolloffs	NA	NA
Trailer Parking Area II	Solid	rolloffs	14 rolloffs	NA	NA
Trailer Parking Area III	Liquid/Solid	tankers/rolloffs	19 rolloffs or 5 tankers & 9 rolloffs	39,273	27,500
Trailer Parking Area IV	Solid	rolloffs	9 rolloffs	NA	NA

LOCATION	WASTE TYPE	CONTAINER TYPE	STORAGE CAPACITY	AVAILABLE SECONDARY CONTAINMENT (gallons)	REQUIRED SECONDARY CONTAINMENT (gallons)
Stabilization Facility New Trailer Park Area	Liquid/Solid	cargo tanks/ rolloffs	37 rolloffs or 11 cargo tanks	56,106	38,777
Stabilization Facility Building					
Waste Ash Tanker Unloading Area	Solid	Tanker(dry)/rolloff	1 tanker(dry)/rolloff	NA	NA
Special Client Treatment Room	Solid	rolloffs	4 rolloffs	NA	NA
Macro Room	Solid	rolloffs	18 rolloffs	NA	NA
Lower Drum Shedder Area	Liquid/Solid	rolloffs	2 rolloffs	3,019	NA
Upper Drum Shredder	Solid	drums	300 55-gal drums	NA	NA
North Expansion Building	Solid	rolloffs	15 rolloffs	NA	NA
Aqueous Treatment Building					
AT Drum Dock	Liquid	drums	128 55-gal drums	1,303	704
	Solid	Drums	128 55-gal drums	NA	NA
AT Tanker Unloading Area	Liquid/Solid	Tankers	2-6,000-gal tankers	14,851	9,916
AT Filter Press Room	Solid	Rolloffs	1 rolloff	NA	NA
T. O. Building					
Transformer Containment Pan	Liquid/Solid	transformer/drums	11 pans	386 (per pan)	386 (per pan)
T.O. Building Loading Ramp	Liquid/Solid	Tanker	2-6,000-gal tankers	18,269	17,515
Truck Wash Facility	Solid	Rolloffs	3 rolloffs	NA	NA
T-130 Loading/Unloading Area	Liquid/Solid	tanker/rolloff	1-5,500-gal tanker, 1 rolloff	9,895	7,281
T-108 Loading/Unloading Area	Liquid/Solid	tanker/rolloff	1-5,500-gal tanker, 1 rolloff	20,481	7,309
T-109 Loading/Unloading Area	Liquid/Solid	tanker/rolloff	1-5,500-gal tanker, 1 rolloff	20,255	7,281
New T-109 Loading Area	Liquid/Solid	cargo tank/rolloff	1-5,500-gal cargo tank or 1 rolloff	21,762	7,294
T-158 Loading/Unloading Area	Liquid/Solid	tanker/rolloff	1-5,500-gal tanker, 1 rolloff	29,422	7,281
New T-158 Loading Area	Liquid/Solid	cargo tank/rolloff	1-5,500-gal cargo tank or 1 rolloff	30,929	7,294

Container types other than those listed above are also allowed, provided the secondary containment requirements are satisfied. For drum storage areas, 55 gallon drums and other liquid containers not exceeding 330 gallon capacity which meet the United States Department of Transportation (DOT) definitions of "non-bulk packaging" or "intermediate bulk containers (IBCs)" in 49CFR 171.8 are allowed. Also, containers of solid materials, such as 55 gallon drums and other solid containers not exceeding 330 gallon capacity which meet the DOT definitions of "non-bulk" or "IBCs" in 49CFR 171.8 may be stored in these areas. The number of containers allowed in each drum storage area is based on 55-gallon equivalents. For bulk container storage areas, rolloffs, tankers, flat beds and box vans and other containers which meet the DOT definition of "bulk packaging in 49CFR 171.8 are allowed. Flat beds and box vans are only used in conjunction with storage of non-bulk containers and IBCs, and not for direct storage of un-containerized bulk waste. Precautions are taken for containers that are subject to deterioration from weather (e.g., cubic yard boxes) and such containers are subject to the storage restrictions under Condition B.1.a.iii in Exhibit C of Schedule 1 of Module I of the Permit. The containment pans in the T.O. Building may be used to store transformers, drums and other electrical devices. Only DOT containers listed in the table under Section B.4.(a) or selected using the procedure in Section B.4.(a) of this appendix are allowed to be used for waste storage.

The above-referenced areas are permitted for container storage and management incidental to the operations conducted in that area. Satellite and 90 day accumulation practices are also permitted as per 6 NYCRR Part 372.

CWM manages all container storage areas in a manner to prevent the possibility of a leak or spill from the containers.

According to the National Fire Protection Association (NFPA) 30, 2003 edition, entitled Flammable and Combustible Liquids Code, Chapter 6.4.3, for flammable liquids (DOT Class IA, Class IB and Class IC) and combustible liquids (DOT Class II and Class III) solid pile (containers, rows or groupings of containers) and palletized storage (modules) in warehouses shall be arranged so that piles containing these materials are separated from each other by at least 4 ft. (1.2 m).

For all other New York State Department of Environmental Conservation (NYSDEC) regulated waste containers, 6NYCRR 373-2.3(f) maintains that the owner or operator must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency unless it can be demonstrated to the commissioner that aisle space is not needed for any of these purposes.

For all container storage areas located on the site, maximum storage is based on the following:

- Drums will be staged two wide with at least a 2 foot aisle space (4 foot for flammables) between drum pairs and between drums and building walls;

- Drums will be stacked a maximum of two high (single stacked for flammables, except for small containers, less than or equal to 30 gallons, of flammables which may be stacked two high to a maximum height of 5 feet);

- Drums containing liquids will be managed with a minimum 2 foot distance to the edge of the containment system (i.e., curbing); and

- Bulk containers may be staged end-to-end (maximum of 2) with a separation of 2 feet between rows.

General container management procedures are presented below, followed by a detailed description of each container storage area. Secondary containment calculations and drawings for each container storage area, as indicated by the figure number referenced for each area, are included in figures and calculations.

B. GENERAL CONTAINER MANAGEMENT PROCEDURES

(1). Acceptance Limitations

CWM is permitted by the NYSDEC for the receipt, handling, treatment and disposal of solid and liquid hazardous waste with the following exceptions:

- Shock-Sensitive Waste (for landfill disposal);
- Radioactive waste (slightly above background is acceptable in accordance with the CWM Waste Analysis Plan);
- Explosives; and
- Pyrophoric Waste (for landfill disposal).

All waste received in containers at the facility is subject to the procedures outlined in the CWM Waste Analysis Plan.

(2). Waste Tracking

Containerized waste is received at the site through the continuously monitored (i.e., security guard) front gate and directed to the scale/receiving department. All waste is tracked from receipt to treatment, disposal and/or off-site shipment. All completed waste tracking information becomes part of the Daily Operating Record.

(3). Off-Specification Wastes

Off-Specification designation indicates that the waste does not fall within specified waste parameters. The waste may or may not be acceptable for handling at the site. Details concerning off-specification wastes are presented in CWM's Waste Analysis Plan.

A quality control check is performed on each waste shipment received at the site. If a waste is determined to be off-specification, the laboratory or other technical personnel documents this off-specification. The off-specification information is distributed as necessary. If the waste is not acceptable at the site, the generator is notified and arrangements are made to transport the material to an appropriate facility or back to the generator.

Information for off-specification wastes will include operations and laboratory steps necessary to manage the waste. Wastes received off-specification may result in a re-evaluation of the waste profile and/or management decision according to CWM's Waste Analysis Plan.

(4). General Container Storage Procedures

(a). Packaging Requirements

Under USDOT regulations, it is the shipper's responsibility to ensure that waste which is a DOT hazardous material conforms to the container packaging requirements. All waste stored in containers shall conform to these requirements as follows:

- 49 CFR Subpart B - Table of Hazardous Materials and Special Provisions; specifically Part 172.101(i) Packaging Authorizations;

- 49 CFR Part 173 - Shippers - General Requirements for Shipments and Packagings; and

- 49 CFR Part 178 - Specifications for Packagings.

The following table contains a list of the USDOT specification containers for hazardous material and wastes received, stored and shipped by CWM. This list is not comprehensive and other containers may be selected in accordance with the performance oriented packaging standards in 49 CFR 171-178. Under USDOT, the shipper is responsible for ensuring that the packages are compatible with the hazardous material; Under RCRA, the TSDF becomes the generator when materials are shipped off-site.

USDOT Class/Div.		**Waste Type Example**	**USDOT Packaging Specifications**
2.1	Flammable Gas	Aerosols	1A2 1H2 1G 4G
2.2	Non-Flammable Gas	Aerosols	1A2 1H2 1G 4G
3	Flammable liquids	solvents, paints	1A1 1A2 1H1 1H2 31H Cargo tank combination: outer 4G or 1G, inner metal or plastic
4.1	Flammable Solid	metal powders	1A2 1H2 1G 4G
4.2	Spontaneously Combustible	oily rags	1A2 1H2 1G 4G
4.3	Dangerous when wet	sodium cell sweepings	1A2 1H2 1G 4G 11G
5.1	Oxidizer	liquid - aqueous solution	1A1 1A2 1H1 1H2 31H Cargo tank
		solid - nitrating salts	1A2 1H2 1G 4G
5.2	Organic Peroxides	organic peroxide	1A1 1A2 1H1 1H2
6.1	Toxic	liquid - chlorinated solvent	1A1 1A2 1H1 1H2 31H Cargo Tank combination: outer 4G or 1G, inner metal or glass
		solid - pesticides/soil	1A2 1H2 1G 4G 6HG 11G 11H 11H2 Roll-off box
8	Corrosive	liquid - acid solution	1A1 1A2 1H1 1H2 31H Cargo tank
		solid - caustic solids	1A2 1H2 1G 4G 6HG 11G 11H 11H2 Roll-off box
9	Miscellaneous	liquid - hazardous waste	1A1 1A2 1H1 1H2 6HG 31H Cargo tank combination: outer 4G or 1G, inner metal or plastic
		solid - hazardous waste	1A2 1H2 1G 4G 5L 5M 6HG 11G 11H 11HZ BK3 13H 13L Roll-off box

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When selecting a container not on this table, CWM will follow the procedure described below:

- Refer to the DOT section of the Waste Profile Sheet to identify the proper shipping name.

- Locate the proper shipping name in column 2 of the Hazardous Materials (HazMat) Table (49 CFR 172.101). and identify the associated hazard class/division, identification number and packing group. Note any special provisions in column 7.

- Using this information, identify permissible packings identified in column 8A (exceptions), 8B non-bulk packages (< or = 119 gallons) and 8C for bulk packages (> 119 gallons). The sections referenced in column 8 as Section 173*** refer to the sections of Part 173 where the permissible packagings are identified and described.

Containers of hazardous materials that arrive at the site which do not meet the USDOT specifications will not be shipped off the site unless the contents of the container are placed into a container which meets USDOT specifications. Containers that arrive at the site which appear to have obvious signs of structural damage or deterioration, or which are found to be leaking shall either be repaired so that the containers meet RCRA & USDOT container specifications, overpacked into containers meeting RCRA & USDOT container standards or will be emptied and their contents placed into containers meeting RCRA & USDOT container standards or processed immediately.

Per 49 CFR, all containers that contain hazardous materials and leave the site for transportation by public highway must meet USDOT standards.

(b). Containment

Secondary containment systems as described below are utilized by CWM to store containerized (i.e., drums, rolloffs, etc.) liquid hazardous waste throughout the site. In the areas that only store hazardous waste solids, secondary containment is not required, but outdoor areas will be designed and operated to remove liquid resulting from precipitation or containers will be elevated or otherwise protected from contact with accumulated liquids.

(1). Modular Units

Modular units are currently used by CWM to store drummed liquid hazardous waste within the Aqueous Treatment Building (AT Drum dock). The modular units are constructed of a rectangular steel frame with a corrosion resistant steel grating over the frame which is bonded

to the concrete floor using a solid layer of sealant (i.e., urethane caulk). Containers are positioned on these gratings. Containers holding packaged laboratory chemicals may be stored on floors since the packaging requirements listed under 49 CFR provide adequate primary, secondary and tertiary containment.

(2). Concrete Curbing

Concrete curbing is currently being used as secondary containment by CWM to store containerized liquid hazardous waste throughout the site. In several of the areas, CWM currently utilizes a coating (e.g., epoxy) or sealant (e.g., CHEMTEC One manufactured by CHEMTEC INTL) to improve the impervious quality of the concrete. The existing coating and sealant systems are inspected at least weekly and maintained as needed. For all sealant areas, the sealant will be reapplied annually. The following table lists all container storage areas and use of coatings or sealants.

LOCATION	COATING/SEALANT
Drum Management Building	
Building Interior	Sealant
West Ramp	Sealant
Truck Loading/Unloading Area & Ramp	No coatings or sealants required
PCB Warehouse Building	
Area 3/6	No coatings or sealants required (use pans for liquid storage)
All other areas	No coatings or sealants required
South Trailer Parking Area	Sealant
Stabilization Facility	
Trailer Parking Area I & II	No coatings or sealants required
Trailer Parking Area III & IV	Sealant
Waste Ash Tanker Unloading Area	Coating
Special Client Treatment Room	No coatings or sealants required
Macro Room	No coatings or sealants required
Lower Drum Shedder Area	Coating
Upper Drum Shredder	No coatings or sealants required
North Expansion Building	No coatings or sealants required
Aqueous Treatment Building	
AT Drum Dock	Coating
AT Tanker Unloading Area	Sealant
AT Filter Press Room	Coating
T. O. Building	No coatings or sealants required (use pans for liquid storage)
T.O. Building Loading Ramp	Sealant
Truck Wash Facility	No coatings or sealants required
T-130 Loading/Unloading Area	Sealant
T-108 Loading/Unloading Area	Sealant
T-109 Loading/Unloading Area	Sealant
T-158 Loading/Unloading Area	Sealant

Secondary containment for all container storage areas is inspected weekly in accordance with the Facility Inspection Plan. If concrete cracks or gaps are found that exhibit separation or if a defect in the coating system exposes the underlying concrete, an Environmental Work Order (EWO) will be issued to schedule the repair unless it is completed by the end of the next business day. The time period for a repair will vary depending on the type, extent and location of the defect. All repairs will be documented. Hairline cracks will be closely monitored and repaired if separation occurs.

(c). Compatibility

Containers are sealed prior to storage and are normally placed in a double row side by side within the same waste category. Containers can be double stacked, except for drummed flammables. Adequate aisle space is maintained to allow daily inspection of the containers.

In the areas where modular units are used, the modular units are organized by grouping them in sections. Each section stores only compatible materials. Each section may contain both regulated and non-regulated material according to compatibility.

For all containers not being stored on modules (i.e., concrete curbing), the segregation philosophy of 49 CFR Part 177.848 will be followed to avoid co-mingling of incompatible wastes.

Procedures for verifying compatibility of wastes are presented in CWM's Waste Analysis Plan.

(d). Identification

All hazardous waste containers will be labeled with the following information:

1. Generator name

2. Waste profile/identity

3. DOT labels, where applicable

4. Date Received at CWM for Land Disposal Restricted waste

Additional labeling for PCB items, articles and containers will be required by 40CFR Part 761. In addition, every PCB item, article, and container, which is regulated as hazardous under 6NYCRR Part 371, will have the words "Hazardous

Waste" affixed to it because PCBs are a New York State listed Hazardous Waste and must be labeled accordingly.

(5). General Methods of Container Processing

Containerized material at the site is processed by one or more of the following general methods:

(a). Liquid wastes may be transferred to or from the Front End Aqueous Treatment System.

Aqueous wastes are stored in areas designated in Section A and treated at the Aqueous Waste Treatment Facility or they may be staged incidental to final treatment at the Aqueous Waste Treatment Facility.

(b). Organic Liquids and other liquids may be consolidated for BIF fuels blending or incineration offsite.

Liquid containerized wastes may be consolidated for BIF fuels blending or incineration. Liquid bulk materials may be transferred to appropriate tanks for storage. Containers of liquid waste may be transshipped to another facility for treatment/disposal.

(c). Solid materials are disposed of in designated landfill areas if and only if land disposal restrictions are met and/or do not apply.

All containers that contain solid wastes are staged temporarily until quality control measures are performed. Prior to landfilling, drums stored in the Drum Management Building are typically loaded onto flatbed trailers staged at the loading dock entrance. Based on information provided by the laboratory, the solid drummed wastes are delivered to the landfill for disposal.

(d). Solid materials may be consolidated for disposal offsite.

Solid containerized wastes may be consolidated for offsite disposal in a landfill or incinerator. Containers of solid waste may also be transshipped to another facility for treatment or disposal.

(e). Other containerized wastes may be stabilized and landfilled and/or transported to an offsite permitted facility.

Incoming materials will be stabilized to meet land disposal restriction standards or to increase strength prior to landfilling, as necessary. Decharacterized waste may be disposed of in an offsite permitted landfill.

(f). Some types of waste can be Macroencapsulated and/or Microencapsulated using permitted debris technology.

CWM may implement debris immobilization techniques by stabilizing debris utilizing microencapsulation and/or macroencapsulation techniques.

Microencapsulation is a specified technology involving the immobilization of contaminants on the surface of debris by a process similar to stabilization.

Debris that may not be physically suitable for the stabilization equipment, or that contains contamination unsuitable for microencapsulation (e.g., a pump contaminated with oily leachate) may be managed by macroencapsulation.

CWM currently utilizes macroencapsulation containers (i.e., vaults) made of high density polyethylene (HDPE) and the minimum thickness of the containers' bottom, sides, and top is 300 mil. having a capacity of approximately 30 cubic yards. The container shall be the "SUPERLINER XL 0370 Black HDPE" brand or NYSDEC approved equivalent. After the void space is filled with stabilized waste or other approved filler material, the containers are sealed by applying glue to the lip of the container and the lid. The lid is placed on the container and screws are installed at approximately 4 inch to 6 inch intervals. A visual inspection is performed after the container is sealed. Other non-degradable containers, such as a polydrum or other approved encapsulation device, may also be used.

In order to help prevent damage to the macroencapsulation container during off-loading operations, the lip of each container shall be modified to reduce the stress on the container. This modification consists of removing as much of the lip as possible while still leaving sufficient width to secure the container lid. Alternatively, the design of the container may be modified by the manufacturer to reduce the stress produced by the lip. CWM will take all necessary precautions to prevent macroencapsulation container damage and monitor each container's integrity from filling through placement in the landfill. Any observed damage and the repairing of such damage, shall be recorded in the facility's operating record.

(g). Repacking and decanting wastes and other hazardous materials.

Container repackaging can occur in the Drum Management Building or the PCB Warehouse Building and, in certain instances, in the T.O. Building. USDOT packaging standards must be followed for hazardous materials that will be shipped offsite.

(h). Empty containers may also be accepted from offsite and landfilled or transported offsite for disposal or recycling.

Empty containers are accepted at the Drum Management Building for visual inspection to ensure that they are empty in accordance with 6NYCRR Part 371.1(h)(2). Drums determined to be empty may be sent off-site for recycling. Empty drums may be crushed in the landfill. They also may be crushed in the stabilization mixing pits and sent offsite to a permitted landfill.

Hazardous waste containers that, upon inspection, do not meet the definition of RCRA empty (as defined in 6NYCRR Part 371.1(h)(2)) after the liquid has been removed will be treated as hazardous waste. A management method for the waste will be selected as dictated by CWM's Waste Analysis Plan.

(i). Transship for recycling or other treatment processes.

Containers of batteries, light bulbs and other wastes may be transshipped for recycling or other applicable management process.

C. DRUM MANAGEMENT BUILDING

(1). History and Design

Construction of the existing Drum Management Building (DMB) commenced in 1981 and was completed in 1982. The building was opened for use in November, 1982 and includes a loading/unloading dock for the shipment and receiving of wastes. The DMB West Ramp was constructed in 1998 and encompasses 1,700 square feet.

(2). Operations

Based on the types/volumes of wastes received by the site, the DMB is the focal point for most incoming containers. Liquid waste containers were previously managed on modular containment units. In 2006, CWM replaced the existing modular units with a concrete curb secondary containment system. This system provides separation of incompatibles. Solid waste containers may be stored throughout the DMB. Figure D-1A presents the DMB layout and the maximum liquid and/or solid storage capacity for the building based on the previously presented spacing requirements (also see Section A). The arrangements of containers may change depending on storage needs, however, compatibility guidelines will be met. Secondary containment calculations accompany attached Figure D-1A. As previously stated, an approved sealant, (e.g., CHEMTEC One) has been applied to all concrete floor areas in this building which are permitted for liquid waste storage.

Loading/unloading areas at the DMB have ramps allowing equipment to move directly onto transport vehicles from the unloading docks. Containers are removed by use of forklifts that are equipped with drum handling attachments. The attachments generally employed are

capable of lifting up to two (2) drums at a time. Other container moving practices may be utilized as technologies improve.

(a). Loading/Unloading Areas

The DMB Loading/Unloading Area & Ramp is permitted for solids container storage only. No secondary containment is required. Incoming and outgoing box trailers containing 55-gallon containers or equivalent of liquids and/or solids may be temporarily staged in this areas. Incoming trailers will be unloaded and a quality control check performed. The dock area is covered, providing protection for personnel during inclement weather.

After receipt, containers may be staged on a flatbed incidental to the transfer of these containers to other on-site operations, such as aqueous treatment, stabilization, or the landfill. Liquid and incompatible waste containers may be staged on flatbed trailers according to USDOT compatibility requirements in the dock area up until the end of the last DMB personnel work shift on the date placed in the dock area. Containers with solid wastes may be staged on the dock for longer if needed.

Co-mingling of incompatible wastes staged on the trailers in the dock area is prevented by separating these wastes with a buffer such as non-regulated packages or bags of "speedi-dry" or as required by NYSDOT.

The DMB West Ramp (fuel transfer area) is permitted for liquid storage. This ramp is used to transfer compatible liquids from drums inside the DMB to bulk tankers located on the ramp. It is sized to accommodate two tankers to also allow the transfer from tanker to tanker. CWM has applied an approved sealant (e.g., CHEMTEC One) to the entire ramp area.

(b). Container Waste Characterization

The waste characterization procedures described in CWM's Waste Analysis Plan are used to determine the compatibility grouping for a particular waste material.

In addition, each corrosive is specified as either an acid or base for further segregation. All acutely toxic materials (P codes which are not "derived from" treatment residues) will be handled as poisons if they are not specifically listed by USDOT for other hazardous properties. Any D, F, K or U codes for materials not specifically assigned a hazard class will be recognized as Class 9 for storage purposes. In the fuels storage area, flammables, combustible, Class 9 and non-regulated organic liquids will be staged for bulking into a fuel or incineration blend.

(3). Containment

The maximum 55-gallon equivalent containers (solids/liquids) allowed for this building is presented in Section A and on attached Figure D-1A.

(a). Base Construction

The DMB floor, loading/unloading ramp and West Ramp are constructed of concrete and inspected as defined within the Facility Inspection Plan. The base was designed by a certified professional engineer to support loads and structural stresses in excess of those provided by present operations.

(b). A Procedure for the Containment of Leaking Drums

The DMB is inspected at least daily on operating days for leaks or spills. If spills are observed, they will be contained within the building. Spilled materials will generally be absorbed with absorbent and placed into drums for disposal. Upon receipt of a shipment of drums and after unloading, a visual inspection is made for leaking drums.

If a small leak should occur, the contents of a leaking drum are transferred to another appropriate container or the drum is placed in an overpack drum. In the event of major leaks or spills, liquids will be removed by vacuum trucks or absorbed with a compatible absorbent material and placed into containers for disposal.

Spilled material is cleaned up with absorbent materials. Spill control procedures are described in the CWM Contingency Plan.

(c). Control of Run-off and Run-on

Because all container management operations take place within the confines of the existing DMB, no run-off or run-on is expected. However, precipitation may collect in the covered truck unloading area or curbed fuels transfer area ramp. Precipitation may be treated in the Aqueous Treatment System without sampling. If the liquids will be discharged to the surface water drainage system, a water sample will be collected for appropriate characterization prior to the discharge.

(4). Fuels Drum Pumping Station

A separate pumping station is located in a partitioned room at the south end of the DMB. The purpose of this station is to transfer waste organic liquids, such as oils, solvents, lean waters, etc., from drums and oil filled equipment into bulk containers at the DMB West Ramp using a permanently installed pump. This operation provides fuels blending and consolidation for off-site shipments. Containment is provided by the DMB (i.e., concrete floor and trench).

D. PCB WAREHOUSE BUILDING

(1). History and Design

The PCB Warehouse Building was constructed in the 1940's and consists of a single story, brick and frame structure which is approximately 239 feet long by 106 feet wide. There are five major areas within the building which are separated by masonry walls.

The floor consists of a six-inch thick reinforced concrete slab poured on fill material. The floor is smooth and there are no floor drains or other floor openings. A perimeter concrete footing is about four feet above surrounding ground level.

The exterior walls consist of wood frame with aluminum siding on exterior and painted plywood on interior with a frame of 2 x 4's on 16-inch centers. Interior walls consist of brick and mortar construction. The roof is supported by 2" x 8" rafters on 20-inch centers. The rafters are supported by wooden beams on vertical wood columns in Areas 3, 4, and 5 and by longer span wood trusses in Area 1. The roof is covered with tar paper and sealed with roofing tar.

(2). Operations

The PCB Warehouse Building is used for the container storage of solid and liquid materials. Liquid drums must be stored within containment pans. A total of four pans, each 9 feet wide by 50 feet long by 2 inches high, capable of storing up to 40 drums (55 gallons or equivalent) each, are constructed of ¼" thick continuously welded ASTM Grade A36 carbon steel coated with vinyl ester. All containers stored within a pan in the PCB Warehouse pans are compatible with each other and with the pans, as established by the CWM Waste Analysis Plan. Attached Figure D-2 presents the PCB Warehouse Building layout and the maximum liquid and/or solid storage capacity for the building based on the previously presented spacing requirements (also see Section A). Secondary containment calculations accompany attached Figure D-2. No secondary containment will be provided or is required in the areas used for storage of solid waste. Coatings or sealants are not required in the PCB Warehouse Building. Storage of waste within the building will be as follows:

- Areas 1, 3 and 6 are primarily used for container storage of wastes that will be shipped offsite for recycling or disposal and other wastes for onsite management. Area 1 will be used for storage of solids only. Areas 3 and 6 will be used to store compatible liquid and solid waste materials.

- Area 5 will be used to store empty drums and supplies. Areas 2 and 4 will be used to store facility supplies and equipment, including clean overpack drums.

(3). Containment

As previously discussed, no secondary containment will be required in areas 1, 2, 4 and 5 based on only solid storage requirements. Containment within the liquid waste storage area (Areas 3 and 6) is provided by containment pans. In addition, storage areas 3 and 6 are provided with a one-foot high continuous perimeter curb and doors are equipped with elevated ramps to prevent liquids from exiting the building.

(a). Base Construction

The PCB Warehouse Building floor consists of a poured concrete slab and is inspected as defined within the Facility Inspection Plan. The base of the PCB Warehouse Building was designed to support loads and structural stresses in excess of those provided by present operations.

(b). A Procedure for the Removal of Liquids from Secondary Containment

The PCB Warehouse Building is inspected daily on operating days for leaks or spills. Spilled materials will generally be absorbed with absorbent and placed into drums for disposal. Upon receipt of a shipment of drums and after offloading, a visual inspection is made for leaking drums.

If a small leak should occur, the contents of a leaking drum are transferred to another appropriate container or the drum is placed in an overpack drum. In the event of major leaks or spills, liquids will be removed by vacuum trucks or absorbed with a compatible absorbent material and placed into containers for disposal.

Spilled material is cleaned up with absorbent materials. Spill control procedures are described in the CWM Contingency Plan.

(c). Control of Run-On and Run-Off

All container management operations will take place within the confines of the existing PCB Warehouse building. Therefore, no run-on and run-off is expected.

E. SOUTH TRAILER PARKING AREA

(1). History and Design

The South Trailer Parking Area encompasses 15,000 square feet, was constructed in 1986, and is used to store full trailers containing solid or liquid materials. The area is 299 feet long and is designed to store liquid and solid materials in containers prior to disposal. The

area is constructed of a reinforced concrete pad, curbed on three sides and sloped so that all precipitation or potential leakage from any unit will be contained.

(2). Operation

The South Trailer Parking Area may be used for storage of liquid and/or solid hazardous and non-hazardous waste. Containers are typically placed in this area for the following reasons:

- Trailer is delivered to the site after normal operating hours;
- The materials delivered are found to be off-specification;
- Materials will be processed after the date of receipt;
- Corrective measures are being instituted due to a potential leaking vehicle; or
- General storage while awaiting disposal approval or off-site transportation.

The following units may be used to store materials in this area.

- Box trailers holding hazardous and non-hazardous waste in USDOT approved containers;
- Bulk tanker trailers, vacuum trailers or other bulk containers holding liquids;
- Covered roll-off trailers holding solid materials; and
- Flatbed or lowboy trailers holding hazardous and non-hazardous waste in containers or transformers. Cardboard, fiberboard, textile fabric or other non-metal or non-heavy plastic containers meeting USDOT specifications, may be stored on an uncovered flatbed or other open trailer for up to seven (7) days in accordance with Condition B.1.a.iii in Exhibit C of Schedule 1 of Module I in the Permit.

Attached Figure D-3 presents the South Trailer Parking Area layout and the maximum liquid and/or solid storage capacity for the area based on the previously presented spacing requirements (also see Section A). Secondary containment calculations accompany attached Figure D-3. As previously stated, an approved sealant, (e.g., CHEMTEC One) has been applied to the entire concrete slab.

(3). Containment

The South Trailer Parking Area is used for the liquid or solid storage of the RCRA regulated, TSCA regulated and non-hazardous full or partially full containers mentioned above.

(a). Base Construction

The South Trailer Parking Area is constructed of reinforced concrete with a compacted gravel base layer. The concrete containment pad is sloped toward the rear wall and graded toward the center from both sides. Approximately one foot up slope from the rear curb is an 18" high containment wall that is designed to protect the rear containment curb. Precipitation will collect in the containment area until it is removed via vacuum truck. The South Trailer Parking Area consists of a poured concrete slab which was designed by a certified professional engineer to support loads and structural stresses in excess of those provided by present operations.

(b). A Procedure for the Removal of Liquids from Secondary Containment and Precipitation Management

The South Trailer Parking Area, being outdoors, will collect precipitation. Precipitation will be collected and removed via vacuum truck or equivalent and treated in the Aqueous Waste Treatment System, or if appropriate, characterized by sampling and discharged to the surface water drainage system if analysis indicates that it meets surface water standards. It may also be collected and used in lieu of city water in the Stabilization process in accordance with SDP 2124, if analysis indicates compliance with 6 NYCRR Part 376.

F. STABILIZATION FACILITY

(1). History and Design

The Stabilization Facility (CHEM-MATRIX System), a mechanized stabilization process, began operations in 1991. In late 1992, the Main Stabilization Facility was augmented with the Northern and Southern Expansions. The Stabilization Facility also includes the Trailer Parking Area, Waste Ash Tanker Unloading Area, Special Client Treatment Room, Macro Room, Lower Drum Shredder Area and Upper Drum Shredder Area.

The mechanized facility was closed in 1996 and received NYSDEC approval of closure in January 1997. After removal of the CHEM-MATRIX system, the drum shredder was relocated from the Northern Expansion to the Main Stabilization Facility. The drum shredder was removed in May 2009 after receiving NYSDEC approval of the closure certification. The Southern Expansion, originally used as a powdery waste processing system, has not been used for that purpose since 1994 and is now used for reagent and water storage.

The Stabilization Facility is permitted to store solid and liquid containers incidental to the treatment operation. Operational flexibility may require storage or staging of different waste types and quantities. Attached Figure D-4 presents the maximum liquid and/or solid storage capacity for the areas based on the previously presented spacing requirements (also see Section A). Secondary containment calculations accompany attached Figure D-4. As previously stated, an approved sealant, (e.g., CHEMTEC One) has been applied in the areas utilized for liquid storage.

The Stabilization Facility is designed to process hazardous wastes so that the stabilized wastes conform to NYSDEC and Federal Land Disposal Restrictions (LDRs) thereby making wastes amenable to landfill disposal. Hazardous and non-hazardous wastes may be stabilized in order to meet the compressive strength requirements of CWM's Waste Analysis Plan. In addition, equipment may be used to process hazardous and non-hazardous waste into a state acceptable at an on-site or off-site disposal facility. A detailed description of each area within the Stabilization Facility is presented below.

(a) <u>Trailer Parking Areas</u>

(1). History and Design

The Stabilization Trailer Parking Area encompasses four separate areas (Areas I – IV) and is used to store solid or liquid materials. The dimensions of the areas as well as intended storage are as follows:

- Area I (solid waste or compatible liquid/solid non-waste containers) – 70'x35'
- Area II (solid waste or compatible liquid/solid non-waste containers) – 150'x35'
- Area III (solid/liquid waste containers or compatible liquid/solid non-waste containers) – 200'x35'
- Area IV (solid/liquid waste containers or compatible liquid/solid non-waste containers) – 100'x35'

The areas are constructed of reinforced concrete pad, curbed on three sides and sloped so that all precipitation or potential leakage from an area will be contained.

(2). Operations

Area III and IV of the Stabilization Trailer Parking Area may be used for storage of liquid and/or solid hazardous and non-hazardous waste. Areas I, II & IV may only be used for storage of solid hazardous and non-hazardous waste and liquid non-waste containers. Containers are typically placed in this area for the following reasons:

- Trailer is delivered to the site after normal operating hours;

- The materials delivered are found to be off-specification;
- Materials will be processed after the date of receipt;
- Corrective measures are being instituted due to a potential leaking vehicle; or
- General storage while awaiting disposal approval or off-site transportation.

Units which may be stored or staged incidental to treatment in this area include:

- Box trailers holding hazardous and non-hazardous waste in USDOT approved containers (liquid waste containers in Areas III & IV only);
- Bulk tanker trailers, vacuum trailers or other bulk containers holding liquids (in Areas III & IV only);
- Covered roll-off trailers holding solid materials; and
- Flatbed or low boy trailers holding hazardous and non-hazardous waste in containers or transformers. Cardboard, fiberboard, textile fabric or other non-metal or non-heavy plastic containers meeting USDOT specifications, may be stored on an uncovered flatbed or other open trailer for up to seven (7) days in accordance with Condition B.1.a.iii in Exhibit C of Schedule 1 of Module I in the Permit.

(3). Containment

(a). Base Construction

All four areas are constructed of reinforced concrete with a compacted gravel base layer. The concrete containment pads are sloped toward the rear wall and graded toward the center from both sides. Approximately one foot up slope from the rear curb is an 18-inch high barrier wall, which is designed to protect the rear curb from trailers backing into the rear containment curb. The base of the Trailer Parking Area was designed by a certified professional engineer to support loads and structural stresses in excess of those provided by present operations.

(b). A Procedure for the Removal of Liquids from Secondary Containment and Precipitation Management

The Stabilization Trailer Parking Area, being outdoors, will collect precipitation. Precipitation will be collected and removed via vacuum

truck or equivalent and treated in the Aqueous Waste Treatment System, or if appropriate, characterized by sampling and discharged to the surface water drainage system if analysis indicates that it meets surface water standards. It may also be collected and used in lieu of city water in the Stabilization process in accordance with SDP 2124, if analysis indicates compliance with 6 NYCRR Part 376.

(b). North Expansion Building

(1). History and Design

The North Expansion Building was constructed in 1992 and is located adjacent to the north side of the Main Stabilization Building. The south wall of the facility is also the north wall of the Main Stabilization Building. The North Expansion Building has a control room and a mechanical room. The building contains two mixing pits (i.e., double walled subsurface tanks) on the west end and an overhead crane with a five ton hoist. An overturning frame is located on the west side by the overhead doors leading to the mixing pits to hinder trucks from tipping over while emptying their loads. There are three dust collection system baghouses, located east of the Main Stabilization Building. In addition, there is a make-up air unit on the roof to provide make-up air and heat to the buildings when the baghouses are operating.

(2). Operations

The primary purpose of the North Expansion Building is to stabilize waste material by mixing incoming waste streams with pozzolanic materials, other reagents and water. This will typically consist of waste being dumped into the pits, adding reagents and water, mixing with a backhoe and loading the stabilized material into dump trucks to haul to the site's landfill or to be transported off site. The pits may also be used to improve waste strength or prepare waste material for off site shipment.

The floor of the building is constructed with reinforced concrete. The concrete floor is placed over an HDPE liner to form an impervious barrier against waste migration. Except at the west side doorways, a perimeter curb is constructed around the entire building to further contain waste. The mixing pits are double walled steel tanks recessed into the floor of the North Expansion Building. The floor of the outer tank is sloped to a low point where a monitoring pipe installed within the secondary containment of the pit to provide identification of leaks into the leak detection annulus and to remove any liquids that collect between the tank walls.

Containerized solid wastes associated with the stabilization operations may be stored in the North Expansion Building.

(3). Containment

Other than the mixing pits, the North Expansion Building is only used for solid container storage and so no secondary containment is required.

(c). Main Building Stabilization Facility:

(1). History and Design

The Main Building Stabilization Facility consists of the Special Client Treatment Room, Macro Room, and the Upper/Lower Drum Shredder Areas.

(2). Operations

The Special Client Treatment Room (SCTR) is generally utilized for material storage, such as sandblast grit, road salt and stabilization reagents. It may also be used for storage of containers of solid hazardous and non-hazardous waste.

The Upper/Lower Drum Shredder Areas were previously used in conjunction with the drum shredder which has since been removed. After removal of the drum shredder, these areas continue to provide container storage. The Upper Drum Shredder Area is used for solid container storage only. The Lower Drum Shredder Area may be used for the storage of solid or liquid containers. Air emissions ductwork previously used for the Drum Shredder remains in place to provide general building ventilation, which is potentially part of the stabilization hazardous waste management.

The Macro Room is used for the storage of solid containers only. This area is used to store rolloffs containing HDPE boxes (minimum thickness of 300 mils) from the macroencapsulation process, prior to disposing in the landfill or shipping offsite. Macroencapsulation containers are processed in accordance with the procedures presented in Section B.5.f above. Lids for the boxes are typically installed in the Macro Room.

(3). Containment

No secondary containment is required in the SCTR, Macro Room or Upper Drum Shredder Area since these areas are used for solid storage only. The area utilized for liquid storage, i.e., Lower Drum Shredder Area, is constructed of a poured concrete slab and curbed sides which were designed by a certified professional engineer to support loads and structural stresses in excess of those provided by present operations. The previously installed coating in this area will be maintained.

(d). Waste Ash Tanker Unloading Area:

(1). History and Design

The Waste Ash Tanker Unloading Area was constructed in 1992 with the Southern Expansion and is located south of the Main Stabilization Building. This area consists of a concrete ramp used for unloading waste ash tankers into the stabilization process. CWM will maintain the existing concrete coating system in this area.

(2). Operations

The Waste Ash Tanker Unloading Area is used to store both empty and full waste roll-offs and dry bulk trailers containing solid materials.

(3). Containment

The Waste Ash Unloading Area includes the ramp and sump area. The Waste Ash Unloading Area is constructed of reinforced concrete with a compacted gravel base layer. The concrete containment pad is sloped toward the rear wall and graded toward the center from both sides. Approximately one foot up slope from the rear curb is a one-foot high barrier wall, which is designed to protect the rear curb from trailers backing into the rear containment curb. The base of the Waste Ash Unloading Area was designed by a certified professional engineer to support loads and structural stresses in excess of those provided by present operations.

G. AQUEOUS TREATMENT BUILDING

(1). History and Design

The Aqueous Treatment (AT) Building was designed and constructed in 1985. The AT Building also includes the AT Drum Dock, the AT Tanker Unloading Area, and the AT Filter Press Room.

(2). Operations

The AT Building is permitted for solid and liquid storage and is used in the treatment of leachate and aqueous waste at the site. Attached Figure D-5 presents the current typical storage arrangements for the Building and secondary containment storage volume calculations (also see Section A). Operational flexibility may require moving modular units and/or redesignating modular waste types and drum quantities. As previously stated, an approved sealant, (e.g., CHEMTEC One) or coating has been applied in the areas utilized for liquid storage.

(3). Containment

The AT Drum Dock is permitted for solid and liquid storage with containers stored on modular containment units. The units are designed to manage liquid waste drums. In the event that a drum of liquid should leak or rupture, the modular containment units would provide containment for such an occurrence. Drums are segregated according to compatibility. The beams under the grating are currently bolted to the floor and caulked to provide separation of incompatible spills. The floor and beams under the grating system have been coated with a coating system (i.e., Elasti-Liner). Segregated rows are identified for storage of acids, bases and neutrals. Acids and bases must be separated by a neutral row at least two drums wide.

The AT Filter Press Room is permitted for the storage of solid containers only. However, CWM will maintain the existing floor coating system in this area due to water cleaning of the filter presses and the presence of tanks T-1111 and T-1112.

The AT Tanker Unloading Area is permitted for the storage of solid and liquid containers. CWM will maintain the existing concrete secondary containment system and has applied an approved sealant (e.g., CHEMTEC One) to the entire ramp and sump area.

(a). Base Construction

The AT Building, including the AT Drum Dock, the Filter Press Room and the AT Tanker Unloading Area, floor base is constructed of concrete which was designed by a certified professional engineer to support loads and structural stresses in excess of those provided by present operations.

(b). A Procedure for the Containment of Leaking Drums

The AT Building is inspected at least daily on operating days for leaks or spills. If spills are observed, they will be contained within the building. Spilled materials will generally be absorbed with absorbent and placed into drums for disposal. Upon receipt of drums and after unloading, a visual inspection is made for leaking drums.

If a small leak should occur, the contents of a leaking drum are transferred to another appropriate container or the drum is placed in an overpack drum. In the event of major leaks or spills, liquids will be washed down and pumped into a treatment tank from the containment sump or absorbed with a compatible absorbent material and placed into containers for disposal.

Spilled material is cleaned up with absorbent materials. Spill control procedures are described in the CWM Contingency Plan. In the event of major leaks or spills, liquids from the AWT Drum Dock will be contained within the Modular

Containment Units and the AT Building. The liquid will be pumped out via vacuum truck or evacuated and placed directly into the AWT tanks.

(c). Control of Run-off and Run-on

Because all container management operations take place within the confines of the existing AT Building, no run-off or run-on is expected. However, precipitation may collect in the ramp and sumps of the AT Tanker Unloading Area. Precipitation will be collected and removed via vacuum truck or equivalent and treated in the aqueous waste treatment system, or if appropriate, characterized by sampling and discharged to the surface water drainage system if analysis indicates that it meets surface water standards.

H. TRANSFORMER DECOMMISSIONING BUILDING OR "T.O." BUILDING

(1). History and Design

The Transformer Decommissioning Building was in use for over forty years as part of the Lake Ontario Ordinance Works. In the 1970s, this building, which now houses the transformer decommissioning operations at CWM, was formerly used for thermal oxidation (T.O.) processes. The facility name for this building, "T.O. Building", is a result of this former use. The T.O. Building consists of a single-story concrete and sheet metal structure, which is approximately 50 feet long by 41 feet wide. The building has been in use for its present service since 1981. In 1981, the equipment from the defunct T.O. operations was removed and disposed. At that time, the building was cleaned and modified for the transformer decommissioning operation by repair of the roof, construction of concrete berms, addition of a door and sealing of floor joints. The south, east and west walls of the building are constructed of one-foot thick reinforced concrete. The north wall of the building consists of corrugated sheet metal with openings for two roll-up doors. The 13-foot high manual (pull-chain) roll-up was originally included in construction of the building. The second roll-up door (20-foot high) was installed during 1987 building modifications. Movement of the door is controlled by an electrical switch.

The roof of the T.O. Building is constructed of corrugated sheet metal. There is electrical service provided throughout the building. Overhead lights have been installed for lighting the building. Besides being permitted to store waste, the T.O. Building is also used to store equipment which is used for PCB waste management operations.

The T.O. Building Loading Ramp was constructed in 1998 and encompasses 2,100 square feet.

Attached Figure D-6 presents the T.O. Building layout and the maximum liquid storage capacity for the building based on the previously presented spacing requirements (also see Section A). Secondary containment calculations accompany attached Figure D-6.

(2). Operations

The T.O. Building and Loading Ramp are permitted for solid and liquid container storage. The facility receives PCB-contaminated transformers and other electrical equipment for decanting and decommissioning prior to disposal. This equipment is brought to the T.O. Building after completion of the receiving procedures. Regulated activities which may be performed in the T.O. Building include equipment decommissioning, storage, decanting, flushing and miscellaneous activities such as cutting contaminated cable.

Generally, transformers and other electrical devices containing liquids which are delivered to the site are transported in metal drip pans or drums on a flatbed trailer or box van. Pans and drums provide containment for spilled or leaked oil while in route to the site.

PCB contaminated oil and spent flushing solvent from decommissioned transformers, other electrical equipment or tank trucks is removed by vacuum tank truck and placed into tankers located at the T.O. Building Loading Ramp north of the building for bulk shipment and off-site treatment, i.e., incineration or other approved TSCA methods. PCB receiving procedures are outlined in CWM's Waste Analysis Plan. The T.O. Building Loading Ramp is also used as a station for fueling vehicles and unloading fuel oil.

(3). Containment

A concrete berm surrounds the inside of the building, providing containment for spilled or leaked material. However, secondary containment will be provided by the use of steel containment pans within the T.O. Building. All transformers, other electrical equipment and drums will be stored within the containment pans. The floor is a six-inch thick reinforced concrete slab poured on fill material. The floor is smooth, with no floor drains or any other floor openings. Coatings or sealants on the existing concrete floor are not required.

The Loading Ramp is constructed of reinforced concrete with a compacted gravel base layer. The concrete containment pad is sloped toward the middle. Precipitation will collect in the containment area until it is removed via vacuum truck. The Loading Ramp was designed by a certified professional engineer to support loads and structural stresses in excess of those provided by present operations. As previously stated, an approved sealant (e.g., CHEMTEC One) has been applied to the entire loading ramp.

(a). Control of Run-On and Run-Off

Since the decommissioning operations are conducted inside the T.O. Building, run-on and run-off is not expected. At the base of each of the two doorways is a ramp, preventing liquids from escaping and precipitation from entering.

The T.O. Building Loading Ramp, being outdoors, will collect precipitation. Precipitation will be collected and removed via vacuum truck or equivalent and treated in the Aqueous Waste Treatment System, or if appropriate, characterized by sampling and discharged to the surface water drainage system if analysis indicates that it meets surface water standards.

I. TRUCK WASH FACILITY

(1). History and Design

The truck wash facility is a heated, drive-through bay on the north end of the old transportation garage, which was renovated in 1994. Dimensions of the bay are 88 feet in length by 15 feet 9 inches wide by 16 feet high. Overhead doors are located at each end of the bay. Walls are constructed of corrugated metal.

(2). Operations

The Truck Wash Building is permitted to stage solid containers only and is used to wash the exterior of trucks which have not come into contact with hazardous waste or have been previously decontaminated at the RMU-1 truck wash station. It also may be used to temporarily store bulk solid hazardous waste containers, such as to provide heat for thawing frozen loads.

Trucks to be cleaned enter the truck wash facility through the east side and exit through the west. A high pressure water wash is used to clean the vehicles. The wash system has an auxiliary heater to raise the water temperature for winter use. Vehicle wash time varies depending upon its size and the amount of cleaning required.

Attached Figure D-7 presents the maximum solid storage capacity for the area based on the previously presented spacing requirements (also see Section A).

(3). Containment

Since the Truck Wash Building is permitted for the storage of solids only, no secondary containment is required.

J. T-130 LOADING/UNLOADING AREA

(1). History and Design

The T-130 Loading/Unloading Area was constructed in 1998 and encompasses 700 square feet. It is used to store full trailers containing liquid materials generated from the SLF 1-6 leachate lift station tank T-105 or surge tank T-130. The area is 56 feet long and 13 feet wide with a curb height at the deepest end of 3'-9". The area is constructed of a reinforced concrete pad, curbed on three sides and sloped so that all precipitation or potential leakage from any unit will be contained.

(2). Operations

The T-130 Loading/Unloading Area may be used by CWM for storage of aqueous liquid which may contain small quantities of incinerable liquids and/or solid hazardous and non-hazardous waste. Containers are typically placed in this area for the following reasons:

- Transfer of leachate from tank T-105 or T-130;
- Trailer is delivered to the site after normal operating hours;
- The materials delivered are found to be off-specification;
- Materials will be processed after the date of receipt;
- Corrective measures are being instituted due to a potential leaking vehicle; or
- General storage while awaiting disposal approval or off-site transportation.

The following units may be used to store materials in this area.

- Box trailers holding hazardous and non-hazardous waste in USDOT approved containers;
- Bulk tanker trailers, vacuum trailers or other bulk containers holding aqueous liquids which may contain small quantities of incinerable liquids;
- Covered roll-off trailers holding solid materials; and
- Flatbed or low boy trailers holding hazardous and non-hazardous waste in containers or transformers. Cardboard, fiberboard, textile fabric and other non-metal or non-heavy plastic containers meeting USDOT specifications, may be stored on an uncovered

flatbed or other open trailer for up to seven (7) days in accordance with Condition B.1.a.iii in Exhibit C of Schedule 1 of Module I in the Permit.

Attached Figure D-25 presents the T-130 Loading/Unloading Area layout and the maximum liquid storage capacity for the area based on the previously presented spacing requirements (also see Section A). Secondary containment calculations accompany attached Figure D-25. As previously stated, an approved sealant, (e.g., CHEMTEC One) has been applied to the entire concrete slab.

(3). Containment

The T-130 Loading/Unloading Area is used for the aqueous liquid which may contain small quantities of incinerable liquids or solid storage of the RCRA regulated, TSCA regulated and non-hazardous full or partially full containers mentioned above.

(a). Base Construction

The T-130 Loading/Unloading Area is constructed of reinforced concrete with a compacted gravel base layer. The concrete containment pad is sloped toward the rear wall and graded toward the center from both sides. Precipitation will collect in the containment area until it is removed via vacuum truck.

The T-130 Loading/Unloading Area consists of a poured concrete slab which was designed by a certified professional engineer to support loads and structural stresses in excess of those provided by present operations.

(b). A Procedure for the Removal of Liquids from Secondary Containment and Precipitation Management

The T-130 Loading/Unloading Area, being outdoors, will collect precipitation. Precipitation will be collected and removed via vacuum truck or equivalent and treated in the Aqueous Waste Treatment, or if appropriate, characterized by sampling and discharged to the surface water drainage system if analysis indicates that it meets surface water standards.

K. T-108 LOADING/UNLOADING AREA

(1). History and Design

The T-108 Loading/Unloading Area was constructed in 1998 and encompasses 700 square feet. It is used to store full trailers containing liquid materials generated from the SLF-7/11 leachate holding tank T-108 or SLF-7 leachate wet well tank T-107. The area is 55 feet long and 13 feet wide with a curb height at the deepest end of 1’-9”. The area is constructed

of a reinforced concrete pad, curbed on three sides and sloped so that all precipitation or potential leakage from any unit will be contained.

(2). Operations

The T-108 Loading/Unloading Area may be used by CWM for storage of aqueous liquid and/or solid hazardous and non-hazardous waste. Containers are typically placed in this area for the following reasons:

- Transfer of leachate from tank T-108 or tank T-107;
- Trailer is delivered to the site after normal operating hours;
- The materials delivered are found to be off-specification;
- Materials will be processed after the date of receipt;
- Corrective measures are being instituted due to a potential leaking vehicle; or
- General storage while awaiting disposal approval or off-site transportation.

The following units may be used to store materials in this area.

- Box trailers holding hazardous and non-hazardous USDOT approved containers;
- Bulk tanker trailers, vacuum trailers or other bulk containers holding aqueous liquids;
- Covered roll-off trailers holding solid materials; and
- Flatbed or lowboy trailers holding hazardous and non-hazardous containers or transformers. Cardboard boxes and other fiberboard containers may not be stored on an uncovered flatbed or other open trailer.

Attached Figure D-13 presents the T-108 Loading/Unloading Area layout and the maximum liquid storage capacity for the area based on the previously presented spacing requirements (also see Section A). Secondary containment calculations accompany attached Figure D-13. As previously stated, an approved sealant, (e.g., CHEMTEC One) has been applied to the entire concrete slab.

(3). Containment

The T-108 Loading/Unloading Area is used for the aqueous liquid or solid storage of the RCRA regulated, TSCA regulated and non-hazardous full or partially full containers mentioned above.

(a). Base Construction

The T-108 Loading/Unloading Area is constructed of reinforced concrete with a compacted gravel base layer. The concrete containment pad is sloped toward the rear wall and graded toward the center from both sides. Precipitation will collect in the containment area until it is removed via vacuum truck.

The T-108 Loading/Unloading Area consists of a poured concrete slab which was designed by a certified professional engineer to support loads and structural stresses in excess of those provided by present operations.

(b). A Procedure for the Removal of Liquids from Secondary Containment and Precipitation Management

The T-108 Loading/Unloading Area, being outdoors, will collect precipitation. Precipitation will be collected and removed via vacuum truck or equivalent and treated in the Aqueous Waste Treatment, or if appropriate, characterized by sampling and discharged to the surface water drainage system if analysis indicates that it meets surface water standards.

L. T-109 LOADING/UNLOADING AREA

(1). History and Design

The T-109 Loading/Unloading Area was constructed in 1998 and encompasses 700 square feet. It is used to store full trailers containing liquid materials generated from the SLF-10 leachate holding tank T-109. The area is 55 feet long and 13 feet wide with a curb height at the deepest end of 1'-9". The area is constructed of a reinforced concrete pad, curbed on three sides and sloped so that all precipitation or potential leakage from any unit will be contained.

(2). Operations

The T-109 Loading/Unloading Area may be used by CWM for storage of liquid and/or solid hazardous and non-hazardous waste. Containers are typically placed in this area for the following reasons:

- Transfer of leachate from tank T-109;
- Trailer is delivered to the site after normal operating hours;
- The materials delivered are found to be off-specification;
- Materials will be processed after the date of receipt;
- Corrective measures are being instituted due to a potential leaking vehicle; or
- General storage while awaiting disposal approval or off-site transportation.

The following units may be used to store materials in this area.

- Box trailers holding hazardous and non-hazardous USDOT approved containers;
- Bulk tanker trailers, vacuum trailers or other bulk containers holding aqueous liquids;
- Covered roll-off trailers holding solid materials; and
- Flatbed or lowboy trailers holding hazardous and non-hazardous containers or transformers. Cardboard boxes and other fiberboard containers may not be stored on an uncovered flatbed or other open trailer.

Attached Figure D-12 presents the T-109 Loading/Unloading Area layout and the maximum liquid storage capacity for the area based on the previously presented spacing requirements (also see Section A). Secondary containment calculations accompany attached Figure D-12. As previously stated, an approved sealant, (e.g., CHEMTEC One) has been applied to the entire concrete slab.

(3). Containment

The T-109 Loading/Unloading Area is used for the aqueous liquid or solid storage of the RCRA regulated, TSCA regulated and non-hazardous full or partially full containers mentioned above.

(a). Base Construction

The T-109 Loading/Unloading Area is constructed of reinforced concrete with a compacted gravel base layer. The concrete containment pad is sloped toward the rear wall and graded toward the center from both sides. Precipitation will collect in the containment area until it is removed via vacuum truck.

The T-109 Loading/Unloading Area consists of a poured concrete slab which was designed by a certified professional engineer to support loads and structural stresses in excess of those provided by present operations.

(b). A Procedure for the Removal of Liquids from Secondary Containment and Precipitation Management

The T-109 Loading/Unloading Area, being outdoors, will collect precipitation. Precipitation will be collected and removed via vacuum truck or equivalent and treated in the Aqueous Waste Treatment, or if appropriate, characterized by sampling and discharged to the surface water drainage system if analysis indicates that it meets surface water standards.

M. T-158 LOADING/UNLOADING AREA

(1). History and Design

The T-158 Loading/Unloading Area was constructed in 1998 and encompasses 700 square feet. It is generally used to store full trailers containing leachate from ~~the~~ SLFs 1-11, biphased gate receipts for transfer to the oil/water separator tank T-158 and organic materials transferred from tank T-158 to tankers. The area is 55 feet long and 13 feet wide with a curb height at the deepest end of 1'-8.5". The area is constructed of a reinforced concrete pad, curbed on three sides and sloped so that all precipitation or potential leakage from any unit will be contained.

(2). Operations

The T-158 Loading/Unloading Area may be used by CWM for storage of liquid and/or solid hazardous and non-hazardous waste. Containers are typically placed in this area for the following reasons:

- Transfer of leachate to and from tank T-158, Frac Tank #3 and the tanks in the Leachate Tank Farm or organic materials from tank T-158 to tankers;
- Trailer is delivered to the site after normal operating hours;
- The materials delivered are found to be off-specification;
- Materials will be processed after the date of receipt;
- Corrective measures are being instituted due to a potential leaking vehicle; or
- General storage while awaiting disposal approval or off-site transportation.

The following units may be used to store materials in this area.

- Box trailers holding hazardous and non-hazardous waste in USDOT approved containers;
- Bulk tanker trailers, vacuum trailers or other bulk containers holding liquids;
- Covered roll-off trailers holding solid materials; and
- Flatbed or low boy trailers holding hazardous and non-hazardous waste in containers or transformers. Cardboard, fiberboard, textile fabric and other non-metal or non-heavy plastic containers meeting USDOT specifications, may be stored on an uncovered flatbed or other open trailer for up to seven (7) days in accordance with Condition B.1.a.iii in Exhibit C of Schedule 1 of Module I in the Permit.

Attached Figure D-14 presents the T-158 Loading/Unloading Area layout and the maximum liquid storage capacity for the area based on the previously presented spacing requirements (also see Section A). Secondary containment calculations accompany attached Figure D-14. As previously stated, an approved sealant, (e.g., CHEMTEC One) has been applied to the entire concrete slab.

(3). Containment

The T-158 Loading/Unloading Area is used for the liquid or solid storage of the RCRA regulated, TSCA regulated and non-hazardous full or partially full containers mentioned above.

(a). Base Construction

The T-158 Loading/Unloading Area is constructed of reinforced concrete with a compacted gravel base layer. The concrete containment pad is sloped toward the rear wall and graded toward the center from both sides. Precipitation will collect in the containment area until it is removed via vacuum truck.

The T-158 Loading/Unloading Area consists of a poured concrete slab which was designed by a certified professional engineer to support loads and structural stresses in excess of those provided by present operations.

(b). A Procedure for the Removal of Liquids from Secondary Containment and Precipitation Management

The T-158 Loading/Unloading Area, being outdoors, will collect precipitation. Precipitation will be collected and removed via vacuum truck or equivalent and

treated in the Aqueous Waste Treatment, or if appropriate, characterized by sampling and discharged to the surface water drainage system if analysis indicates that it meets surface water standards.

N. AIR EMISSION STANDARDS

Air emission standards for containers are specified in 6NYCRR 373-2.29 and 40 CFR 264/265.1080-1091 (Subpart CC), which became effective on December 6, 1996. RCRA Subpart CC is applicable to owners and operators of a TSDF which treats, stores or disposes of hazardous waste containing greater than 500 ppmw volatile organics in tanks, surface impoundments and containers. If Subpart CC wastes are managed in containers, either Level 1, Level 2 or Level 3 controls must be implemented depending on the container size, organic content and activity performed.

Level 1 controls may be used for all containers less than 119 gallons and containers greater than 119 gallons which are not in light material service (i.e., total concentration of pure organic constituents having a vapor pressure greater than 0.3 kPa (0.04 psi) at 20^{o} C is equal to or greater than 20% by weight). Level 1 controls may be satisfied through use of a container that meets USDOT specifications; use of a cover, such as a tarp, with no visible cracks, holes, gaps or other spaces; or use of an organic vapor barrier, such as a foam or tight fitting tarp.

All drums and other containers less than 119 gallons at CWM drum storage locations which are subject to Subpart CC requirements will have level 1 controls. This requirement may be satisfied by use of a USDOT specification container or a container with no cracks, gaps or holes. Most bulk containers in CWM bulk container storage locations will not be in light material service and thus will only require level 1 controls. This requirement will be satisfied by use of a tarp or equivalent with no cracks, gaps or holes.

Level 2 controls are required for containers greater than 119 gallons in light material service. Level 2 controls may be satisfied through use of a container that meets USDOT specifications; use of a container that operates with no detectable emissions as tested using USEPA Method 21; or use of a container that is vapor tight as tested by USEPA Method 27. On-site tankers and vacuum trucks containing Subpart CC wastes are tested annually by USEPA Method 27 to satisfy the Level 2 requirements. If a rolloff containing Subpart CC waste in light material service is accepted, Level 2 controls will be satisfied by covering with a tarp and testing for no detectable emissions using USEPA Method 21 within 24 hours of receipt.

Level 3 controls are required to perform stabilization of Subpart CC wastes in containers. The container must be placed inside an enclosure and vented to a control device. This operation is not performed at CWM.

O. NEW DRUM MANAGEMENT BUILDING

The location of the existing Drum Management Building (DMB) as described in Section C is located in the proposed footprint of a new landfill designated Residuals Management Unit Number Two (RMU-2). A New Drum Management Building will be constructed to replace the existing DMB.

(1). Design

The new DMB is designed with nine (9) areas for management of containers with solid or liquid wastes. Each area is segregated by concrete curbing, interior walls, and/or exterior walls. Areas will typically be connected by overhead doors and concrete ramps. The types of wastes and containers, and the container management procedures for the handling of containers in the new DMB are described in Sections A and B. Permit Design Drawings are included with the Figures in this appendix.

(2). Operations

Based on the types/volumes of wastes received by the site, the new DMB will be the focal point for most incoming containers after construction and closure of the existing DMB. Separation of incompatibles will be accomplished by placing these wastes in separate secondary containment areas within the new DMB. Solid waste containers may be stored throughout the new DMB. The table in Section A and Figure D-1B in the figures section of this appendix present the new DMB layout and the maximum liquid and/or solid storage capacity for the building based on the previously presented spacing requirements. The arrangements of containers may change depending on storage needs, however, compatibility guidelines will be met. Secondary containment calculations accompany Figure D-1B in this appendix. As previously stated, an approved sealant, (e.g., CHEMTEC One) will be applied to all concrete floor areas in this building which are permitted for liquid waste storage.

Loading/unloading areas at the new DMB have ramps allowing equipment to move directly onto transport vehicles from the unloading docks. Containers will be removed by use of forklifts that are equipped with drum handling attachments. The attachments generally employed are capable of lifting up to two (2) drums at a time. Other container moving practices may be utilized as technologies improve.

(a). Loading/Unloading Areas

The new DMB Loading/Unloading Area & Ramp is permitted for solids and liquids container storage, excluding flammable. Secondary containment is provided by the sloped concrete ramp and the truck dock. An approved sealant, (e.g., CHEMTEC One) will be applied to the concrete area of the ramp. Incoming and outgoing box trailers containing 55-gallon containers or equivalent containers of liquids and/or

solids may be staged in this area. Incoming trailers will be unloaded and a quality control check performed. The dock area will be covered, providing protection for personnel during inclement weather.

After receipt, containers may be stored on a flatbed in the dock area incidental to the transfer of these containers to other on-site operations, such as aqueous treatment, stabilization, or the landfill. If DOT incompatible waste containers remain stored on flatbed trailers in the dock area at the end of the work shift they will be separated from each other as required by 6 NYCRR Part 373-2.9(h)(s).

The new DMB Fuels Transfer Ramp is permitted for liquid storage. This ramp will be used to transfer compatible liquids from drums inside the new DMB Fuels Pumping Area to bulk tankers located on the ramp. The ramp is sized to accommodate two tankers to also allow the transfer from tanker to tanker. As previously stated, an approved sealant (e.g., CHEMTEC One) will be applied to the entire ramp area.

(b). Container Waste Characterization

The waste characterization procedures described in CWM's Waste Analysis Plan will be used to determine the compatibility grouping for a particular waste material in the new DMB.

In addition, each corrosive is specified as either an acid or base for further segregation. All acutely toxic materials (P codes which are not "derived from" treatment residues) will be handled as poisons if they are not specifically listed by DOT for other hazardous properties and will be stored in Area 4 (Poison Area). Any D, F, K or U codes for materials not specifically assigned a hazard class will be recognized as Class 9 for storage purposes. In the fuels storage area, flammables, combustible, Class 9 and non-regulated organic liquids will be stored for bulking into a fuel or incineration blend.

(3). Containment

Containment is provided by a combination of sloping floors, trenches, and/or concrete curbing around the perimeter of the building and individual areas. The maximum 55-gallon equivalent containers (solids/liquids) allowed for this building is presented in Section A and on Figure D-1B in this appendix.

(a). Base Construction

The DMB floor, loading/unloading ramp and West Ramp will be constructed of concrete and inspected as defined within the Facility Inspection Plan. The base was

designed by a certified professional engineer to support loads and structural stresses in excess of those provided by present operations.

(b). A Procedure for the Containment of Leaking Drums

The new DMB will be inspected daily on operating days for leaks or spills. If spills are observed, they will be contained within the building. Spilled materials will generally be absorbed with absorbent and placed into drums for disposal. Upon receipt of a shipment of drums and after unloading, a visual inspection is made for leaking drums.

If a small leak should occur, the contents of a leaking drum are transferred to another appropriate container or the drum is placed in a salvage drum. In the event of major leaks or spills, liquids will be removed by vacuum trucks or absorbed with a compatible absorbent material and placed into containers for disposal.

Spilled material is cleaned up with absorbent materials. Spill control procedures are described in the CWM Contingency Plan.

(c). Control of Run-off and Run-on

Because all container management operations take place within the confines of the new DMB, no run-off or run-on is expected. However, precipitation may collect in the covered truck unloading area or covered fuels transfer area ramp. Precipitation may be treated in the Aqueous Treatment System without sampling. If the liquids will be discharged to the surface water drainage system, a water sample will be collected and analyzed to confirm the liquids meet surface water standards prior to the discharge.

(4). Fuels Pumping Area

A separate pumping station is located in a room at the north end of the new DMB. The purpose of this station is to transfer waste organic liquids, such as oils, solvents, lean waters, etc., from drums and oil filled equipment into bulk containers at the new DMB Fuels Transfer Ramp using permanently installed pumps. This operation provides blending and consolidation of liquids for off-site shipments. Drums will be staged in Area 1 of the new DMB and no drums will be staged or stored in the fuels pumping room. Containment will be provided by the new DMB (i.e., concrete floor 2-inch curb around the perimeter of the room).

(5). Transformer Flush Area

The Transformer Flush Area will be used for permitted solid and liquid container storage. The facility receives PCB-contaminated transformers and other electrical equipment for

decanting and decommissioning prior to disposal. This equipment will be brought to the Transformer Flush Area after completion of the receiving procedures. Regulated activities which may be performed in the Transformer Flush Area will include equipment decommissioning, storage, decanting, flushing and miscellaneous activities such as cutting contaminated cable.

PCB contaminated oil and spent flushing solvent from decommissioned transformers, other electrical equipment or tank trucks will be removed by vacuum tank truck and placed into tankers located at the Fuels Loading Ramp north of the building for bulk shipment and off-site treatment, i.e., incineration or other approved TSCA methods. PCB receiving procedures are outlined in CWM's Waste Analysis Plan.

P. NEW FULL TRAILER PARKING AREA

The location of the existing South (Full Trailer Parking Area) as described in Section E is partially located in the proposed footprint of a new landfill designated Residuals Management Unit Number Two (RMU-2). A New Full Trailer Parking Area will be constructed to replace the existing South Trailer Parking Area.

(1). Design

A new Full Trailer Parking Area (see Figure D-3A in the figures section of this appendix) will be constructed which will encompass 13,700 square feet, and will be used to store full trailers containing solid or liquid materials. The area is 250 feet long and is designed to store liquid and solid materials in containers prior to disposal or shipment off-site. The area will be constructed of a reinforced concrete pad, curbed on three sides and sloped so that all precipitation or potential leakage from any unit will be contained.

(2). Operation

The new Full Trailer Parking Area will be used for storage of liquid and/or solid hazardous and non-hazardous waste. Containers will be typically placed in this area for the following reasons:

- The materials delivered are found to be off-specification;
- Materials will be processed after the date of receipt;
- Corrective measures are being instituted due to a potential leaking vehicle; or
- General storage while awaiting disposal approval or off-site transportation.

The following units may be used to store materials in this area.

- Box trailers holding hazardous and non-hazardous DOT approved containers;
- Bulk tanker trailers, vacuum trailers or other bulk containers holding liquids;
- Covered roll-off trailers or other bulk containers holding solid materials; and
- Flatbed or lowboy trailers holding hazardous and non-hazardous containers or transformers. Cardboard, fiberboard, textile fabric or other non-metal or non-heavy plastic containers meeting USDOT specifications, may be stored on an uncovered flatbed or other open trailer for up to seven (7) days in accordance with Condition B.1.a.iii in Exhibit C of Schedule 1 of Module I in the Permit.

Figure D-3A in the figures section of this appendix presents the proposed new Full Trailer Parking Area layout and the maximum liquid and/or solid storage capacity for the area based on the previously presented spacing requirements (see Section A). Secondary containment calculations accompany Figure D-3A in this appendix. An approved sealant, (e.g., CHEMTEC One) will be applied to the entire concrete slab.

(3). Containment

The new Trailer Parking Area will be used for the liquid or solid storage of the RCRA regulated, TSCA regulated and non-hazardous full or partially full containers mentioned above.

(a). Base Construction

The new Full Trailer Parking Area will be constructed of reinforced concrete with a compacted gravel base layer. The concrete containment pad will be sloped toward the rear wall and graded toward two low points. Precipitation will collect in the containment area until it is removed via vacuum truck. The new Full Trailer Parking Area will consist of a poured concrete slab which has been designed by a certified professional engineer to support loads and structural stresses in excess of those provided by present operations.

(b). A Procedure for the Removal of Liquids from Secondary Containment and Precipitation Management

The new Full Trailer Parking Area, being outdoors, will collect precipitation. Precipitation will be collected and removed via vacuum truck or equivalent and treated in the Aqueous Waste Treatment System, or if appropriate, characterized by sampling and discharged to the surface water drainage system if analysis indicates that it meets surface water standards.

Q. NEW STABILIZATION TRAILER PARKING AREA

The location of the Stabilization Trailer Parking Area (Areas III and IV) as described in Section F is partially located in the proposed footprint of a new landfill designated Residuals Management Unit Number Two (RMU-2). A New Stabilization Trailer Parking Area will be constructed in the location of Areas I and II to replace the existing Stabilization Trailer Parking Areas.

(1). Design

The new Stabilization Trailer Parking Area (see Figure D-4A in the figures section of this appendix) will be 13,125 square feet, and will be used to store full trailers containing solid or liquid materials. The area is 375 feet long and is designed to store liquid and solid materials in containers prior to disposal. The area will be constructed of a reinforced concrete pad, curbed on three sides and sloped so that all precipitation or potential leakage from any unit will be contained.

The new Stabilization Trailer Parking Area is permitted to store solid and liquid containers incidental to the treatment operation. Operational flexibility may require storage or staging of different waste types and quantities. Figure D-4A in the figures section of this appendix presents the maximum liquid and/or solid storage capacity for the new Stabilization Trailer Parking Area based on the previously presented spacing requirements (see Section A). Secondary containment calculations accompany Figure D-4A in this appendix. An approved sealant, (e.g., CHEMTEC One) will be applied to the entire concrete slab.

(2). Operations

The new Stabilization Trailer Parking Area may be used for storage of liquid and/or solid hazardous and non-hazardous waste. Containers may typically be placed in this area for the following reasons:

- The materials delivered are found to be off-specification;
- Materials will be processed after the date of receipt;
- Corrective measures are being instituted due to a potential leaking vehicle; or
- General storage while awaiting disposal approval or off-site transportation.

Units which may be stored or staged incidental to treatment in this area include:

- Box trailers holding hazardous and non-hazardous DOT approved containers;
- Bulk tanker trailers, vacuum trailers or other bulk containers holding liquids;

- Covered roll-off trailers or other bulk containers holding solid materials; and

- Flatbed or lowboy trailers holding hazardous and non-hazardous containers or transformers. Cardboard, fiberboard, textile fabric or other non-metal or non-heavy plastic containers meeting USDOT specifications, may be stored on an uncovered flatbed or other open trailer for up to seven (7) days in accordance with Condition B.1.a.iii in Exhibit C of Schedule 1 of Module I in the Permit.

(3). Containment

(a). Base Construction

The new Stabilization Trailer Parking Area will be constructed of reinforced concrete with a compacted gravel base layer. The concrete containment pad will be sloped toward the rear wall and graded toward two low points. The base of the new Stabilization Trailer Parking Area has been designed by a certified professional engineer to support loads and structural stresses in excess of those provided by present operations.

(b). A Procedure for the Removal of Liquids from Secondary Containment and Precipitation Management

The Stabilization Trailer Parking Area, being outdoors, will collect precipitation. Precipitation will be collected and removed via vacuum truck or equivalent and treated in the Aqueous Waste Treatment System, or if appropriate, characterized by sampling and discharged to the surface water drainage system if analysis indicates that it meets surface water standards.

R. NEW T-109 LOADING/UNLOADING AREA

The T-109 Loading/Unloading Area as described in Section L is partially located in the proposed footprint of a new landfill designated Residuals Management Unit Number Two (RMU-2). A New T-109 Loading/Unloading Area will be constructed to replace the existing T-109 Loading/Unloading Area.

(1). Design

The new T-109 Loading/Unloading Area (see Figure D-12A in the figures section of this appendix) will encompass approximately 700 square feet. It will be used to store full trailers containing liquid materials generated from the SLF-10 leachate holding tank T-109. The area is 55 feet long and 13 feet wide with a curb height at the deepest end of 2’-3”. The

area will be constructed of a reinforced concrete pad, curbed on three sides and sloped so that all precipitation or potential leakage from any unit will be contained.

(2). Operations

The new T-109 Loading/Unloading Area may be used by CWM for storage of liquid and/or solid hazardous and non-hazardous waste. Containers may typically be placed in this area for the following reasons:

- Transfer of leachate from tank T-109;
- The materials delivered are found to be off-specification;
- Materials will be processed after the date of receipt; or
- General storage while awaiting disposal approval or off-site transportation.

The following units may be used to store materials in this area.

- Box trailers holding hazardous and non-hazardous DOT approved containers;
- Bulk tanker trailers, vacuum trailers or other bulk containers holding liquids;
- Covered roll-off trailers or other bulk containers holding solid materials; and
- Flatbed or lowboy trailers holding hazardous and non-hazardous containers or transformers. Cardboard, fiberboard, textile fabric or other non-metal or non-heavy plastic containers meeting USDOT specifications, may be stored on an uncovered flatbed or other open trailer for up to seven (7) days in accordance with Condition B.1.a.iii in Exhibit C of Schedule 1 of Module I in the Permit.

Figure D-12A in the figures section of this appendix presents the new T-109 Loading/Unloading Area layout and the maximum liquid storage capacity for the area based on the previously presented spacing requirements (see Section A). Secondary containment calculations accompany Figure D-12A in this appendix. An approved sealant, (e.g., CHEMTEC One) will be applied to the entire concrete slab.

(3). Containment

The new T-109 Loading/Unloading Area will be used for the liquid or solid storage of the RCRA regulated, TSCA regulated and non-hazardous full or partially full containers mentioned above.

(a). Base Construction

The new T-109 Loading/Unloading Area will be constructed of reinforced concrete with a compacted gravel base layer. The concrete containment pad will be sloped toward the rear wall and graded toward the center from both sides. Precipitation will collect in the containment area until it is removed via vacuum truck.

The new T-109 Loading/Unloading Area will consist of a poured concrete slab which has been designed by a certified professional engineer to support loads and structural stresses in excess of those provided by present operations.

(b). A Procedure for the Removal of Liquids from Secondary Containment and Precipitation Management

The new T-109 Loading/Unloading Area, being outdoors, will collect precipitation. Precipitation will be collected and removed via vacuum truck or equivalent and treated in the Aqueous Waste Treatment System, or if appropriate, characterized by sampling and discharged to the surface water drainage system if analysis indicates that it meets surface water standards.

S. NEW T-158 LOADING/UNLOADING AREA

The T-158 Loading/Unloading Area as described in Section M is partially located in the proposed footprint of a new landfill designated Residuals Management Unit Number Two (RMU-2). A new T-158 Loading/Unloading Area will be constructed to replace the existing T-158 Loading/Unloading Area.

(1). Design

The new T-158 Loading/Unloading Area (Figure D-14A in the figures section of this appendix) will encompass approximately 700 square feet. It will generally be used to store full trailers containing leachate from SLFs 1-11, biphased gate receipts for transfer to the oil/water separator tank T-158 and organic materials transferred from tank T-158 to tankers. The area will be 55 feet long and 13 feet wide with a curb height at the deepest end of 2'-3". The area will be constructed of a reinforced concrete pad, curbed on three sides and sloped so that all precipitation or potential leakage from any unit will be contained.

(2). Operations

The new T-158 Loading/Unloading Area may be used by CWM for storage of liquid and/or solid hazardous and non-hazardous waste. Containers may typically be placed in this area for the following reasons:

- Transfer of leachate to and from tank T-158, Frac Tank #3 and the closed landfill tank in the Leachate Tank Farm or organic materials from tank T-158 to tankers;
- Trailer is delivered to the site after normal operating hours;
- The materials delivered are found to be off-specification;
- Materials will be processed after the date of receipt;
- Corrective measures are being instituted due to a potential leaking vehicle; or
- General storage while awaiting disposal approval or off-site transportation.

The following units may be used to store materials in this area.

- Box trailers holding hazardous and non-hazardous DOT approved containers;
- Bulk tanker trailers, vacuum trailers or other bulk containers holding liquids;
- Covered roll-off trailers, covered dump trailers or other bulk containers holding solid materials; and
- Flatbed or lowboy trailers holding hazardous and non-hazardous containers or transformers. Cardboard, fiberboard, textile fabric or other non-metal or non-heavy plastic containers meeting USDOT specifications, may be stored on an uncovered flatbed or other open trailer for up to seven (7) days in accordance with Condition B.1.a.iii in Exhibit C of Schedule 1 of Module I in the Permit.

Figure D-14A in the figures section of this appendix presents the new T-158 Loading/Unloading Area layout and the maximum liquid storage capacity for the area based on the previously presented spacing requirements (see Section A). Secondary containment calculations accompany Figure D-14A in this appendix. An approved sealant, (e.g., CHEMTEC One) has been applied to the entire concrete slab.

(3). Containment

The new T-158 Loading/Unloading Area is used for the liquid or solid storage of the RCRA regulated, TSCA regulated and non-hazardous full or partially full containers mentioned above.

(a). Base Construction

The new T-158 Loading/Unloading Area will be constructed of reinforced concrete with a compacted gravel base layer. The concrete containment pad will be sloped toward the rear wall and graded toward the center from both sides. Precipitation will collect in the containment area until it is removed via vacuum truck.

The new T-158 Loading/Unloading Area will consist of a poured concrete slab which has been designed by a certified professional engineer to support loads and structural stresses in excess of those provided by present operations.

(b). A Procedure for the Removal of Liquids from Secondary Containment and Precipitation Management

The new T-158 Loading/Unloading Area, being outdoors, will collect precipitation. Precipitation will be collected and removed via vacuum truck or equivalent and treated in the Aqueous Waste Treatment System, or if appropriate, characterized by sampling and discharged to the surface water drainage system if analysis indicates that it meets surface water standards.

APPENDIX D-L, SECTION O

PCB WAREHOUSE AREA 3

SECONDARY CONTAINMENT PAN DESIGN

Modified: Added 06/10

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Transmitted Via Electronic Mail

June 26, 2008

Stephen Rydzyk
Engineer
CWM Chemical Services, LLC
1550 Balmer Rd. P.O. Box 200
Model City, NY 14107

Re: CWM Chemical Services, LLC
Model City Facility
PCB Warehouse Building Containment Pan Design
Response to NYSDEC Comments

Dear Mr. Rydzyk:

EnSol, Inc. (EnSol) is providing this letter to CWM Chemical Services, LLC (CWM) to present additional information on the design of the proposed steel secondary containment pans for the PCB Warehouse Building at your Model City, NY Facility. Additionally, this letter provides supporting information in response to NYSDEC comments provided to CWM under Item 2 of Enclosure No. 3 of CWM's Sitewide Permit Modification Application for PCB Warehouse CSA 3/6 Design Revisions (see attachment 1).

The design of the containment pans, in accordance with 6 NYCRR 373-2.9(f)(1), was presented on drawing Sheet 1 titled "Plans, Profiles, and Details – PCB Warehouse Building Containment Pan Design", dated February 2008, prepared by EnSol (see Attachment 2). We understand this drawing was not submitted by CWM to the NYSDEC with the subject Permit Modification Application. With reference to the NYSDEC comments and the attached design drawing, the following is provided:

- Details regarding the type and thickness of steel used to construct the pans are shown. The design of the steel pans was developed by EnSol to provide sufficient structural integrity to withstand the weight of the stored drums and to not be damaged by drum handling activities (e.g. placement or removal) or by drum handling equipment (e.g., forklifts). Note that the bottom and sides of the steel pans (consisting of continuous welded ¼-inch steel plate and continuous welded 2" x 2" x ¼" steel angles, respectively) are entirely supported by the building concrete floor. Access into and out of the pans by drum handling equipment is limited to the steel ramp located at the one end of the pans.

- Details regarding how bottom sections and/or bottom/sides of these pans will be joined to be free of gaps, so as to demonstrate compliance with 6 NYCRR 323-2.9(f)(1)(i) of the regulations is shown. The steel bottom plates and perimeter supporting angles and tube steel members are all to be constructed as one continuously welded system and will be free of gaps once assembled. Note 10 on Sheet 1 require the pans be capable of holding water for minimum 24-hour duration without leaks. This hydrostatic test will be conducted and documented prior to placing the pans into service.

Modified: Added 06/10

- The pan bottoms are to be placed directly on the concrete floor of the PCB Warehouse Building which is relatively flat and level. The drums are then to be placed directly on the interior surface of the containment pans. In lieu of a sloped containment pan or elevating the drums above the pan, we understand CWM will inspect the pans on a daily basis for signs of any accumulated leaked or spilled liquid. CWM will promptly remove any leaked or spilled liquid within 24-hours of its identification. In addition, we understand that only drums whose contents are compatible with each other will be stored in the same pan. We concur with CWM that this method of operation demonstrates compliance with 6 NYCRR 373-2.9(f)(1)(ii) of the regulations.

- Regarding the chemical compatibility of the liquids to be stored in the drums as compared to the containment pan materials of construction, we have reviewed a proposed protective coating product that CWM intends to use for the interior surfaces of the pans. The product is known as Vinester® Series 120, 5001 – 5002, as manufactured by Tnemec Company, Inc (see Attachment 3). This coating system is a premium Novalac Vinyl Ester coating intended for use to protect against organic and inorganic acids and sour crude when stored at elevated temperature in insulated tanks. It is a sprayable lining for tanks and vessels which provides splash, spillage, and fume protection for structural surfaces and secondary containment. We have also reviewed the manufacturer's chemical resistance literature (see Attachment 3) and find this system offers a very high level of protection against chemical attack by many chemicals that could be expected to be placed within the containment pans. Note 12 has been added to design drawing Sheet 1 to specify this product be placed on all interior surfaces of the containment pans.

EnSol has reviewed the system materials of construction and considers them appropriate and adequate for the intended service and types of wastes expected to be handled. It is noted, as with all coating systems, that the system has certain limitations relative to service temperature, abrasion resistance, and chemical resistance. Other factors that may have an affect on the service life of the coating system include overall thickness, physical abuse, and combinations of wastes. It is recommended that CWM review the product literature included in Attachment 3, particularly the Chemical Resistance Guide by Tnemec Company, Inc. EnSol understands that CWM cannot provide an all-inclusive list of specific wastes to be handled, due to the expected variety of materials that may be stored. The above mentioned manufacturer literature should be referred to by CWM personnel, as needed, to make a determination as to if a particular waste is acceptable to place in the pans. CWM should consult the coating manufacturer for assistance when in doubt.

We trust this letter and attachments provide the information necessary to satisfy the NYSDEC comments. Please do not hesitate to contact me if you have any questions or require additional information.

Sincerely,

ENSOL, INC.

Brian D. Shiah

Brian D. Shiah, P.E.
Vice President

Attachments

Modified: Added 06/10

PCB WAREHOUSE BUILDING CONTAINMENT PAN DESIGN

CWM Chemical Services, LLC
Model City, New York Facility

CERTIFICATION

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

Brian D. Shiah, P.E.
ENSOL, INC.

6/26/08
Date

Modified: Added 06/10

Attachment 1

EnSol, Inc. *Environmental Solutions*

professional engineering – business consulting

NYSDEC Comments

Modified: Added 06/10

ENCLOSURE NO. 3
Permit Modification Application - PCB Warehouse CSA 3/6 Design Revisions
NYSDEC Comments

1. Attachment A, Page 4 of 7 — **Part A Application**

CWM is proposing to modify this page of the Part A Application (Attachment A of the Permit) to reflect the overall decrease in the Facility's container storage capacity that arises out of the proposed decrease in capacity of PCB Warehouse CSA 3/6. While this modification is appropriate, it should be accomplished through use of the updated/revised USEPA Part A Application Form described in Enclosure No.1 Comment 1, for similar reasons as expressed by this previous comment.

2. Att. D, Am. D-1, Page 13, Section D.(2) — **PCB WAREHOUSE BUILDING - Operation**

This modified Permit page states that liquid drums must be stored within containment pans. However, none of the submitted, modified Permit pages include any design details for these pans. The Permit modification application must include the following containment pan design details to demonstrate compliance with 6 NYCRR 373-2.9(f)(1) of the regulations:

- Details regarding the type and thickness of steel used to construct the pans and a demonstration that they have sufficient structural integrity to withstand the weight of the stored drums and will not be damaged by drum handling activities (e.g., placement or removal) or by drum handling equipment (e.g., forklifts).

- Details regarding how bottom sections and/or bottom/sides of these pans will be joined to be free of gaps, so as to demonstrate compliance with 6 NYCRR 373-2.9(f)(1)(i) of the regulations.

- Details regarding whether each pan bottom will be sloped or how drums will be elevated to prevent contact with any accumulated leaked or spilled liquid, so as to demonstrate compliance with 6 NYCRR 373-2.9(f)(1)(ii) of the regulations.

In addition, a brief summary of the containment pan design should be included on the modified Permit page.

It is also stated on this page that all containers stored in the PCB Warehouse are compatible. It is unclear whether this refers to both waste to waste compatibility and waste to containment pan compatibility. CWM needs to provide information which indicates how they will insure that containerized waste types within a pan will be compatible with one another and with the containment pan (e.g., waste types which are strongly acidic could react with the un-coated steel pan).

Attachment 2

EnSol, Inc. Environmental Solutions

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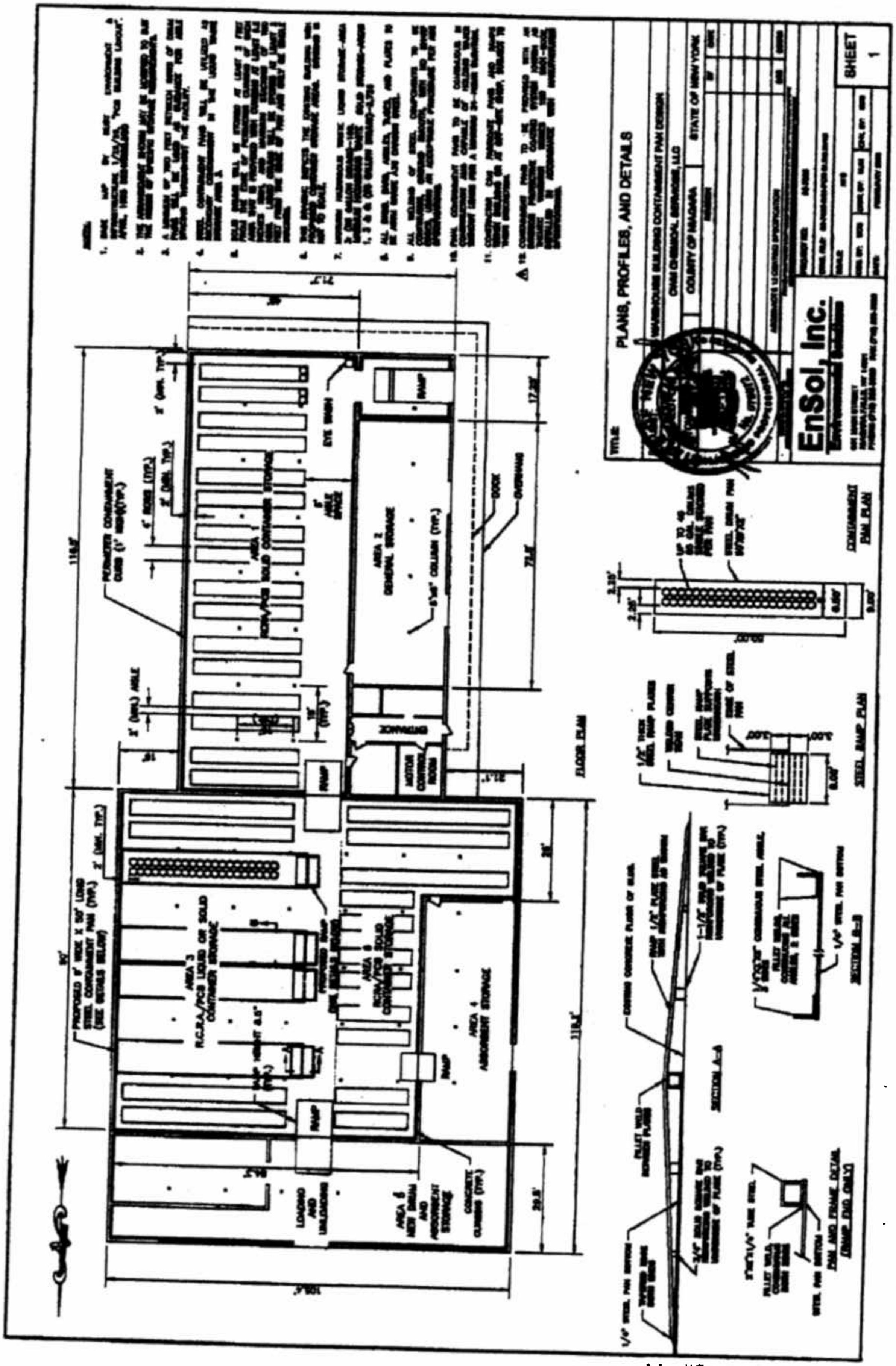
Containment Pan Design Drawing

Modified: Added 06/10



Modified: Added 06/10

Attachment 3

EnSol, Inc. *Environmental Solutions*

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Tnemec Series 120 – 5001/5002 Coatings
Product & Chemical Resistance Literature

Modified: Added 06/10

PRODUCT PROFILE

GENERIC DESCRIPTION Novolac Vinyl Ester

COMMON USAGE Superior protection against organic and inorganic acids and sour crude when stored at elevated temperatures in insulated tanks. Sprayable lining for tanks and vessels. Provides splash, spillage and fume protection for structural surfaces and secondary containment. Frequently used as a topcoat for additional chemical resistance with various epoxy flooring and wall systems.
Note: Contact your Tnemec representative or Tnemec Technical Services with specific chemical exposures.

COLORS 5002 Beige (primer only) and 5001 Gray (finish coat only)
Color change will occur when Series 120 is exposed to sunlight; also, some batch-to-batch color variations can be expected.

FINISH Semi-gloss

PERFORMANCE CRITERIA Extensive test data available. Contact your Tnemec representative for specific test results.

COATING SYSTEM

PRIMERS **Prepared Bare Concrete and Steel:** 120-5002
Thick-Film Floor and Wall Systems: Series 239, 275

CONCRETE FILLER & SURFACER See: 120-5003 Vinester F & S, 218, 219

SURFACE PREPARATION

STEEL SSPC-SP5/NACE 1 White Metal Blast with a minimum anchor pattern of 3.0 mils. Refer to Tnemec's Application Specification for Series 120 to Steel Substrates for specific requirements.

CONCRETE Allow to cure for 28 days. Abrasive blast referencing SSPC-SP13/NACE 6, ICRI CSP5 Surface Preparation of Concrete and Tnemec's Surface Preparation and Application Guide. Refer to Tnemec's Application Specification for Series 120 to Concrete Substrates for specific requirements.

ALL SURFACES Must be clean, dry and free of oil, grease, form release agents, curing compounds/membranes, sealers, hardeners and other contaminants.

TECHNICAL DATA

VOLUME SOLIDS Theoretical 89% (mixed). Series 120 Vinester system contains a reactive monomer and some loss will occur during application and cure. Actual solids by volume will vary depending upon temperature and air movement. See Practical Coverage Rates.

RECOMMENDED DFT 12.0 to 18.0 mils (305 to 455 microns) per coat (minimum of one coat 5002 primer and one coat 5001 finish coat).

CURING TIME

	Temperature	To Handle	To Recoat	Immersion
120-5001	75°F (24°C)	4 hours	6 hours min. 72 hours max.	72 hours min.
120-5002	75°F (24°C)	6 hours	6 hours min. 72 hours max.	72 hours min.

Note: Scarification required if maximum recoat time is exceeded.
Curing time varies with surface temperature, air movement, humidity and film thickness.

VOLATILE ORGANIC COMPOUNDS

Unthinned (theoretical)		Thinned 3% (theoretical)	
120-5001	120-5002	120-5001	120-5002
0.64 lbs/gallon (77 grams/litre)	0.59 lbs/gallon (71 grams/litre)	0.83 lbs/gallon (99 grams/litre)	0.78 lbs/gallon (93 grams/litre)

NUMBER OF COMPONENTS Two: Part A (base) and Part B (catalyst)

PACKAGING 1 gallon (3.79L) kits. 3 gallon (11.4L) kits are available upon special request.

NET WEIGHT PER GALLON Series 120-5001: 10.98 ± 0.25 lbs (4.98 ± .11 kg) (mixed)
Series 120-5002: 10.80 ± 0.25 lbs (4.90 ± .11 kg) (mixed)

STORAGE TEMPERATURE Minimum 35°F (2°C) Maximum 90°F (32°C)

TEMPERATURE RESISTANCE (Dry) Continuous 300°F (149°C) Intermittent 450°F (232°C)

SHELF LIFE Part A: 3 months at 35°F to 49°F (2°C to 9°C), 2 months at 50°F to 79°F (10°C to 26°C), 1 month at 80°F to 90°F (27°C to 32°C). Do not store at temperatures below 35°F (2°C) or above 90°F (32°C). DUE TO THE REACTIVE NATURE OF VINYL ESTER RESINS AND THE CORRESPONDING LIMITED SHELF LIFE, EXPEDITIOUS USE OF THIS PRODUCT IS SUGGESTED. SINCE JOBSITE STORAGE CONDITIONS ARE BEYOND TNEMEC'S CONTROL, THIS PRODUCT IS NON-RETURNABLE.

Modified: Added 06/10

SERIES 120 Vinester

TECHNICAL DATA Continued

SHELF LIFE (continued) Part B: 12 months at recommended storage temperature.

FLASH POINT - SETA Part A: 90°F (32°C) Part B: 190°F (88°C)

HEALTH & SAFETY Paint products contain chemical ingredients which are considered hazardous. Read container label warning and Material Safety Data Sheet for important health and safety information prior to the use of this product. **Keep out of the reach of children.**

APPLICATION

PRACTICAL COVERAGE RATES

Dry Mils (Microns)	Wet Mils (Microns)	Sq Ft/Gal (m^2/Gal)
12.0-18.0 (305-455)	20.0-25.0 (510-635)	60-80 (5.6-7.4)

Practical spreading rates are based on typical field applications. Actual spreading rates will vary with surface profile, amount of overspray and surface irregularities.

Application of coating below minimum or above maximum recommended dry film thicknesses may adversely affect coating performance. THIS PRODUCT SHOULD NOT BE APPLIED BELOW 60°F (16°C) MATERIAL TEMPERATURE.

MIXING Power mix contents of Part A (base) thoroughly, making sure no pigment remains on the bottom of the can. Add the Part B (catalyst) slowly to the Part A while under agitation. Continue to agitate until thoroughly mixed. Care should be exercised so as not to entrap air in the mixed material. Do not use mixed material beyond pot life limits.

POT LIFE 3 to 4 hours at 65°F (18°C) 1½ to 2½ hours at 75°F (24°C)*

*At higher temperatures pot life will decrease (use caution in spray equipment). In hot weather, material should be cooled to 65°F to 80°F (18°C to 27°C) prior to mixing and application to improve workability and avoid shortened pot life.

THINNING Use No. 19 Thinner. For air or airless spray, thin up to 3% per gallon if needed for good atomization.

SURFACE TEMPERATURE Minimum 60°F (16°C) Maximum 110°F (43°C)

The surface should be dry and at least 5°F (3°C) above the dew point. At surface temperatures below 60°F (16°C), Series 120 will not cure properly or obtain maximum chemical resistance. Following application, the surface temperature must be held at or above 60°F (16°C) until the coating surface is tack free [approximately 8 hours at 60°F (16°C) surface temperature, 6 hours at 70°F (21°C) surface temperature, 4 hours at 80°F (27°C) surface temperature] to avoid incomplete polymerization. At relative humidities above 75%, the cure of this coating may be retarded. It is also recommended that all precautions be taken to insure that adequate forced-air ventilation exists.

APPLICATION EQUIPMENT

Air Spray

Gun	Fluid Tip	Air Cap	Air Hose ID	Mat'l Hose ID	Atomizing Pressure	Pot Pressure
DeVilbiss JGA	E	78	5/16" or 3/8" (7.9 or 9.5 mm)	3/8" or 1/2" (9.5 or 12.7 mm)	60-80 psi (4.2-5.5 bar)	10-20 psi (0.7-1.4 bar)

Low temperatures or longer hoses require higher pot pressure.

Airless Spray

Tip Orifice	Atomizing Pressure	Mat'l Hose ID	Manifold Filter
0.015"-0.021" (380-535 microns)	2400-3000 psi (165-207 bar)	1/4" or 3/8" (6.4 or 9.5 mm)	60 mesh (250 microns)

Use appropriate tip/atomizing pressure for equipment, applicator technique and weather conditions.

Brush: Recommended for small areas only. Use high quality natural or synthetic bristle brushes.

Note: Two or more coats may be required to obtain recommended film thicknesses.

CLEANUP Flush and clean all equipment immediately after use with the recommended thinner or MEK. If material begins to exotherm, flush equipment immediately.

TNEMEC COMPANY, INCORPORATED
6800 CORPORATE DRIVE, KANSAS CITY, MISSOURI 64120-1372 TEL: 1 800 TNEMEC 1 www.tnemec.com

PRINTED IN USA
(YDAT1209) 120

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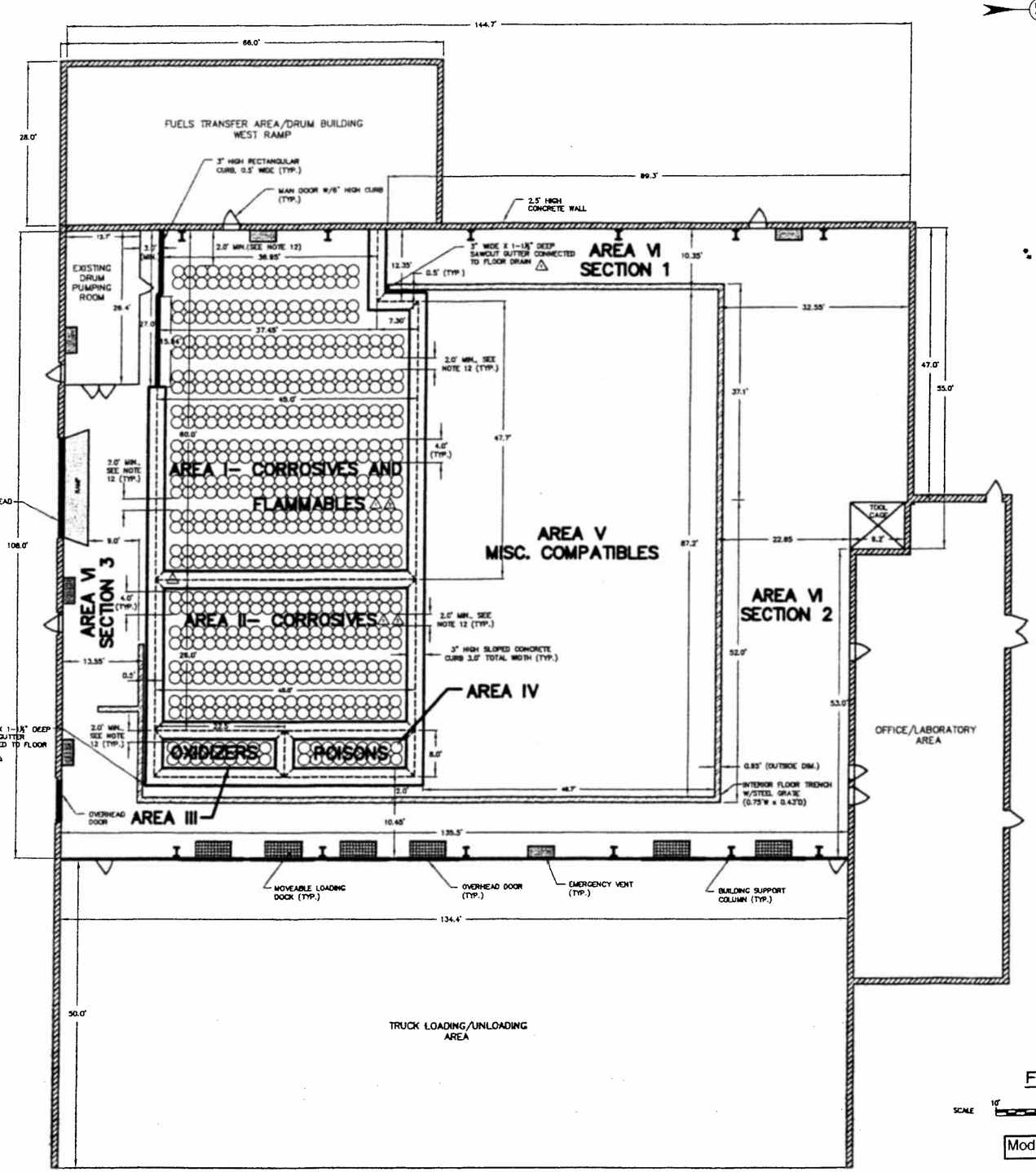
FIGURES
&
CAPACITY CALCULATIONS

FOR

CONTAINER STORAGE AREAS

FIGURE D-1A

DRUM HANDLING BUILDING LAYOUT



FLOOR PLAN

SCALE 10' 0' 10' 20'

Modified: 10/06

NOTES:

1. BASE MAP BY ENSOL, INC. FROM FIELD MEASUREMENTS TAKEN ON MAY 17, 2005.
2. THE ARRANGEMENT SHOWN MAY BE MODIFIED TO SUIT THE NEEDS OF SPECIFIC STORAGE REQUIREMENTS.
3. A MINIMUM OF TWO FEET BETWEEN ROWS OF DRUM PAIRS (FOUR FEET FOR FLAMMABLES) WILL BE USED AS GUIDANCE FOR AISLE SPACING THROUGHOUT THE FACILITY.
4. CONCRETE CURBING WILL BE UTILIZED ALONG WITH EXISTING CONCRETE FLOOR AS SECONDARY CONTAINMENT FOR LIQUID STORAGE.
5. DRUMS WILL BE STORED A MINIMUM OF TWO FEET FROM THE CENTERLINE OF CURBING AND EDGE OF WALLS (FOUR FEET FOR FLAMMABLES), AND MAY BE STACKED TWO HIGH (ONE HIGH FOR FLAMMABLES).
6. INCOMPATIBLES WILL BE STORED WITH A MINIMUM FOUR FOOT SEPARATION BETWEEN STORAGE AREAS.
7. MAXIMUM STORAGE CAPACITY: CALCULATED AS 55-GALLON DRUMS
   △△ AREA I: CORROSIVES AND FLAMMABLES – 688 (LIQUID OR SOLID)
   AREA II: CORROSIVES – 320 (LIQUID OR SOLID)
   AREA III: OXIDIZERS – 36 (LIQUID OR SOLID)
   AREA IV: POISONS – 36 (LIQUID OR SOLID)
   △ AREA V: MISCELLANEOUS COMPATIBLES – 117 (LIQUID)
   AREA V: MISCELLANEOUS COMPATIBLES – 1,376 (SOLID)
   AREA VI: MISCELLANEOUS COMPATIBLES – 956 (SOLID)

   MAXIMUM TOTAL BUILDING STORAGE (55-GALLON DRUMS) – 3,412 (3,412 SOLID DRUMS; 1,197 LIQUID DRUMS)

   AREAS I-IV MAY STORE LIQUIDS, SOLIDS, OR A COMBINATION OF LIQUID AND SOLID DRUMS. OTHER COMPATIBLE LIQUIDS AND SOLIDS MAY ALSO BE STORED IN THESE AREAS.
8. THIS DRAWING DEPICTS THE EXISTING BUILDING WITH PROPOSED CONTAINER STORAGE AREAS.
9. THE TRUCK LOADING/UNLOADING RAMP IS PERMITTED FOR SOLIDS CONTAINERS STORAGE ONLY. LIQUID CONTAINERS MAY BE STAGED ON THE RAMP FOR UP TO ONE DAY. THEREFORE, SECONDARY CONTAINMENT IS NOT REQUIRED.
10. MAXIMUM CAPACITY FOR UNLOADING/LOADING AREA IS 13 FLATBEDS OR 13 TRAILERS CONTAINING APPROXIMATELY 80 DRUMS EACH (i.e., 1040 DRUMS MAXIMUM)
11. MAXIMUM CAPACITY FOR FUELS TRANSFER AREA/DRUM BUILDING WEST RAMP IS TWO TANKERS CONTAINING UP TO 5,500 GALLONS EACH.
12. FLOOR PLAN SHOWS TYPICAL MAXIMUM LAYOUT USING 55-GALLON DRUMS. DRUMS MAY BE DOUBLE STACKED. DRUMS CONTAINING FLAMMABLES MUST BE ONLY SINGLE STACKED AND STORED FOUR FEET MINIMUM FROM WALLS/CURBS AND BETWEEN DOUBLE ROWS. OTHER TYPES, SIZES, AND ARRANGEMENT OF CONTAINERS ARE POSSIBLE AS LONG AS THE SECONDARY CONTAINMENT CAPACITY IS NOT EXCEEDED.

△ 13. THE DRUM MANAGEMENT BUILDING CONTAINMENT STORAGE AREA LAYOUT CONFORMS TO ALL APPLICABLE PROVISIONS IN THE NFPA CODES.

△ 14. CORROSIVES IN AREAS I AND II MAY BE EITHER ACIDS OR CAUSTICS, BUT NOT BOTH IN THE SAME AREA AT ANY TIME.

STATE OF NEW YORK
BRIAN DOUGLAS SHAH
No. 079072
LICENSED PROFESSIONAL ENGINEER

TITLE: PROPOSED DRUM MANAGEMENT BUILDING LAYOUT

PROJECT: CWM CHEMICAL SERVICES, LLC, MODEL CITY, NEW YORK
6NYCRR PART 373 PERMIT APPLICATION

PREPARED FOR: CWM CHEMICAL SERVICES, LLC.

TOWN OF PORTER | COUNTY OF NIAGARA | STATE OF NEW YORK

REVISION	NO	BY	DATE
SHORTENING TRENCH LENGTH ALONG SOUTH SIDE OF DRUM BUILDING, REVISED RECT ANNULAR CURB TO DEPICT FIELD CHANGE IN LOCATION, REVISED NOTE NO. 7 (AREA VI), REVISED MISC. DIMENSIONS, ADDED NOTE NO. 14, AND RENUMBERED ANSI/FM NOTE	△	AJE	3/15/06
CHANGED LAYOUT OF AREAS I AND II AND RENAMED, ADDED BUFFER DRAIN BETWEEN TRENCH AND CONCRETE CURBING, REVISED NOTE NO. 7, ADDED NOTE NO. 13, AND ADDED MISC. DIMENSIONS AS PER MYSDEC COMMENTS	△	AJE	10/06/2005

BRIAN D. SHAH, P.E.
NYSPE LICENSE NO. 079072

IF IN A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, ARTICLE 145 SECTION 7209 FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER AN ITEM IN ANY WAY.

EnSol, Inc.
Environmental Solutions
661 MAIN STREET
NIAGARA FALLS, NY 14301
PHONE (716) 285-3920 FAX (716) 285-3928

PROJECT NO: 05-7007
DWG. FILE: 05-7007_D-1A_PROP DRUM MGMT BLDG LAYOUT REV.DWG
SCALE: AS NOTED
DES. BY: BOS | DRW. BY: MJM | CHK. BY: BOS
DATE: 8/12/05

FIGURE D-1A

EnSol, Inc.
Environmental Solutions

PROJECT NO.: 05-7007

CLIENT: CWM Chem. Svcs. PROJECT: DMB Secondary Containment Upgrades Prepared By: AJZ Date: 3/15/2006
SUBJECT: Secondary Containment Calculations Reviewed By: BDS Date: 3/15/2006

DRUM MANAGEMENT BUILDING

TASK:

Determine the number of drums that can be stored and calculate the total volume within the secondary containment areas as shown on Permit Drawing Fig. D-1A.

CALCULATIONS:

CORROSIVES AND FLAMMABLES STORAGE AREA: (AREA I)

Dimensions of Storage Area and Number of Drums:

$60'lx45'w$ (with a portion 36.95' wide)

$60'-4' = 56'$
$45'-4' = 41'$
$36.95'-4' = 32.95'$
The 4 feet is the 2-foot minimum required spacing from the centerline of containment curbing or wall.

$56'\div 6' = 9.33 Sections \cong 9.3 Sections$
The 6 feet incorporates 2 rows of drums, equaling 4 feet, and a 2-foot aisle space.

$41'\div 2' = 20 Drums$
$32.95'\div 2' = 16 Drums$
The 2 feet is a typical drum width.

$$9.3 Sections * 2\frac{Rows}{Section} = 18.6 Rows \cong 18 Rows$$

$$14 Rows * 20\frac{Drums}{Row} + 4 Rows * 16\frac{Drums}{Row} = 344 Drums(SingleStacked) * 2 = \underline{688 Drums}(DoubleStacked)$$

$$688 Drums * 55\frac{gallon}{Drum} = 37{,}840 gallons$$

Required Secondary Containment:

$$37{,}840 gallons * 10\% = 3{,}784 gallons \cong 506 ft^3$$

Dimensions of Storage:

$(45'x60') - (7.30'*12.35')$
Total Area – Area of Unused Section

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DRUM MANAGEMENT BUILDING (continued)

Area of Storage:

$$(45'x60') - (7.30'*12.35') = 2{,}609\,ft^2$$

Minimum Curb Height Required:

$$506\,ft^3 \div 2{,}609\,ft^2 = 0.194\,ft \cong 2.32"(ASSUME: 3")$$

Available Secondary Containment:

$$Volume of Curbing = \tfrac{1}{2} * (1.5') * (.25') * (146') = 27\,ft^3$$

$$2{,}609\,ft^2 * 0.25' = 652\,ft^3 - 27\,ft^3 \cong \underline{\underline{4{,}675 gallons}}$$

CONCLUSIONS:

This area has sufficient secondary containment for the storage capacity of 688 55-gallon liquid or solid drums.

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DRUM MANAGEMENT BUILDING

CORROSIVES STORAGE AREA: (AREA II)

Dimensions of Storage Area and Number of Drums:

$26'lx45'w$

$26'-4' = 22'$
$45 - 4' = 41'$
The 4 feet is the 2-foot minimum required spacing from the centerline of containment curbing.

$22'-6' = 16'$ (The 6' accounts for the 3 aisles times the 2' aisle spacing)

$16'\div 4' = 4 Sections$
The 4 feet incorporates 2 rows of drums, equaling 4 feet.
A typical drum width is equal to 2 feet.

$41'\div 2' = 20 Drums$
The 2 feet is the drum width.

$$4 Sections * 2\frac{Rows}{Section} = 8 Rows$$

$$8 Rows * 20\frac{Drums}{Row} = 160 Drums(SingleStacked) * 2 = \underline{320 Drums}(DoubleStacked)$$

$$320 Drums * 55\frac{gallon}{Drum} = 17{,}600 gallons$$

Required Secondary Containment:

$17{,}600 gallons * 10\% = 1{,}760 gallons \cong 235 ft^3$

Dimensions of Storage:

$45'x26'$

Area of Storage:

$45'*26' = 1{,}170 ft^2$

Minimum Curb Height Required:

$235 ft^3 \div 1{,}170 ft^2 = 0.2008 ft \cong 2.41"(ASSUME: 3")$

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DRUM MANAGEMENT BUILDING (continued)

Available Secondary Containment:

$$Volume of Curbing = \tfrac{1}{2} * (1.5') * (.25') * (142') = 26.62\,ft^3$$

$$45'*26'*0.25' = 292.5\,ft^3 - 26.62\,ft^3 \cong 1{,}989\,gallons$$

CONCLUSIONS:

This area has sufficient secondary containment for the storage capacity of 320 55-gallon liquid or solid drums.

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DRUM MANAGEMENT BUILDING

OXIDIZERS STORAGE AREA: (AREA III)

Dimensions of Storage Area and Number of Drums:

$8'lx22.5'w$

$8'-4' = 4'$
$22.5'-4' = 18.5'$
The 4 feet incorporates the 2-foot containment spacing; therefore a 2-foot perimeter.

$4' \div 2' = 2Rows$
The 2 feet is equivalent to a typical drum width.

$18.5' \div 2' = 9Drums$

$$2Rows * 9\frac{Drums}{Row} = 18Drums(SingleStacked) * 2 = \underline{36Drums(DoubleStacked)}$$

$$36Drums * 55\frac{gallons}{Drum} = 1980gallons$$

Required Secondary Containment:

$$1980gallons * 10\% = \underline{198gallons \cong 26.46ft^3}$$

Dimensions of Storage Area:

$22.5'x8'$

Area of Storage:

$22.5' * 8' = 180ft^2$

Minimum Curb Height Required:

$26.46ft^3 \div 180ft^2 = 0.147' \cong 1.76" \cong 2"(ASSUME: 3")$

Modified: 11/05

DRUM MANAGEMENT BUILDING (continued)

Available Secondary Containment:

$$Volume of Curbing = \tfrac{1}{2} * (1.5') * (.25') * (61') = 11.44 ft^3$$

$$22.5' * 8' * 0.25' = 45 ft^3 - 11.44 ft^3 \cong 251 gallons$$

CONCLUSIONS:

This area has sufficient secondary containment for storage capacity of 36 55-gallon liquid or solid drums.

Modified: 11/05

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PROJECT NO.: 05-7007

CLIENT: CWM Chem. Svcs. PROJECT: DMB Secondary Containment Upgrades Prepared By: AJZ Date: 10/3/2005
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DRUM MANAGEMENT BUILDING

POISONS STORAGE AREA: (AREA IV)

Dimensions of Storage Area and Number of Drums:

$8' lx 22.5' w$

$8'-4' = 4'$
$22.5'-4' = 18.5'$
The 4 feet incorporates the 2-foot containment spacing; therefore a 2-foot perimeter.

$4' \div 2' = 2 Rows$
The 2 feet is equivalent to a typical drum width.

$18.5' \div 2' = 9 Drums$

$$2 Rows * 9 \frac{Drums}{Row} = 18 Drums(SingleStacked) * 2 = \underline{36 Drums}(DoubleStacked)$$

$$36 Drums * 55 \frac{gallons}{Drum} = 1980 gallons$$

Required Secondary Containment:

$1980 gallons * 10\% = \underline{198 gallons \cong 26.46 ft^3}$

Dimensions of Storage Area:

$22.5' x 8'$

Area of Storage:

$22.5' * 8' = 180 ft^2$

Minimum Curb Height Required:

$26.46 ft^3 \div 180 ft^2 = 0.147' \cong 1.76" \cong 2" (ASSUME: 3")$

Modified: 11/05

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DRUM MANAGEMENT BUILDING (continued)

Available Secondary Containment:

$$Volume of Curbing = \tfrac{1}{2} * (1.5') * (.25') * (61') = 11.44 ft^3$$

$$22.5' * 8' * 0.25' = 45 ft^3 - 11.44 ft^3 \cong 251 gallons$$

CONCLUSIONS:

This area has sufficient secondary containment for storage capacity of 36 55-gallon liquid or solid drums.

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NYSDEC OHMS Document No. 201469232-00015

PROJECT NO.: 05-7007

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SUBJECT: Secondary Containment Calculations Reviewed By: BDS Date: 10/3/2005

DRUM MANAGEMENT BUILDING

MISC. COMPATIBLES STORAGE AREA: (AREA V – Within Trench Area)

Dimension of Solid Storage Area:

$87.2' lx 49.7' w$

Drum Capacity Determination:

$49.7' \div 6' = 8 Sections$

The 6 feet incorporates 2 rows of drums equaling 4 feet and a 2-foot minimum required aisle space.

$$8 Sections * 2 \frac{Rows}{Section} = 16 Rows$$

$87.2' \div 2' = 43 Drums$

The 2 feet is equivalent to a typical drum width.

$$16 Rows * 43 \frac{Drums}{Row} = 688 Drums(SingleStacked) * 2 = \underline{1{,}376 Drums(DoubleStacked)}$$

CONCLUSIONS:

This area has a solids storage capacity of 1,376 55-gallon drums. Secondary containment is not required for solids storage.

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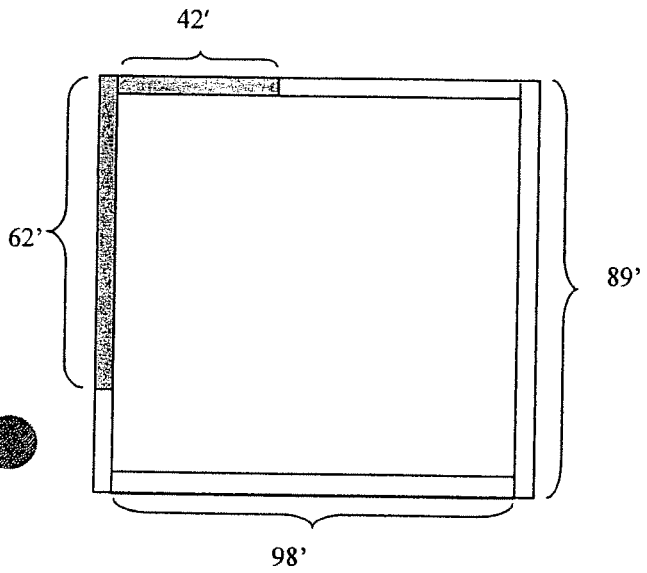
DRUM MANAGEMENT BUILDING (continued)

MISC. COMPATIBLES STORAGE AREA: (AREA V) – LIQUID STORAGE CAPACITY

Dimensions: (Floor Trench System Volume)

$100' x 89' x 0.75'(wide) x 0.428'(deep)$



- Shaded area is closed.

Floor Trench Volume:

$89'-62' = 27'$
$98'-42' = 56'$

$(27'+56'+89'+98') * 0.75' * 0.428 = 86.67\,ft^3 \cong 648.34\,gallons$

AREA V:

Maximum Liquid Drum Storage Capacity:

$$648.34\,gallons \div 10\% = 6{,}483\,gallons \div 55\frac{gallons}{Drum} = \underline{\underline{117\,Drums}}$$

CONCLUSIONS:

The Drum Handling Building Floor (Trench) Sump System allows for a liquid storage capacity of 117 55-gallon drums in Area V.

Modified: 10/06

EnSol, Inc.
Environmental Solutions

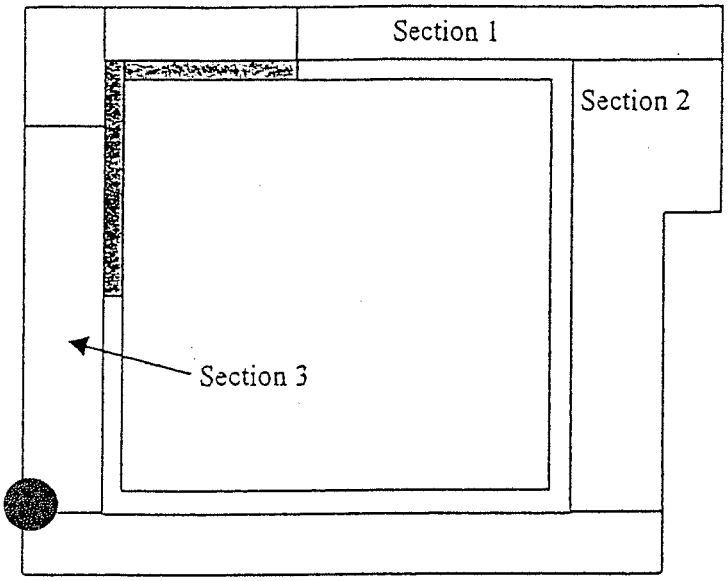
PROJECT NO.: 05-7007

CLIENT: CWM Chem. Svcs. PROJECT: DMB Secondary Containment Upgrades Prepared By: AJZ Date: 10/3/2005
SUBJECT: Secondary Containment Calculations Reviewed By: BDS Date: 10/3/2005

DRUM MANAGEMENT BUILDING

SOLID STORAGE AREA: AREA VI (Outside Trench Area)

Area VI is the area within the Drum Management Building outside Areas I – V



Dimension of Solid Storage Area: (Section 1)

$89.3' l x 10.35' w$

Drum Capacity Determination:

$(10.35') \div 6' = 1 Section$

The 6 feet incorporates 2 rows of drums equaling 4 feet and a 2-foot minimum required aisle space.

$$1 Section * 2 \frac{Rows}{Section} = 2 Rows$$

$(89.3' - 4') \div 2' = 42 Drums$

The 4 feet incorporates 2 feet minimum required isle space at end of each row.
The 2 feet is equivalent to a typical drum width.

$$2 Rows * 42 \frac{Drums}{Row} = 84 Drums(SingleStacked) * 2 = \underline{168 Drums}(DoubleStacked)$$

Modified: 11/05

CLIENT: CWM Chem. Svcs. PROJECT: DMB Secondary Containment Upgrades Prepared By: AJZ Date: 10/3/2005
SUBJECT: Secondary Containment Calculations Reviewed By: BDS Date: 10/3/2005

Dimension of Solid Storage Area: (Section 2)

$32.55' lx 37.1' w$
$22.85' lx 52' w$

Drum Capacity Determination:

$37.1' \div 6' = 6 Sections$
The 6 feet incorporates 2 rows of drums equaling 4 feet and a 2-foot minimum required aisle space.

$52' - 16' = 36'$ (The 16' accounts for the 8 aisles times the 2' aisle spacing)
$36' \div 4' = 9 Sections$
The 4 feet incorporates 2 rows of drums

$$6 Sections * 2 \frac{Rows}{Section} = 12 Rows$$
$$9 Sections * 2 \frac{Rows}{Section} = 18 Rows$$

$(32.55' - 4') \div 2' = 14 Drums$
$(22.85' - 4') \div 2' = 9 Drums$
The 4 feet incorporates 2 feet minimum required isle space at end of each row.
The 2 feet is equivalent to a typical drum width.

$$12 Rows * 14 \frac{Drums}{Row} + 18 Rows * 9 \frac{Drums}{Row} = 330 Drums(SingleStacked) * 2 = \underline{660 Drums}(DoubleStacked)$$

Dimension of Solid Storage Area: (Section 3)

$68' lx 9.0' w$ (Approximate minimum available area between ramps)

Drum Capacity Determination:

$(9.0) \div 6' = 1 Section$

The 6 feet incorporates 2 rows of drums equaling 4 feet and a 2-foot minimum required aisle space.

$$1 Section * 2 \frac{Rows}{Section} = 2 Rows$$

$(68.0' - 4') \div 2' = 32 Drums$
The 4 feet incorporates 2 feet minimum required isle space at end of each row.
The 2 feet is equivalent to a typical drum width.

$$2 Rows * 32 \frac{Drums}{Row} = 64 Drums(SingleStacked) * 2 = \underline{128 Drums}(DoubleStacked)$$

Modified: 11/05

EnSol, Inc.
Environmental Solutions

PROJECT NO.: 05-7007

CLIENT: CWM Chem. Svcs. PROJECT: DMB Secondary Containment Upgrades Prepared By: AJZ Date: 10/3/2005
SUBJECT: Secondary Containment Calculations Reviewed By: BDS Date: 10/3/2005

CONCLUSIONS:

This area has a solids storage capacity of at least 956 55-gallon drums. Actual arrangement and layout within area varies provided that the minimum requirement of 2-foot isle spacing and 2-drum maximum rows and maximum double stacking height is satisfied. Secondary containment is not required for solids storage.

Modified: 11/05

EnSol, Inc.
Environmental Solutions

PROJECT NO.: 05-7007

CLIENT: CWM Chem. Svcs. PROJECT: DMB Secondary Containment Upgrades Prepared By: AJZ Date: 10/3/2005
SUBJECT: Secondary Containment Calculations Reviewed By: BDS Date: 10/3/2005

FUELING TRANSFER AREA/DRUM BUILDING WEST RAMP:

Dimensions:

$28'x66'x3.2'(DeepEnd)$

Available Secondary Containment:

$0.50*(28'*66'*3.2') = 2{,}956.8\,ft^3 \cong 22{,}118.4\,gallons$

Required Secondary Containment:

2 tankers, 5,500-gallon each.
Largest single container equals 5,500 gallon.

25 Year, 24 Hour Precipitation Event:

$28'*66'*0.333' = 615.40\,ft^3 \cong 4{,}603.5\,gallons$
0.333 feet is equivalent to 4.0 inches of precipitation (i.e., rain).

Required Secondary Containment Including Precipitation Event:

$5{,}500\,gallons + 4{,}603.5\,gallons = 10{,}103.5\,gallons$

CONCLUSIONS:

The Fueling Transfer Area/Drum Building West Ramp has sufficient secondary containment capacity for 2 5,500-gallon tankers.

EnSol, Inc.
Environmental Solutions

PROJECT NO.: 05-7007

CLIENT: CWM Chem. Svcs. PROJECT: DMB Secondary Containment Upgrades Prepared By: AJZ Date: 10/3/2005
SUBJECT: Secondary Containment Calculations Reviewed By: BDS Date: 10/3/2005

TRUCK LOADING/UNLOADING AREA & RAMP:

Dimensions:

$50' x 134.4'$

Solids Storage Capacity Determination:

$134.4' \div 10' = 13.4 Trucks \cong 13 Trucks$

The 10 feet is equivalent to a typical truck width of 8 feet and the 2-foot required aisle spacing.

$$13 Trucks * 80 \frac{Drums}{Truck} = 1{,}040 Drums$$

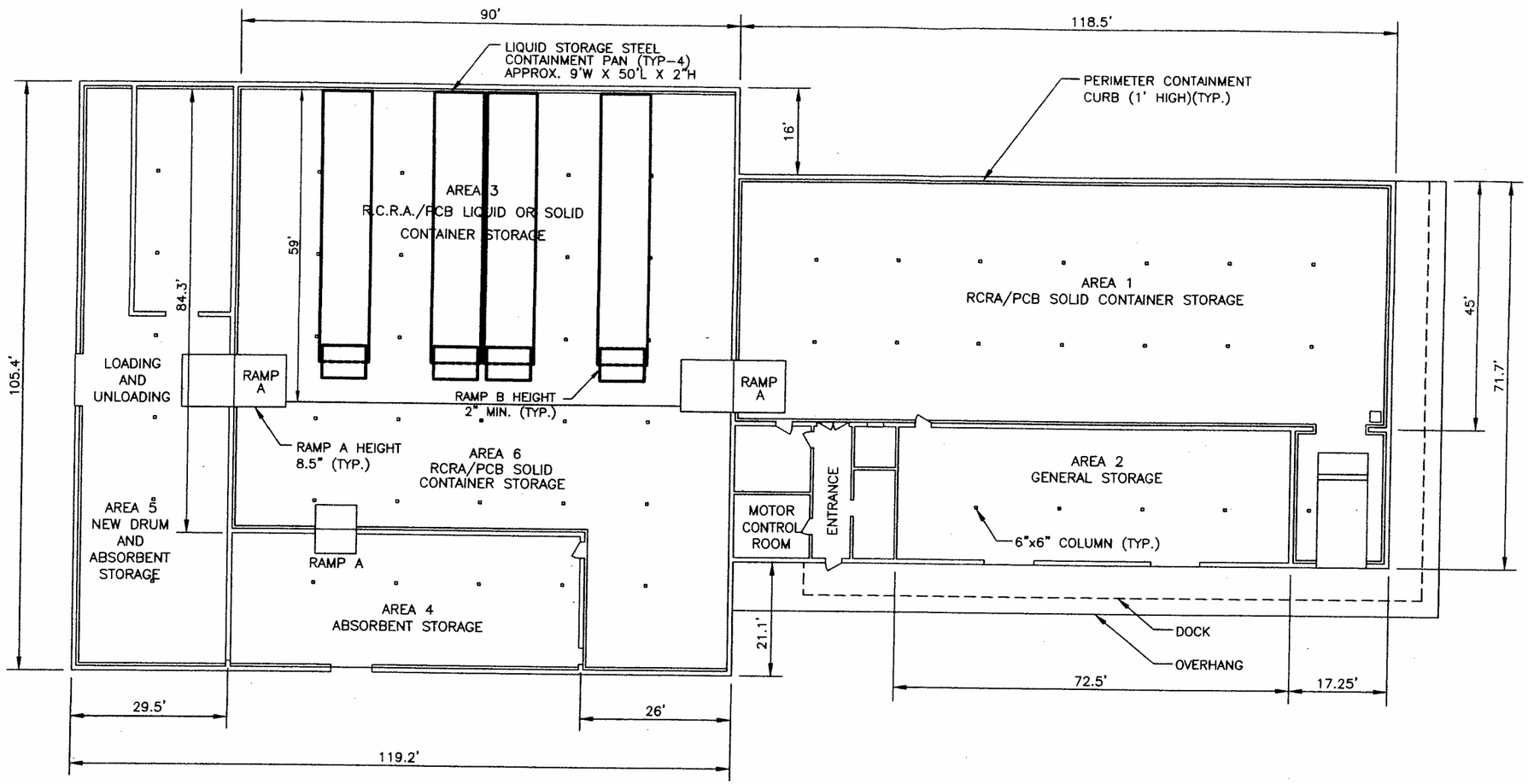
The 80 drums per truck is provided by CWM.

CONCLUSION:

The Truck Loading/Unloading Area & Ramp has a solids storage capacity of 1,040 55-gallon drums.

FIGURE D-2

PCB WAREHOUSE LAYOUT



NOTES:

1. BASE MAP BY RUST ENVIRONMENT & INFRASTRUCTURE 1/25/95, "PCB BUILDING LAYOUT". APRIL, 1995 8824RR02.DWG
2. THE ARRANGEMENT SHOWN MAY BE MODIFIED TO SUIT THE NEEDS OF SPECIFIC STORAGE REQUIREMENTS.
3. A MINIMUM OF TWO FEET BETWEEN ROWS OF DRUM PAIRS WILL BE USED AS GUIDANCE FOR AISLE SPACING THROUGHOUT THE FACILITY.
4. STEEL CONTAINMENT PANS WILL BE UTILIZED AS SECONDARY CONTAINMENT IN THE LIQUID WASTE STORAGE AREA 3.
5. SOLID DRUMS WILL BE STORED AT LEAST 2 FEET FROM THE EDGE OF PERIMETER CURBING OF EACH AREA THAT IS PROVIDED WITH CURBING AT LEAST 8.5 INCHES HIGH, AND MAXIMUM STACKING OF TWO HIGH. LIQUID DRUMS WILL BE STORED AT LEAST 2 FEET FROM THE EDGE OF PAN AND ONLY BE SINGLE STACKED.
6. THIS DRAWING DEPICTS THE EXISTING BUILDING WITH PROPOSED CONTAINER STORAGE AREAS. DRAWING IS NOT TO SCALE.
7. MAXIMUM HAZARDOUS WASTE LIQUID STORAGE-AREA 3: (55 GALLON DRUMS)-160
8. MAXIMUM HAZARDOUS WASTE SOLID STORAGE-AREAS 1, 3 & 6: (55 GALLON DRUMS)-2,726

CWM CHEMICAL SERVICES, LLC
MODEL CITY, NEW YORK
6NYCRR PART 373 PERMIT APPLICATION

PCB WAREHOUSE BUILDING LAYOUT

EnSol, Inc.
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661 MAIN STREET
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PHONE (716) 285-3920 FAX (716) 285-3928

FIGURE
D-2

Modified: 06/10

CALCULATION SHEET

EnSol, Inc.
Environmental Solutions

PROJECT NO.: 08-7005

CLIENT: CWM Chem. Svcs. PROJECT: PCB Secondary Containment Upgrades Prepared By: MJM Date: 3/4/2008
SUBJECT: Secondary Containment Calculations Reviewed By: BDS Date: 3/13/2008

PCB WAREHOUSE BUILDING

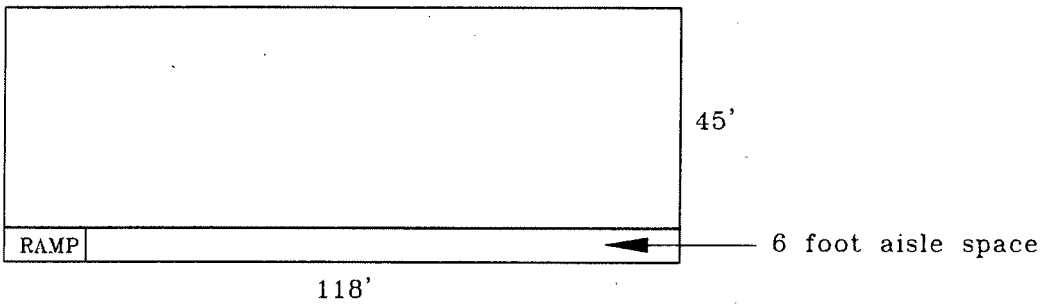
TASK:

Calculate the total volume within the secondary containment areas.

CALCULATIONS:

AREA 1 - SOLID STORAGE AREA:

Dimensions:
118' x 45'



118' - 4' = 114'
45' - 2' = 43'
The 4-Foot perimeter is the required 2-foot spacing from the end walls.
The 2-foot is the required 2-foot spacing from the side wall.

114' ÷ 6' =19 *Sections*
A section is defined as 2 drums side by side (4 feet total) and the 2-foot required aisle space.
Therefore, a section is 2 rows of drums.

43' – 6' *Aisle Space* = 37' ÷ 2' = 18.5 *Drums* ≈ 18 *Drums*
The 2 feet is equivalent to a typical drum diameter.

19 *Sections* * 2 *Rows/Section* = 38 *Rows* * 18 *Drums/Row* = 684 *Drums* (Single Stacked)* 2 =1,368 *Drums* (Double Stacked)

CONCLUSIONS:

Area 1 – Solid Storage Area has a solids storage capacity of 1,368 55-gallon drums.

EnSol, Inc.
Environmental Solutions

PROJECT NO.: 08-7005

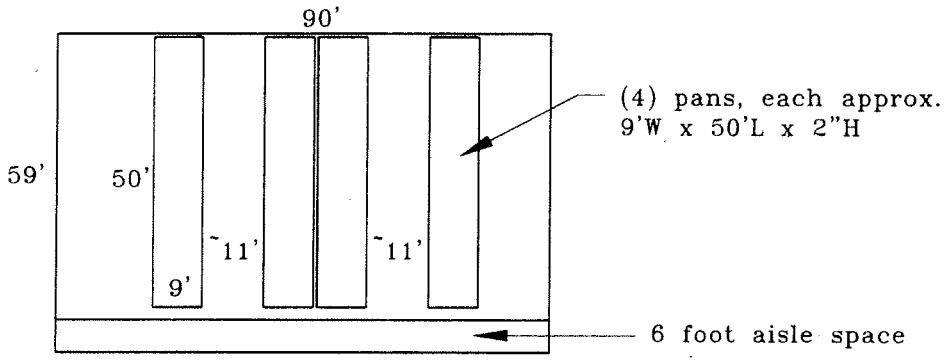
CLIENT: CWM Chem. Svcs. PROJECT: PCB Secondary Containment Upgrades Prepared By: MJM Date: 3/4/2008
SUBJECT: Secondary Containment Calculations Reviewed By: BDS Date: 3/13/2008

PCB WAREHOUSE BUILDING (continued)

AREA 3 - LIQUID STORAGE AREA:

Dimensions:

A *section* = 50'L x 9'W x 0.167'D = 75.15 ft³



There are 4 *sections*.
A *section* is defined as a pan containing 2 *drums* side by side w/6" between *drums* (4.5 feet total) and the 2.25-foot aisle space on either side of *drums*, 2-foot from wall; 20 *drums* each row x 2 rows of *drums* (40 *drums total,* Single-Stacked).

4 *sections* x 40 *drums/section* = 160 *drums*

The 2-foot spacing from the wall is required.

Typical drum diameter is 2 feet.

Required Secondary Containment per *Section*:

40 *Drums* * 55 *gallons/Drum* = 2,200 *gallons* * 10% = 220 *gallons*

Available Secondary Containment per *Section*:

Gross Dimensions and Volume:

50' x 9' x 0.167' (2-inches)

50' * 9' * 0.167' = 75.2 *ft³*

7.48 *gallons / ft³*

7.48 *gallons/ft³* * 75.2 *ft³* = 562.5 *gallons*

CALCULATION SHEET

EnSol, Inc.
Environmental Solutions

PROJECT NO.: 08-7005

CLIENT: CWM Chem. Svcs. PROJECT: PCB Secondary Containment Upgrades Prepared By: MJM Date: 3/4/2008
SUBJECT: Secondary Containment Calculations Reviewed By: BDS Date: 3/13/2008

PCB WAREHOUSE BUILDING (continued)

Reduction in Gross Available Volume Due to Presence of Drums (assume 1 drum leaks):

39 drums * [3.14 * (2')^2/4 * 0.167'] = 20.5 *ft*^{3}

7.48 *gallons* / *ft*^{3}

7.48 *gallons*/*ft*^{3} * 20.5 *ft*^{3} = 153.3 *gallons*

Net Available Secondary Containment Volume:

562.5 *gallons* – 153.3 *gallons* = 409 *gallons*

Total Required Secondary Containment-all *Sections*:

4 *Sections* * 40 *Drums/Section* * 55 *gallons/Drum* = 8,800 *gallons* * 10% = 880 *gallons*

Available Secondary Containment - All *Sections*:

1 *Section* = {50' * 9' * 0.167'} – {39 drums * [3.14 * (2')^2/4 * 0.167']} = 75.2 *ft*^{3} – 20.5 *ft*^{3} = 54.7 *ft*^{3}

4 *Sections* * 54.7 *ft*^{3} = 218.8 *ft*^{3}

7.48 *gallons* / *ft*^{3}

7.48 *gallons*/*ft*^{3} * 218.8 *ft*^{3} = 1636 *gallons*

CONCLUSIONS:

Area 3 has sufficient secondary containment for the liquid storage capacity of 160 55-gallon drums.

EnSol, Inc.
Environmental Solutions

CALCULATION SHEET

PROJECT NO.: 08-7005

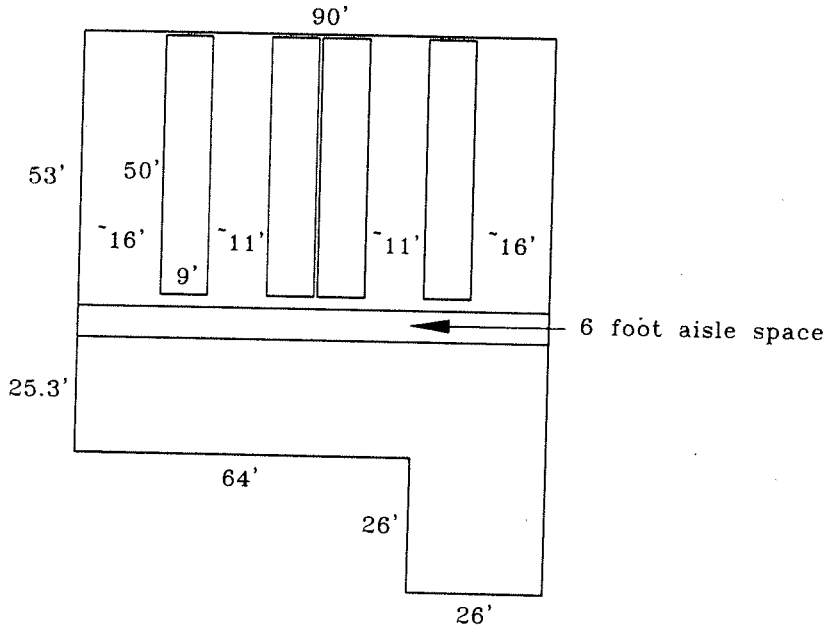
CLIENT: CWM Chem. Svcs. PROJECT: PCB Secondary Containment Upgrades Prepared By: MJM Date: 3/4/2008
SUBJECT: Secondary Containment Calculations Reviewed By: BDS Date: 3/13/2008

PCB WAREHOUSE BUILDING (continued)

AREA 3/6 - SOLID STORAGE AREA:

Dimensions:

60' = Required Space for Liquid Storage Pans in Area 3
90' – 60' = 30' (Remaining space available in Area 3)



16' - 4' = 12'
53- 2' = 51'
16' - 4' = 12'
53- 2' = 51'
25.3' – 2' = 23.3'
64' - 2' = 62'
26' - 4' = 22'
51.3 - 2' = 49.3'

The 4 foot perimeter is the required 2-foot spacing from the wall.

12' ÷ 6' = 2.0 *Sections*
12' ÷ 6' = 2.0 *Sections*
62' ÷ 6' = 10.3 *Sections*
22' ÷ 6' = 3.7 *Sections*

A *section* is defined as 2 *drums* side by side (4 feet total) and the 2-foot required aisle space.

CALCULATION SHEET

EnSol, Inc.
Environmental Solutions

PROJECT NO.: 08-7005

CLIENT: CWM Chem. Svcs. PROJECT: PCB Secondary Containment Upgrades Prepared By: MJM Date: 3/4/2008
SUBJECT: Secondary Containment Calculations Reviewed By: BDS Date: 3/13/2008

PCB WAREHOUSE BUILDING (continued)

51' ÷ 2' = 25.5*Drums* ≈ 25 *Drums*
23.3' ÷ 2' = 11.7*Drums* ≈ 11 *Drums*
49.3' ÷ 2' = 24.7*Drums* ≈ 24 *Drums*

The 2 feet is equivalent to a typical drum diameter.

2.0 *Sections* * 2 *Rows/Section* = 4.0 *Rows*

2.0 *Sections* * 2 *Rows/Section* = 4.0 *Rows*

4 *Rows* * 25 *Drums/Row* = 100 *Drums* (Single Stacked) * 2 = 200 *Drums* (Double Stacked)

4 *Rows* * 25 *Drums/Row* = 100 *Drums* (Single Stacked) * 2 = 200 *Drums* (Double Stacked)

10.3 *Sections* * 2 *Rows/Section* = 20.6 *Rows* ≈ 21 *Rows*

21 *Rows* * 11 *Drums/Row* = 231 *Drums* (Single Stacked) * 2 = 462 *Drums* (Double Stacked)

3.7 *Sections* * 2 *Rows/Section* = 7.4 *Rows* ≈ 7 *Rows*

7 *Rows* * 24 *Drums/Row* = 168 *Drums* (Single Stacked) * 2 = 336 *Drums* (Double Stacked)

The 2 feet is equivalent to a typical drum diameter.

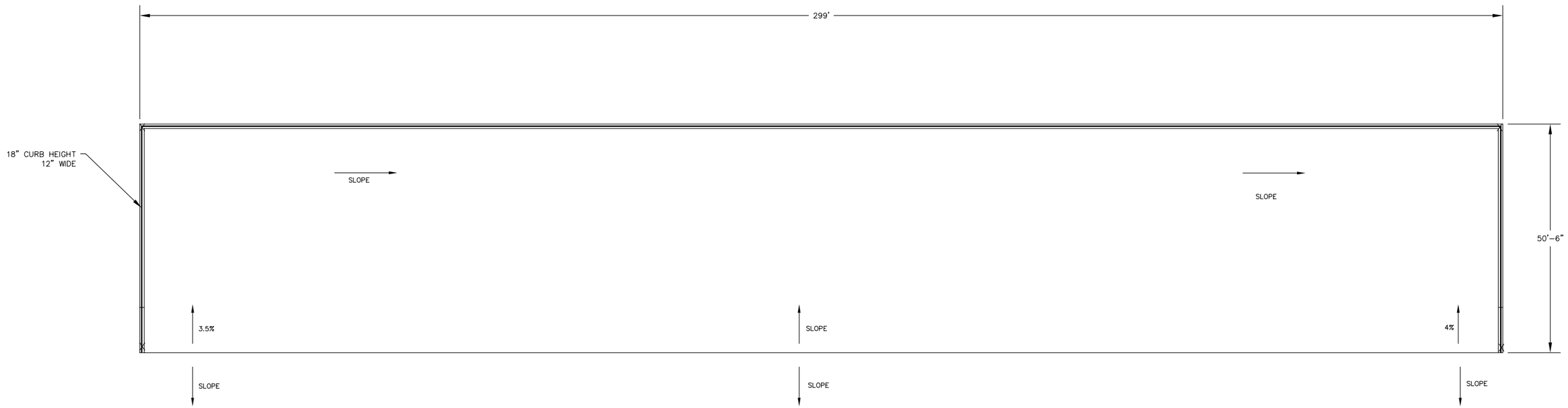
Total Drum Storage Capacity (Double Stacked):
200 *Drums* + 200 *Drums* + 462 *Drums* + 336 *Drums* = 1,198 *Drums Total*

CONCLUSIONS:

Area 3/6 has a solids storage capacity of 1,198 55-gallon drums,
Plus 160 drums that could be stored in the Area 3 liquid storage pans. Therefore,
Total available storage = 1,358 55-gallon drums

FIGURE D-3

SOUTH TRAILER PARKING AREA



PLAN VIEW

NOTES:

1. BASE MAP BY RUST ENVIRONMENT & INFRASTRUCTURE, 1/25/95.
2. DRAWING IS NOT TO SCALE.
3. A MINIMUM OF 2 FEET WILL BE USED AS GUIDANCE FOR AISLE SPACING BETWEEN CONTAINERS AND FROM CONTAINER TO PERIMETER THROUGHOUT THE FACILITY.
4. THIS AREA HAS A MAXIMUM LIMIT OF 58 ROLLOFFS STAGED END TO END, WITH AN AVERAGE DIMENSION OF 8'W X 22'L.
5. THIS AREA MAY ALSO BE USED TO STORE LIQUID CONTAINERS. THE AREA HAS A MAXIMUM CONTAINMENT VOLUME OF 45,860 GALLONS. (SEE ATTACHED CALCULATION)

CWM CHEMICAL SERVICES, LLC
MODEL CITY, NEW YORK
6NYCRR PART 373 PERMIT APPLICATION

SOUTH TRAILER PARKING AREA

EnSol, Inc.
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661 MAIN STREET
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PHONE (716) 285-3920 FAX (716) 285-3928

FIGURE
D-3

EnSol, Inc.
Environmental Solutions

PROJECT NO.: 11-7015

CLIENT: CWM Chem. Svcs. **PROJECT: Permit Renewal** **Prepared By: JCD** **Date: 7/1/2011**
SUBJECT: Secondary Containment Calculations **Reviewed By: BDS** **Date: 7/1/2011**

SOUTH TRAILER PARKING AREA

TASK:

Calculate the total volume within the secondary containment area.

CALCULATIONS:

Dimensions:

$49.5' x 297' x 1.5'$

Available Secondary Containment:

$$(0.50) * 1.5' * 49.5' * 297' = 11{,}026.13\, ft^3 \cong 82{,}481.2\, gallons$$

Required Secondary Containment:

Largest single liquid container is expected to be 5,500 gallons.

25 Year, 24 Hour Precipitation Event:

$$297' * 49.5' * 0.333' = 4{,}895.6\, ft^3 \cong 36{,}621.6\, gallons$$

0.333 feet is equivalent to 4.0 inches of precipitation (i.e., rain).

Required Secondary Containment Including Precipitation Event:

$$5{,}500\, gallons + 36{,}621.6\, gallons = 42{,}121.6\, gallons$$

CONCLUSIONS:

The South Trailer Parking Area has secondary containment capacity of 82,481 gallons.
The maximum number of liquid containers is limited only by the available physical space, and the ability to contain the volume of the largest container or 10% of the total liquid stored including precipitation. Secondary containment is sufficient for liquid containers equal to or less than a total of 45,860 gallons.

EnSol, Inc.
Environmental Solutions

PROJECT NO.: 11-7015

CLIENT: CWM Chem. Svcs. **PROJECT: Permit Renewal** **Prepared By: JCD** **Date: 7/1/2011**
SUBJECT: Secondary Containment Calculations **Reviewed By: BDS** **Date: 7/1/2011**

SOUTH TRAILER PARKING AREA (continued)

CALCULATIONS:

Available Secondary Containment (Based on a maximum of 29 Tankers):

82,481.2 *gallons* (From Page 1)

Required Secondary Containment:

$$29\ Tanks * 5{,}500\ \frac{gallons}{Tank} = 159{,}500\ gallons * 10\% = 15{,}950\ gallons$$

25 Year, 24 Hour Precipitation Event:

36,621.6 *gallons* (From Page 1)

Required Secondary Containment Including Precipitation Event:

$$15{,}950\ gallons + 36{,}621.6\ gallons = 52{,}571.6\ gallons$$

CONCLUSIONS:

The above calculation confirms that the South Trailer Parking Area's secondary containment capacity of 82,481 gallons is adequate to contain 10% of the total liquid stored including precipitation.

EnSol, Inc.
Environmental Solutions

PROJECT NO.: 11-7015

CLIENT: CWM Chem. Svcs. **PROJECT: Permit Renewal** **Prepared By: JCD** **Date: 7/1/2011**
SUBJECT: Secondary Containment Calculations **Reviewed By: BDS** **Date: 7/1/2011**

SOUTH TRAILER PARKING AREA (continued)

Number of Rolloffs:

2 foot perimeter: $297' - 4' = 293'$

2 foot perimeter: $49.5' - 4' = 45.5'$

$293' \div 10' = 29.3 Rolloffs \cong 29 Rolloffs$

The 10 feet incorporates the 8-foot width of the rolloff and the 2-foot aisle space.
The rolloffs will be place end-to-end with 2-foot aisle spacing.

$45.5' \div 22' = 2.07 Row \cong 2 Rows$

The 22 feet is equivalent to a typical rolloff length.

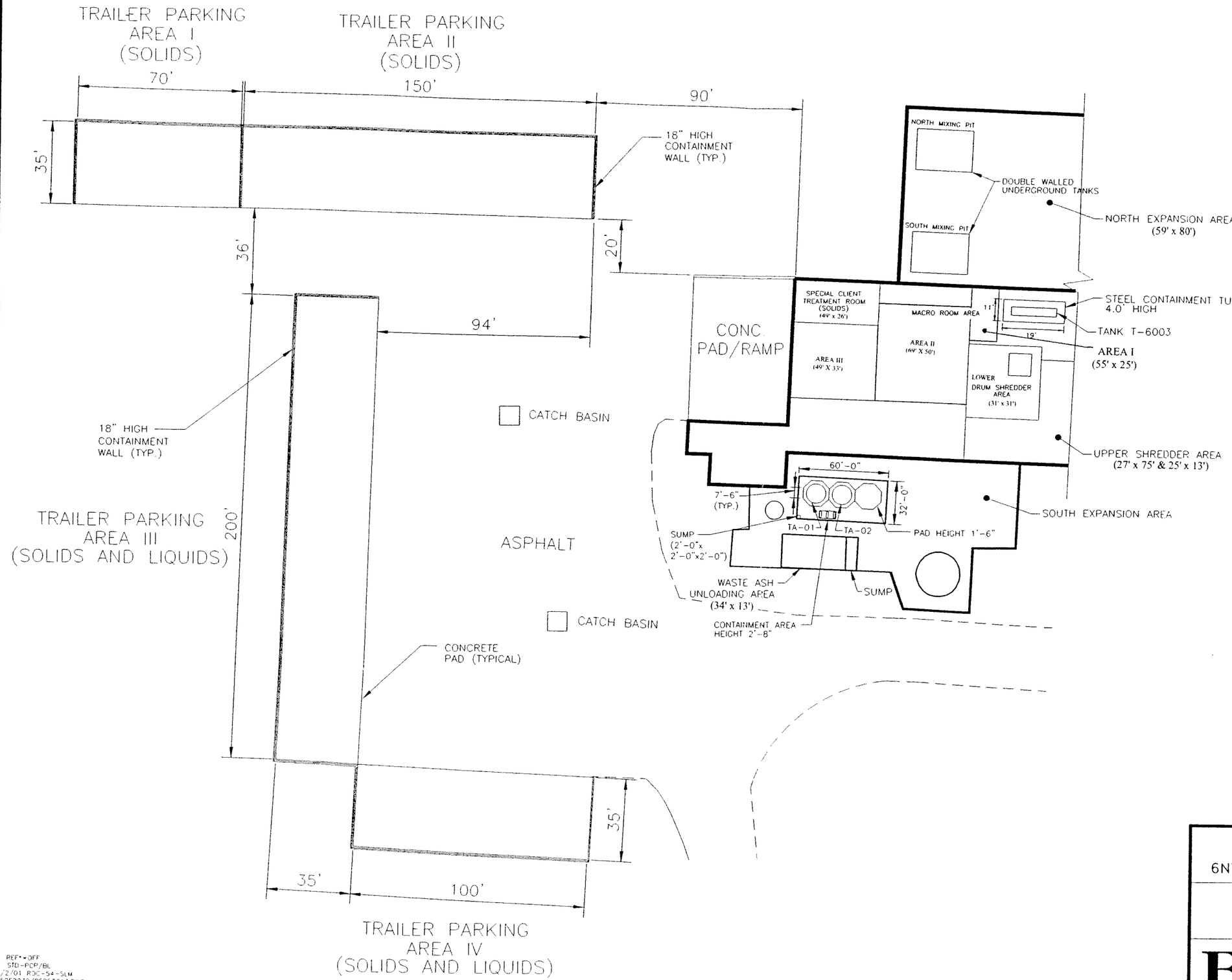
$$2 Rows * 29 \frac{Rolloffs}{Row} = 58 Rolloffs$$

CONCLUSIONS:

The South Trailer Parking Area can store up to 58 rolloffs.
The rolloffs will be stored end-to-end in 2 rows and will be stored with the required 2-foot perimeter, and the 2-foot aisle space.

FIGURE D-4

STABILIZATION FACILITY



NOTES:

1. BASE MAP BY RUST ENVIRONMENT & INFRASTRUCTURE 1/25/95. UPDATED BY BLASLAND, BOUCK AND LEE FEBRUARY 2001.
2. A MINIMUM OF TWO FEET BETWEEN CONTAINERS AND ROWS OF DRUM PAIRS WILL BE USED AS GUIDANCE FOR AISLE SPACING THROUGHOUT THE FACILITY.
3. CONTAINERS WILL BE STORED A MINIMUM OF 2 FEET FROM EDGE OF CONTAINMENT.
4. THIS FIGURE REPRESENTS THE CURRENT STORAGE ARRANGEMENTS AS OF FEBRUARY 2001.
5. DRAWING IS NOT TO SCALE. LOCATIONS OF FEATURES SUCH AS NORTH AND SOUTH PIT ARE APPROXIMATE.
6. TRAILER PARKING AREAS HAVE A MAXIMUM LIMIT OF 48 ROLLOFFS BASED ON AN AVERAGE DIMENSION OF 8'W X 22'L.
7. SOLID STORAGE:
   AREA I: 6 ROLLOFFS
   AREA II: 14 ROLLOFFS
   AREA III: 19 ROLLOFFS
   AREA IV: 9 ROLLOFFS
8. LIQUID STORAGE:
   AREA III: 21,836 GALLONS
   AREA IV: 10,918 GALLONS

CWM CHEMICAL SERVICES, LLC
MODEL CITY, NEW YORK
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STABILIZATION FACILITY

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

FIGURE D-4

L REF*-OFF
P STD-PCP/BL
4/2/01 ROC-54-SLM
0505203O/0505201.DWG

CLIENT: CWM PROJECT: Permit Renewal Prepared By: CBT Date: 02/09/2001
SUBJECT: Secondary Containment Calculations Reviewed By: AGL Date: 02/21/2001

STABILIZATION FACILITY

TASK:

Calculate the total volume within the secondary containment area.

CALCULATIONS:

TRAILER PARKING AREA I:

Number of Rolloffs:

2 foot perimeter: $35' - 4' = 31'$
2 foot perimeter: $70' - 4' = 66'$

$66' \div 10' = 6.6 Rolloffs \cong 6 Rolloffs$
The 10 feet incorporates the 8-foot width of the rolloff and the 2-foot aisle space.

$31' \div 22' = 1.4 Rows \cong 1 Row$
The 22 feet is equivalent to a typical rolloff length.

$$1 Row * 6 \frac{Rolloffs}{Row} = 6 Rolloffs$$

CONCLUSIONS:

Trailer Parking Area I is permitted for solid container storage only; therefore, secondary containment is not required. Trailer Parking Area I has the storage capacity for 6 rolloffs.

STABILIZATION FACILITY (continued)

TRAILER PARKING AREA II:

Number of Rolloffs:

2 foot perimeter: $35' - 4' = 31'$
2 foot perimeter: $150' - 4' = 146'$

$146' \div 10' = 14.6 Rolloffs \cong 14 Rolloffs$
The 10 feet incorporates the 8-foot width of the rolloff and the 2-foot aisle space.

$31' \div 22' = 1.4 Rows \cong 1 Row$
The 22 feet is equivalent to a typical rolloff length.

$$1 Row * 14 \frac{Rolloffs}{Row} = 14 Rolloffs$$

CLUSIONS:

1. .er Parking Area II is permitted for solid container storage only; therefore, secondary containment is not required. Trailer Parking Area II has the storage capacity 14 rolloffs.

STABILIZATION FACILITY (continued)

TRAILER PARKING AREA III:

Available Secondary Containment:

$$35' * 200' * 1.5' * (0.50) = 5{,}250\,ft^3 \cong 39{,}272.73\,gallons$$

Required Secondary Containment:

Largest single liquid container is expected to be 5,500 gallons.

25 Year, 24 Hour Precipitation Event:

$$35' * 200' * 0.333' = 2{,}331\,ft^3 \cong 17{,}437.10\,gallons$$

0.333 feet is equivalent to 4.0 inches of precipitation (i.e., rain).

Required Secondary Containment Including Precipitation Event:

$$5{,}500\,gallons + 17{,}437.10\,gallons = 22{,}937.1\,gallons$$

CONCLUSIONS:

Trailer Parking Area III has secondary containment capacity of 39,273 gallons. The maximum number of liquid containers is limited by the available physical space, and the ability to contain the volume of the largest container or 10% of the total liquid stored including precipitation. Secondary containment is sufficient for liquid containers equal to or less than 21,836 gallons.

STABILIZATION FACILITY (continued)

TRAILER PARKING AREA III (continued):

Available Secondary Containment:

39,272.7 *gallons*
(From Page 3)

Required Secondary Containment:

$$19\ Tankers * 5{,}500\ \frac{gallons}{Tanker} = 104{,}500\ gallons * 10\% = 10{,}450\ gallons$$

25 Year, 24 Hour Precipitation Event:

17,437.1 *gallons*
(From Page 3)

Required Secondary Containment Including Precipitation Event:

10,450 *gallons* + 17,437.1 *gallons* = 27,887.1 *gallons*

CONCLUSIONS:

The above calculations confirm that the Trailer Parking Area III's secondary containment capacity of 39,272.7 gallons is adequate to contain 10% of the liquid stored including precipitation.

STABILIZATION FACILITY (continued)

TRAILER PARKING AREA III:

Number of Rolloffs:

2 foot perimeter: $35' - 4' = 31'$
2 foot perimeter: $200' - 4' = 196'$

$196' \div 10' = 19.6 Rolloffs \cong 19 Rolloffs$
The 10 feet incorporates the 8-foot width of the rolloff and the 2-foot aisle space.

$31' \div 22' = 1.4 Rows \cong 1 Row$
The 22 feet is equivalent to a typical rolloff length.

$$1 Row * 19 \frac{Rolloffs}{Row} = 19 Rolloffs$$

CONCLUSIONS:

Trailer Parking Area III has the storage capacity of 19 rolloffs.

STABILIZATION FACILITY (continued)

TRAILER PARKING AREA IV:

Available Secondary Containment:

$$35' * 100' * 1.5' * (0.50) = 2{,}625\,ft^3 \cong 19{,}636.4\,gallons$$

Required Secondary Containment:

Largest single liquid container is expected to be 5,500 gallons.

25 Year, 24 Hour Precipitation Event:

$$35' * 100' * 0.333' = 1{,}165.5\,ft^3 \cong 8{,}718.6\,gallons$$

0.333 feet is equivalent to 4.0 inches of precipitation (i.e., rain).

Required Secondary Containment Including Precipitation Event:

$$5{,}500\,gallons + 8{,}718.6\,gallons = 14{,}218.6\,gallons$$

CONCLUSIONS:

Trailer Parking Area IV has secondary containment capacity of 19,636 gallons. The maximum number of liquid containers is limited only by the available physical space, and the ability to contain the volume of the largest container or 10% of the total liquid stored including precipitation. Secondary containment is sufficient for liquid containers equal to or less than 10,918 gallons.

STABILIZATION FACILITY (continued)

TRAILER PARKING AREA IV (continued):

Available Secondary Containment:

19,636.4 *gallons*
(From Page 5)

Required Secondary Containment:

$$9\ Tankers * 5{,}500\ \frac{gallons}{Tanker} = 49{,}500\ gallons * 10\% = 4950\ gallons$$

25 Year, 24 Hour Precipitation Event:

8718.6 *gallons*
(From Page 5)

Required Secondary Containment Including Precipitation Event:

4950 *gallons* + 8718.6 *gallons* = 13,668.6 *gallons*

CONCLUSIONS:

The above calculations confirm that the Trailer Parking Area IV's secondary containment capacity of 19,636.4 gallons is adequate to contain 10% of the liquid stored including precipitation.

STABILIZATION FACILITY (continued)

TRAILER PARKING AREA IV:

Number of Rolloffs:

2 foot perimeter: $35' - 4' = 31'$
2 foot perimeter: $100' - 4' = 96'$

$96' \div 10' = 9.6 Rolloffs \cong 9 Rolloffs$
The 10 feet incorporates the 8-foot width of the rolloff and the 2-foot aisle space.

$31' \div 22' = 1.4 Rows \cong 1 Row$
The 22 feet is equivalent to a typical rolloff length.

$$1 Row * 9 \frac{Rolloffs}{Row} = 9 Rolloffs$$

CONCLUSIONS:

Trailer Parking Area IV has the storage capacity of 9 rolloffs.

STABILIZATION FACILITY (continued)

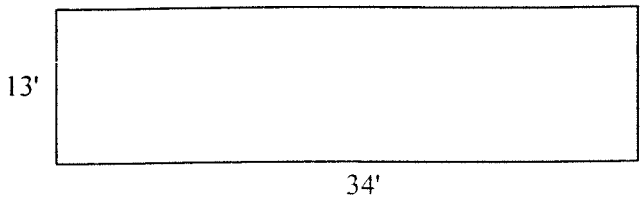
STABILIZATION WASTE ASH UNLOADING AREA:

Available Secondary Containment:

Dimensions:

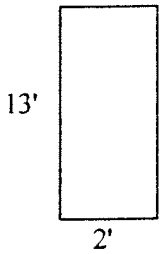
Ramp Area:

$13' x 34' x 1'$



Ramp Area:

$34' * 13' * 1' * 0.5 = 221 ft^3 \cong 1{,}653.08 gallons$



Sump Area:

$2' * 13' * 2' = 52 ft^3 \cong 388.99 gallons$

Total Available Secondary Containment:

$1{,}653.08 gallons + 388.99 gallons = 2{,}042.07 gallons$

STABILIZATION FACILITY (continued)

25 Year, 24 Hour Precipitation Event:

$$34' * 13' * 0.333' = 147.19\,ft^3 \cong 1{,}101.06\,gallons$$

0.333 feet is equivalent to 4.0 inches of precipitation (i.e., rain).

Largest Allowable Liquid Container:

$$2{,}042.07 - 1{,}101.06 = 941.01\,gallons$$

CONCLUSIONS:

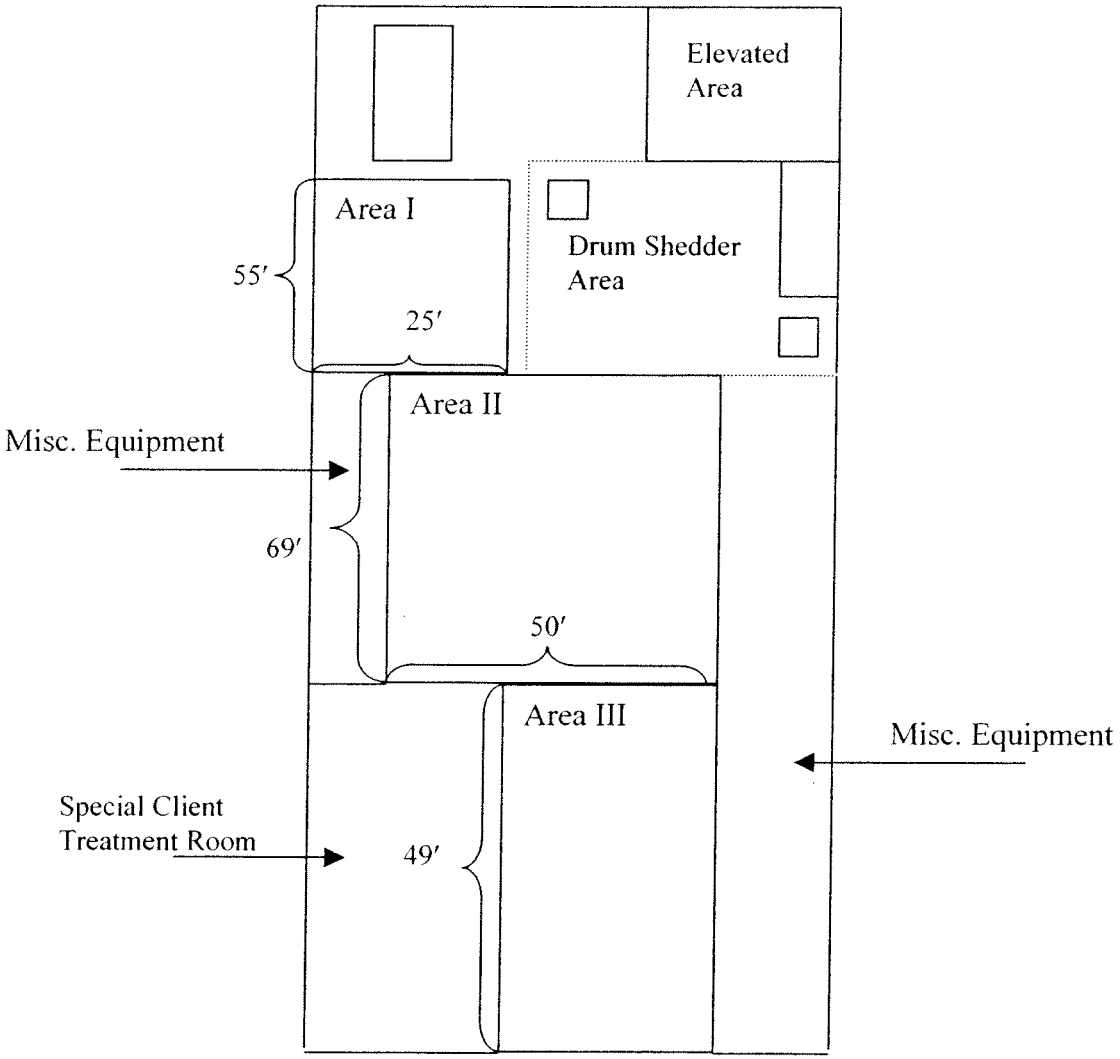
The Stabilization Waste Ash Unloading Area has secondary containment capacity of 2,042 gallons. The maximum number of liquid containers is limited only by the available physical space, and the ability to contain the volume of the largest container or 10% of the total liquid stored including precipitation. The Stabilization Waste Ash Unloading Area has the storage capacity for one truck or pneumatic tanker containing solid waste.

CLIENT: CWM PROJECT: Permit Renewal Prepared By: CBT Date: 02/09/2001
SUBJECT: Secondary Containment Calculations Reviewed By: AGL Date: 02/21/2001

STABILIZTION FACILITY (continued)

STABILIZATION FACILITY MACRO ROOM:

Dimensions:



Area I:

STABILIZATION FACILITY (continued)

Dimensions:

$22.5' x 55'$

$22.5' - 4' = 18.5'$
The 4 feet incorporates the required 2-foot perimeter.

$55' - 4' = 51'$
The 4 feet incorporates the required 2-foot perimeter.

$18.5' \div 10' = 1.85 Rows \cong 2 Rows$
The 10 feet is equivalent to a typical rolloff width of 8 feet and the required 2-foot aisle space.

$51' \div 22' = 2.3 Rolloffs \cong 2 Rolloffs$
The 22 feet is equivalent to a typical rolloff length.

$$2 Rows * 2 \frac{Rolloffs}{Row} = 4 Rolloffs$$

II:

Dimensions:

$50' x 69'$

$50' - 4' = 46'$
The 4 feet incorporates the required 2-foot perimeter.

$69' - 4' = 65'$
The 4 feet incorporates the required 2-foot perimeter.

$46' \div 10' = 4.6 Rows \cong 4 Rows$
The 10 feet is equivalent to a typical rolloff width of 8 feet and the required 2-foot aisle space.

$65' \div 22' = 2.9 Rolloffs \cong 2 Rolloffs$
The 22 feet is equivalent to a typical rolloff length.

$$4 Rowss * 2 \frac{Rolloffs}{Row} = 8 Rolloffs$$

Area III:

Dimensions:

$33' x 49'$

$33' - 4' = 31'$

STABILIZATION FACILITY (continued)

The 4 feet incorporates the required 2-foot perimeter.

$49' - 4' = 45'$

The 4 feet incorporates the required 2-foot perimeter.

$33' \div 10' = 3.3 Rows \cong 3 Rows$

The 10 feet is equivalent to a typical rolloff width of 8 feet and the required 2-foot aisle space.

$45' \div 22' = 2.0 Rolloffs$

The 22 feet is equivalent to a typical rolloff length.

$$3 Rows * 2 \frac{Rolloffs}{Row} = 6 Rolloffs$$

CONCLUSIONS:

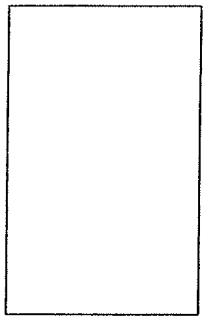
Stabilization Facility Macro Room has a storage capacity of 18 rolloffs.

STABILIZATION FACILITY (continued)

STABILIZATION FACILITY SPECIAL CLIENT ROOM:

Dimensions:

$26' x 49'$



$49' - 4' = 45'$
The 4 feet is the required 2-foot perimeter spacing.

$26' - 4' = 22'$
The 4 feet is the required 2-foot perimeter spacing.

$45' \div 22' = 2.04 Rolloffs \cong 2 Rolloffs$
The 22 feet is equivalent to a typical rolloff length.

$22' \div 10' = 2.2 Rows \cong 2 Rows$
The 10 feet is equivalent to a typical rolloff width of 8 feet and the required 2-foot aisle space.

$$2 Rows * 2 \frac{Rolloffs}{Row} = 4 Rolloffs$$

CONCLUSIONS:

The Stabilization Facility Special Client Room has the storage capacity of 4 rolloffs, which are stored in 2 rows end-to-end with the required aisle spacing.

STABILIZATION FACILITY (continued)

STABILIZATION FACILITY NORTH EXPANSION AREA:

Dimensions:

$59' x 80'$

Number of Rolloffs:

2 foot perimeter: $59' - 4' = 55'$
2 foot perimeter: $80' - 4' = 76'$

$59' \div 10' = 5.9 Rows \cong 5 Rows$
The 10 feet incorporates the 8-foot width of the rolloff and the required 2-foot aisle space.

$76' \div 22' = 3.45 Rolloffs \cong 3 Rolloffs$

$$5 Rows * 3 \frac{Rolloffs}{Row} = 15 Rolloffs$$

CONCLUSIONS:

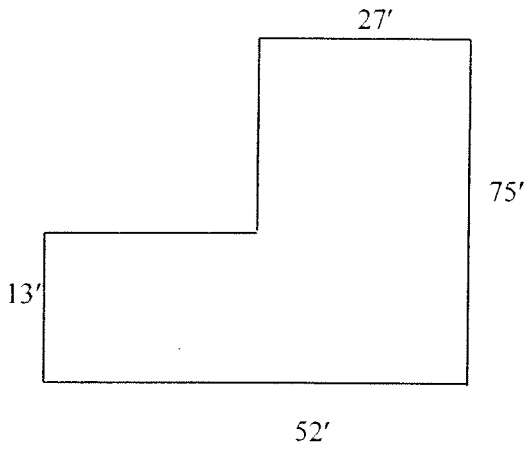
The Stabilization Facility North Expansion Area has a storage capacity of 15 rolloffs.

CLIENT: CWM PROJECT: Permit Renewal Prepared By: CBT Date: 02/09/2001
SUBJECT: Secondary Containment Calculations Reviewed By: AGL Date: 02/21/2001

STABILIZATION FACILITY (continued)

STABILIZATION FACILITY DRUM SHREDDER AREA (UPPER):

Dimensions:



Dimensions:

$27'x75'$
$13'x25'$

2 foot perimeter: $27' - 4' = 23'$
2 foot perimeter: $75' - 4' = 71'$
The 2-foot perimeter is the required wall spacing.

$$5Sections * 2\frac{Rows}{Section} = 10Rows$$

$31' \div 2' = 15.5Drums \cong 15Drums$
The 2 feet is equivalent to a typical drum diameter.

$$10Rows * 15\frac{Drums}{Row} = 150Drums(SingleStackedd) * 2 = 300Drums(DoubleStacked)$$

CONCLUSIONS:

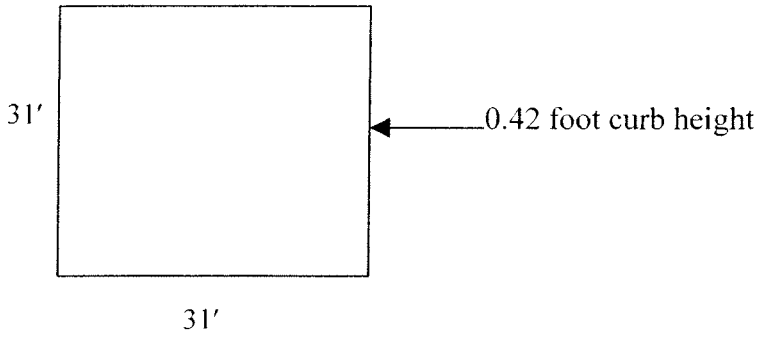
Stabilization Facility Upper Drum Shredder Area has a solids storage capacity of 300 55-gallon drums. It is permitted for solid container storage only; therefore, secondary containment is not required.

STABILIZATION FACILITY (continued)

STABILIZATION FACILITY DRUM SHREDDER AREA (LOWER):

Dimensions:

$31' x 31'$



Number of Rolloffs:

$31' - 4' = 27'$
$31' - 4' = 27'$
The 4 feet incorporates the required 2-foot perimeter.

$27' \div 22' = 1.22 Rows \cong 1 Row$
The 22 feet is equivalent to the typical length of a rolloff.

$27' \div 10' = 2.7 Rolloffs \cong 2 Rolloffs$
The 10 feet is equivalent to the typical rolloff width of 8 feet and the required 2-foot aisle spacing.

$$1 Row * 2 \frac{Rolloffs}{Row} = 2 Rolloffs$$

Liquid Storage Capacity:

Dimensions:

$31' x 31' x 0.42'$

CLIENT: CWM PROJECT: Permit Renewal Prepared By: CBT Date: 02/09/2001
SUBJECT: Secondary Containment Calculations Reviewed By: AGL Date: 02/21/2001

STABILIZATION FACILITY (continued)

Available Liquid Storage Capacity:

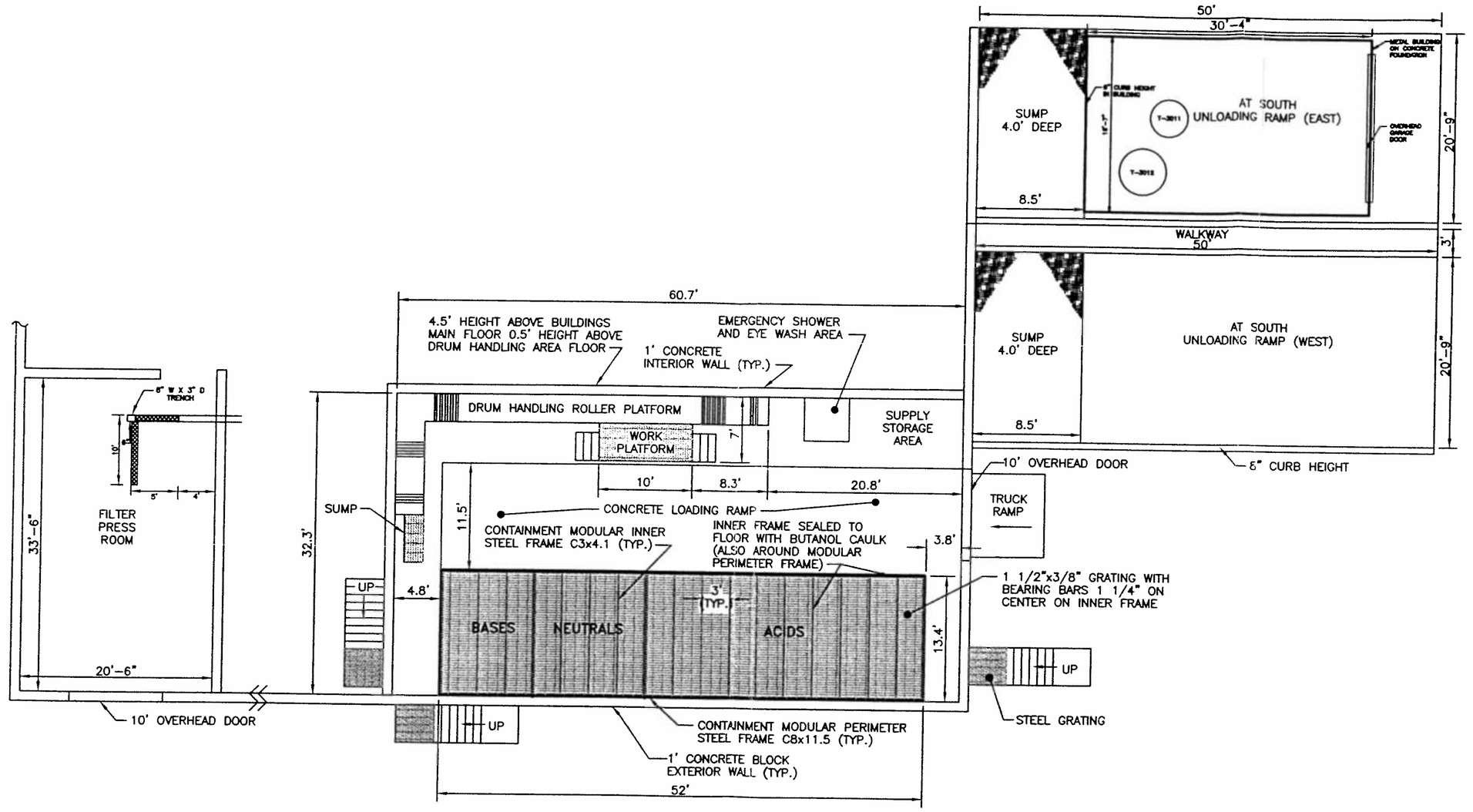
$31' * 31' * 0.42' = 403.6\,ft^3 \cong 3{,}019.3\,gallons$

CONCLUSIONS:

The Stabilization Facility Drum Shredder Area (Lower) has the storage capacity for 2 rolloffs and has a liquid secondary containment capacity of 3,019 gallons.

FIGURE D-5

AQUEOUS TREATMENT BUILDING CONTAINER STORAGE AREAS



NOTES:

1. BASE MAP BY RUST ENVIRONMENT & INFRASTRUCTURE 1/25/95. DRAWING IS NOT TO SCALE.
2. THE DESIGNATED ACID OR BASE AREAS AS SHOWN MAY INCREASE IN SIZE BY UTILIZING THE NEUTRAL AREA. PROVIDING THERE IS A TWO DRUM WIDTH BETWEEN ACIDS AND BASES AT ALL TIMES.
3. ACIDS AND BASES CANNOT BOTH BE IN THE NEUTRAL AREA AT THE SAME TIME.
4. MAXIMUM HAZARDOUS WASTE DRUM CAPACITY: 128 (55-GALLON EACH)
5. DRUMS WILL BE STORED 2 FEET FROM THE EDGE OF CONTAINMENT; A MINIMUM OF 2' WILL BE USED FOR AISLE SPACING BETWEEN ROWS OF DRUM PAIRS, AND WILL BE STACKED AT A MAXIMUM OF TWO HIGH.
6. FILTER PRESS ROOM WILL TYPICALLY CONTAIN ONE SOLID HAZARDOUS WASTE ROLLOFF CONTAINER, APPROXIMATELY 8'W X 22'L.
7. TWO TANKERS WITH A MAXIMUM CAPACITY OF 6,000 GALLONS EACH MAY BE LOCATED AT THE AT SOUTH UNLOADING RAMP.

L: REF*-OFF
P: STD-PCP/BL
12/31/01 ROC-54-SLM
05052090/05052B03.DWG

CWM CHEMICAL SERVICES, LLC
MODEL CITY, NEW YORK
6NYCRR PART 373 PERMIT APPLICATION

AQUEOUS TREATMENT BUILDING CONTAINER STORAGE AREAS

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

FIGURE D-5

CLIENT: CWM PROJECT: Permit Renewal Prepared By: CBT Date: 02/09/2001
SUBJECT: Secondary Containment Calculations Reviewed By: AGL Date: 02/21/2001

AQUEOUS TREATMENT BUILDING

TASK:

Calculate the total volume within the secondary containment of the drum storage area.

CALCULATIONS:

ACIDS/BASES/NEUTRALS STORAGE AREA - LIQUIDS:

Available Secondary Containment:

$$13.4' * 52' * 0.25' = 174.2\,ft^3 \cong 1{,}303.11\,gallons$$

Drum Storage Capacity:

$$128\,Drums * 55\frac{gal}{drum} = 7{,}040\,gallons$$

Required Secondary Containment:

$$10\% * 7{,}040\,gallons = 704\,gallons$$

CONCLUSIONS:

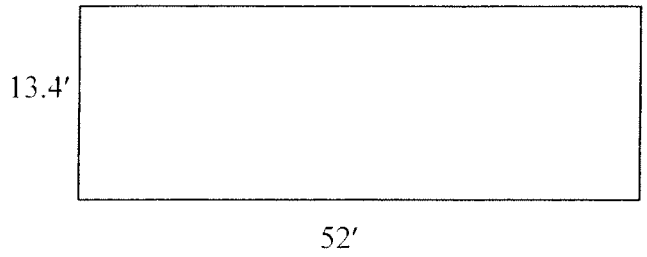
The Aqueous Treatment Building Acids/Bases/Neutrals storage area has sufficient secondary containment for the storage capacity of 128 55-gallon drums.

AQUEOUS TREATMENT BUILDING (continued)

ACIDS/BASES/NEUTRALS STORAGE AREA - SOLIDS:

Dimensions:

$13.4' x 52'$



$13.4' - 4' = 9.4'$
$52' - 4' = 48'$

$9.4' \div 2' = 4.7 Drums \cong 4 Drums$
The 2 feet is equivalent to a typical drum diameter.

$48' \div 6' = 8 Sections$
A section is defined as 2 drums side by side (4 feet total) and the required 2-foot aisle space. Therefore, a section is 2 rows of drums.

$$8 Sections * 2 \frac{Rows}{Section} = 16 Rows$$

$$16 Rows * 4 \frac{Drums}{Row} = 64 Drums(SingleStacked) * 2 = 128 Drums(DoubleStacked)$$

CONCLUSIONS:

The Aqueous Treatment Building Acids/Neutrals/Bases solids storage area has the capacity of 128 55-gallon drums.

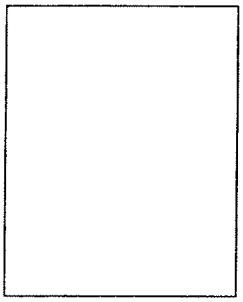
CLIENT: CWM PROJECT: Permit Renewal Prepared By: CBT Date: 02/09/2001
SUBJECT: Secondary Containment Calculations Reviewed By: AGL Date: 02/21/2001

AQUEOUS TREATMENT BUILDING (continued)

FILTER PRESS ROOM:

Dimensions:

20.5′*x*33.5′



$33.5' \div 22' = 1.5 Rolloffs \cong 1 Rolloff$

A typical rolloff is 22 feet in length and 8 feet in width.

CONCLUSIONS:

The Aqueous Treatment Building Filter Press Room has the solids storage capacity of 1 rolloff.

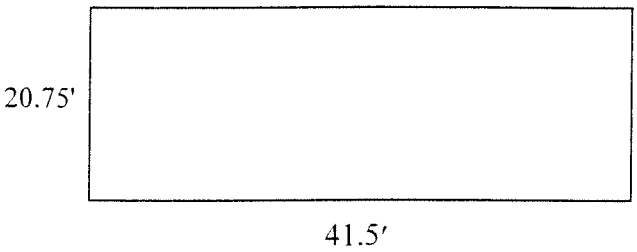
AQUEOUS TREATMENT BUILDING (continued)

AT SOUTH UNLOADING RAMP AREAS (EAST & WEST):

Dimensions (Individually):

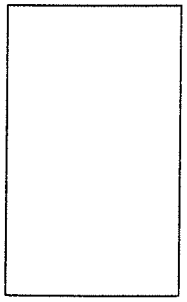
Ramp (East & West):

$20.75' x 41.5' x 0.667'$



Sump (East & West):

$8.5' x 20.75' x 4'$



Available Secondary Containment (East & West-Total):

Ramp Area (East & West-Total):

$$41.5' * 20.75 * 0.667' * (0.50) = 287.2\,ft^3 \cong 2{,}148.1\,gallons * 2 = 4{,}296.3\,gallons$$

Sump Area (East & West-Total):

$$8.5' * 20.75' * 4' = 705.5\,ft^3 \cong 5{,}277.14\,gallons * 2 = 10{,}554.3\,gallons$$

AQUEOUS TREATMENT BUILDING (continued)

Total Available Secondary Containment (East & West-Total):

$$4{,}296.3 gallons + 10{,}554.3 gallons = 14{,}850.6 gallons$$

Required Secondary Containment (East & West-Total):

Tankers, a total of 2, with a maximum capacity of 6,000 gallons each may be located in the unloading area.

25 Year, 24 Hour Precipitation Event:

East & West Ramp (minus clarifier building):

$$41.5' * 20.75' * 0.333' * 2 - (16.58' * 30.33' * 0.333') = 406.1 ft^3 \cong 3{,}037.3 gallons$$

0.333 feet is equivalent to 4.0 inches of precipitation (i.e., rain).

Sumps (East & West- Total):

$$8.5' * 20.75' * 0.333' = 58.7 ft^3 * 2 = 117.5 ft^3 \cong 878.6 gallons$$

0.333 feet is equivalent to 4.0 inches of precipitation (i.e., rain).

Total Precipitation:

$$3{,}037.3 gallons + 878.6 gallons = 3{,}915.9 gallons$$

Required Secondary Containment Including Precipitation Event (East & West-Total):

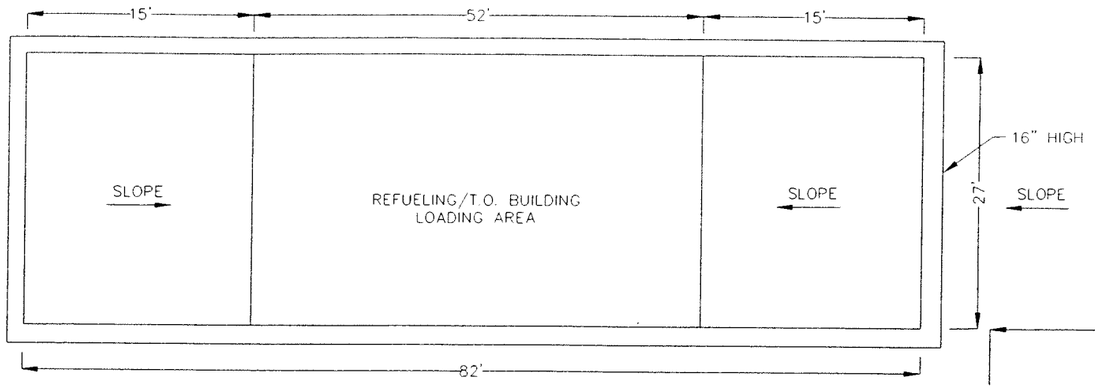
$$6{,}000 gallons + 3{,}915.9 gallons = 9{,}915.9 gallons$$

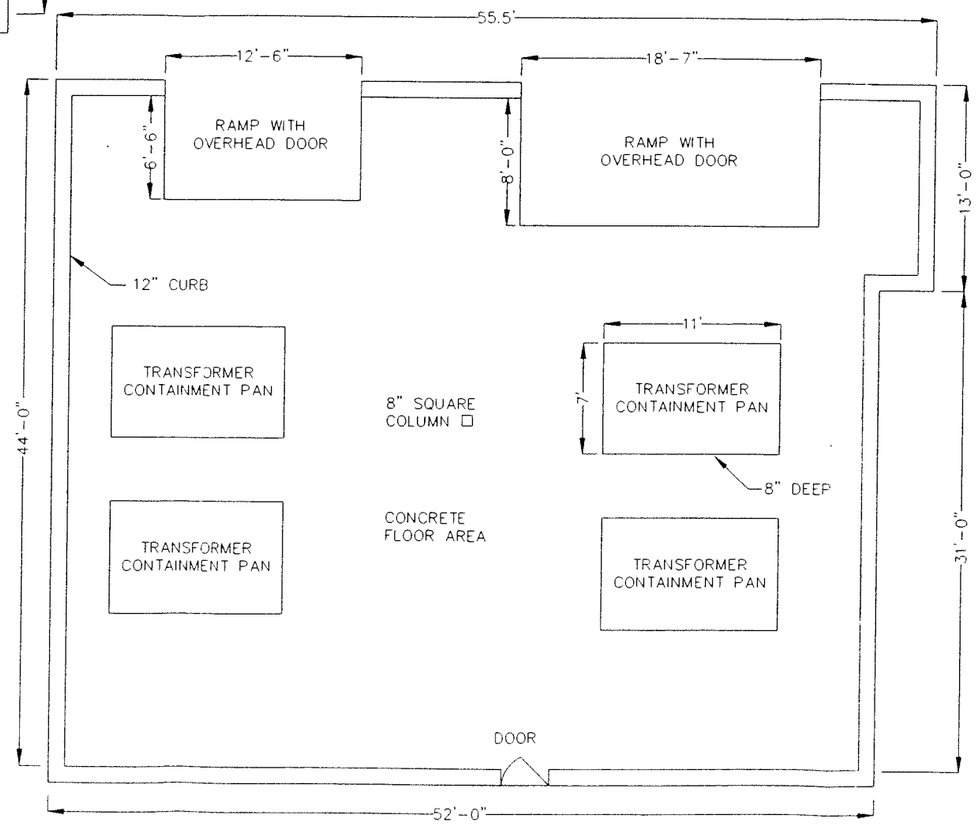
CONCLUSIONS:

The AT South Unloading Ramp Areas (East & West) has a secondary containment capacity of 14,850.6 gallons. The maximum number of liquid containers is limited only by the available physical space, and the ability to contain the volume of the largest container or 10% of the total liquid stored including precipitation. The AT South Unloading Ramp Areas (East & West) has the storage capacity for liquid containers equal to or less than 10,935 gallons.

FIGURE D-6

TRANSFORMER DECOMMISSIONING (T.O.) BUILDING





NOTES:

1. BASE MAP ADAPTED FROM RUST ENVIRONMENT & INFRASTRUCTURE, 1/24/95.
2. TYPICAL MAXIMUM CONTAINMENT VOLUME FOR EACH PAN IS 385 GALLONS. (8" DEEP PAN) THE NUMBER OF PANS MAY VARY TO A MAXIMUM OF 11 PANS.
3. LOCATION OF FEATURES SUCH AS T.O. BUILDING LOADING AREA AND TRANSFORMER CONTAINMENT PANS ARE APPROXIMATE.
4. DRAWING IS NOT TO SCALE.
5. TWO TANKERS WITH A TOTAL CAPACITY OF 12,000 GALLONS MAY BE LOCATED IN THE REFUELING/T.O. BUILDING LOADING AREA.

CWM CHEMICAL SERVICES, LLC
MODEL CITY, NEW YORK
6NYCRR PART 373 PERMIT APPLICATION

TRANSFORMER DECOMMISSIONING (T.O) BUILDING

BBL BLASLAND, BOUCK & LEE, INC. *engineers & scientists*

FIGURE D-6

L: REF=OFF
P: STD-PCP/BL
4/20/01 POC-54-SLM
05052030/05052G43.DWG

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

CALCULATION SHEET

PROJECT NO.: 05052.030

CLIENT: CWM PROJECT: Permit Renewal Prepared By: CBT Date: 04/03/2001

SUBJECT: Secondary Containment Calculations Reviewed By: AGL Date: 04/03/2001

TRANSFORMER DECOMMISSIONING (T.O.) BUILDING

TASK:

Calculate the total volume within the secondary containment area.

CALCULATIONS:

TRANSFORMER CONTAINMENT PAN: (Determined on an individual basis.)

Dimensions:

$11' x 7' x 0.667'$

Available Secondary Containment:

$11' * 7' * 0.67' = 51.59\, ft^3 \cong 385.92\, gallons$

CONCLUSIONS:

The individual transformer containment pans have secondary containment capacity of 385.92 gallons. The total number of containment pans may vary to a maximum of 11 pans.

TRANSFORMER DECOMMISSIONING (T.O.) BUILDING (continued)

Dimensions:

50' x 31'

Number of Pans:

2 foot perimeter: 50' - 4' = 46'
2 foot perimeter: 31' - 2' = 29'

$29' \div 9' = 3.22 Rows \cong 3 Rows$
The 9 feet incorporates the 7-foot width of the pan and the required 2-foot aisle space.

$46' \div 11' = 4.18 Pans \cong 4 Pans$

$3\ Rows * 4\ \frac{Pans}{Row} = 12 Pans$

CONCLUSIONS:

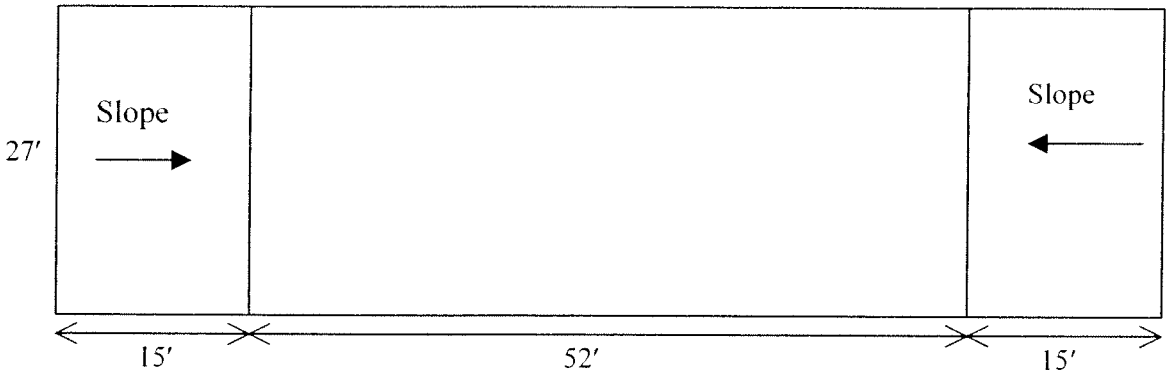
The Transformer Decommissioning (T.O.) Building can accommodate the storage of up to 11 pans, with the largest transformer in each pan having a liquid capacity of no greater than 385 gallons.

TRANSFORMER DECOMMISSIONING (T.O.) BUILDING (continued)

TRANSFORMER DECOMMISSIONING (T.O.) LOADING RAMP:

Dimensions:

$82' x 27' x 1.35'$



Available Secondary Containment:

$(0.50) * 15' * 27' * 1.35' * 2 = 546.8\,ft^3 \cong 4{,}090.3\,gallons$

$52' * 27' * 1.35' = 1{,}895.4\,ft^3 \cong 14{,}178.6\,gallons$

$4{,}090.3\,gallons + 14{,}178.6\,gallons = 18{,}268.9\,gallons$

Required Secondary Containment:

Two tankers with a total capacity of 12,000 gallons will be located in the unloading area.

25 Year, 24 Hour Precipitation Event:

$82' * 27' * 0.333' = 737.26\,ft^3 \cong 5{,}515.10\,gallons$

0.333 feet is equivalent to 4.0 inches of precipitation (i.e., rain).

Required Secondary Containment:

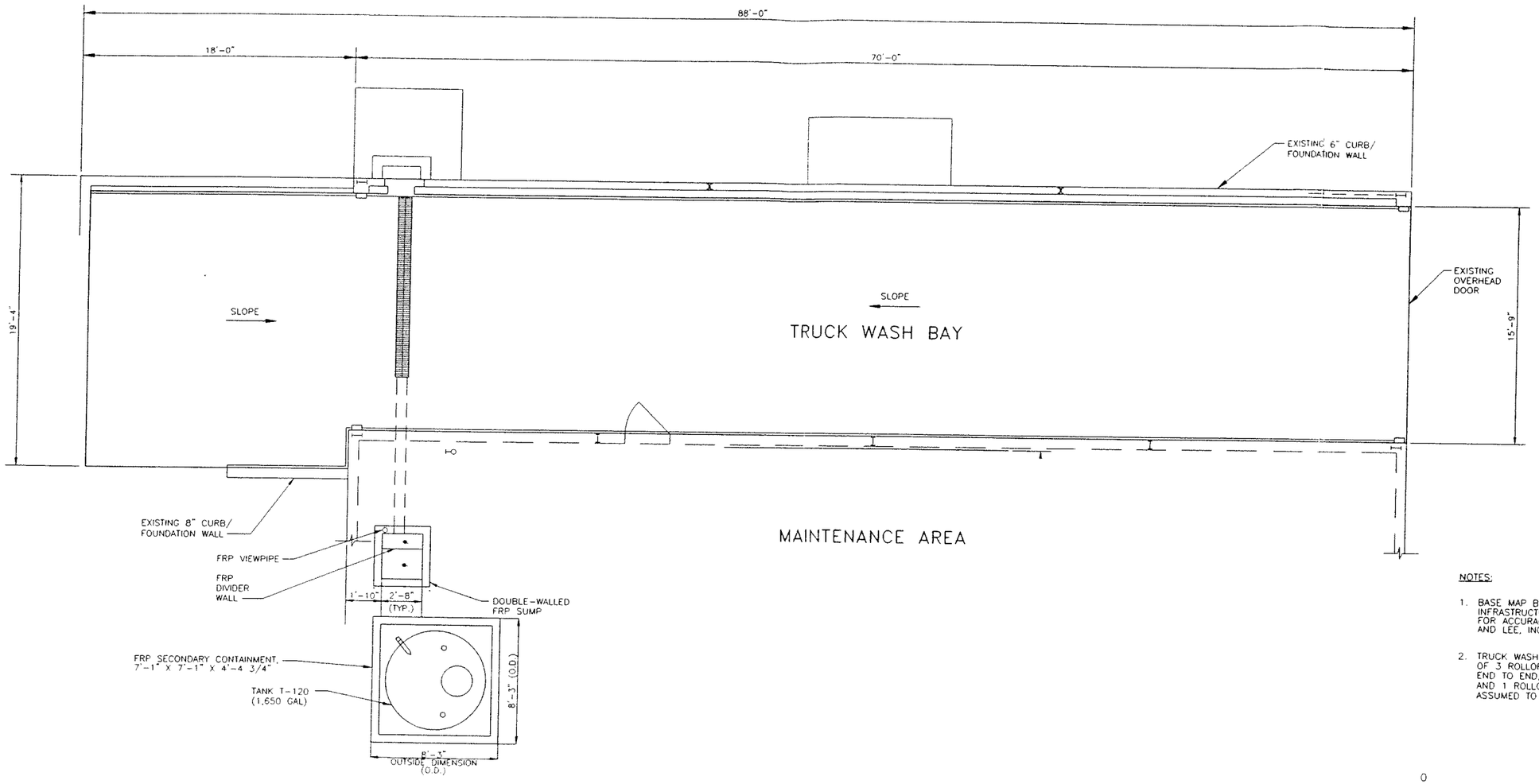
$12{,}000\,gallons + 5{,}515.10\,gallons = 17{,}515.1\,gallons$

CONCLUSIONS:

The Transformer Decommission Loading Ramp has secondary containment capacity of 18,269 gallons. Secondary containment is sufficient for liquid containers equal to or less than 12,754 gallons.

FIGURE D-7

TRUCK WASH BUILDING



NOTES:

1. BASE MAP BY RUST ENVIRONMENT & INFRASTRUCTURE, 1/25/95. UPDATED FOR ACCURACY BY BLASLAND, BOUCK AND LEE, INC., JANUARY 2001.
2. TRUCK WASH BAY HAS A MAXIMUM LIMIT OF 3 ROLLOFFS: 2 ROLLOFFS END TO END, A 2' AISLE SPACING, AND 1 ROLLOFF. EACH ROLLOFF IS ASSUMED TO BE 8'W X 22'L.

0 8' 16'

GRAPHIC SCALE

CWM CHEMICAL SERVICES, LLC
MODEL CITY, NEW YORK
6NYCRR PART 373 PERMIT APPLICATION

TRUCK WASH BUILDING

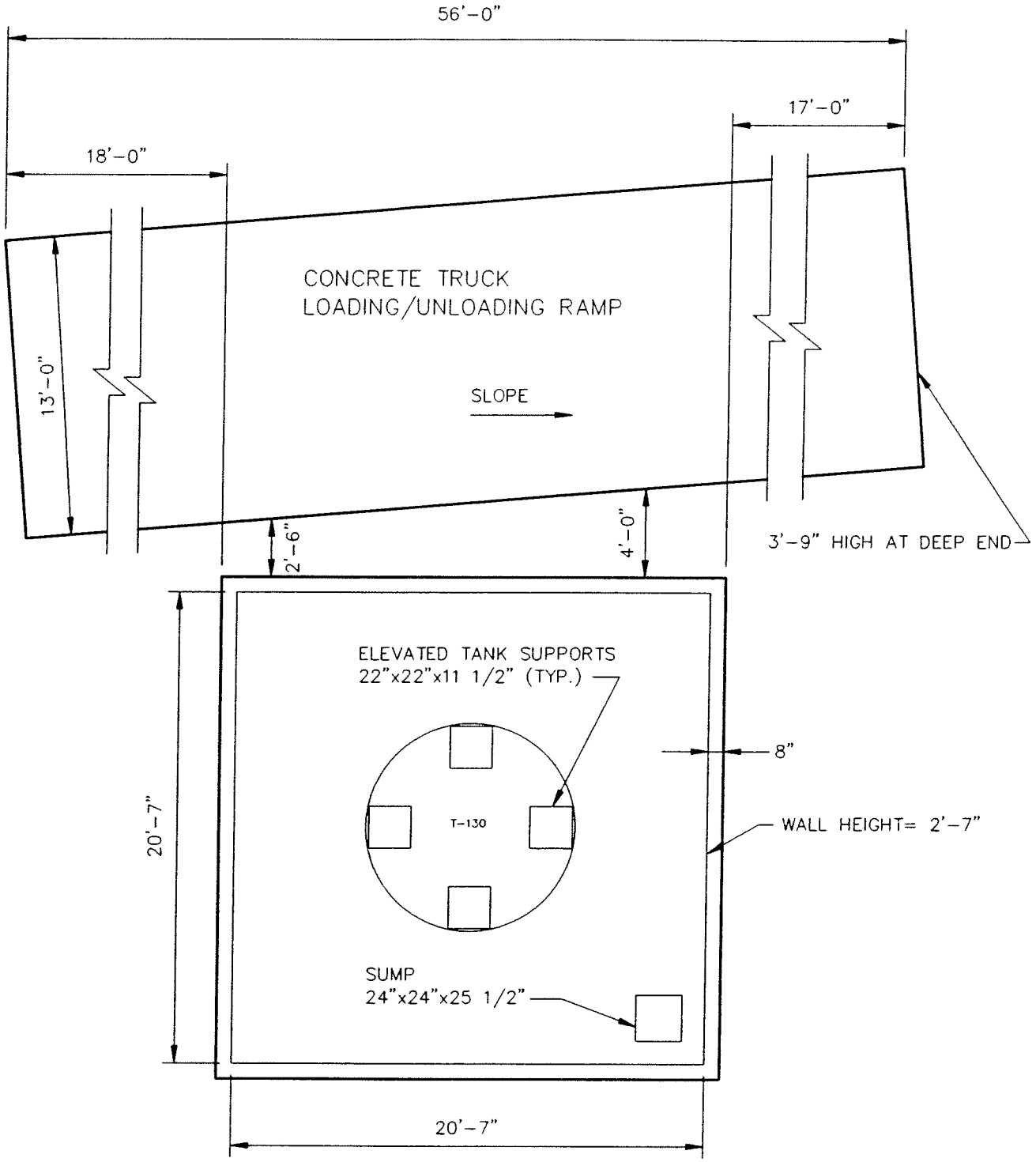
BBL BLASLAND, BOUCK & LEE, INC. *engineers & scientists*

FIGURE D-7

L: REF**OFF
P: STD-PCP/BL
3/13/01 POC-54-SLM
05052030/05052C18.DWG

FIGURE D-25

TANK T-130 LOADING/UNLOADING RAMP



PLAN
NOT TO SCALE

CWM CHEMICAL SERVICES, LLC
MODEL CITY, NEW YORK
6NYCRR PART 373 PERMIT APPLICATION

TANK T-130

BBL BLASLAND, BOUCK & LEE, INC.
engineers & scientists

FIGURE
D-25

X: 05052X00
L: ON=* OFF=*REF*
P: STD-PCP/AP
4/2/01 SYR-54-HSB DJP SDL ROC-54-SLM
05052080/05052G05.DWG

CLIENT: CWM PROJECT: Permit Renewal Prepared By: PJC Date: 02/15/2001
SUBJECT: Secondary Containment Calculations Reviewed By: CBT Date: 02/19/2001

TANK T-105 & T-130 LOADING/UNLOADING RAMP

TASK:

Calculate the total volume within the secondary containment area.

CALCULATIONS:

Available Volume:

Containment Area:

(0.50(55.0′ x 3.7′ x 13.0′)) = 1,322.8 CF

Subtractions:

Note:
Additional volume displacements such as truck stops will only account for a very small volume and will not be included in the net containment volume.

Total Available Volume:

(1,322.8 CF x 7.48 gal/CF) = 9,894.5 gallons

Required Volume:

One tanker truck with a maximum capacity of 5,500 gallons could be located in Truck Ramp.

25 Year, 24 Hour Precipitation Event:

(55.0′ x 13.0′ x 0.33′) = 238.1 CF = 238.1 CF x 7.48 gal/CF = 1,781.0 gallons
0.333 feet is equivalent to 4.0 inches of precipitation (i.e., rain).

Required Volume

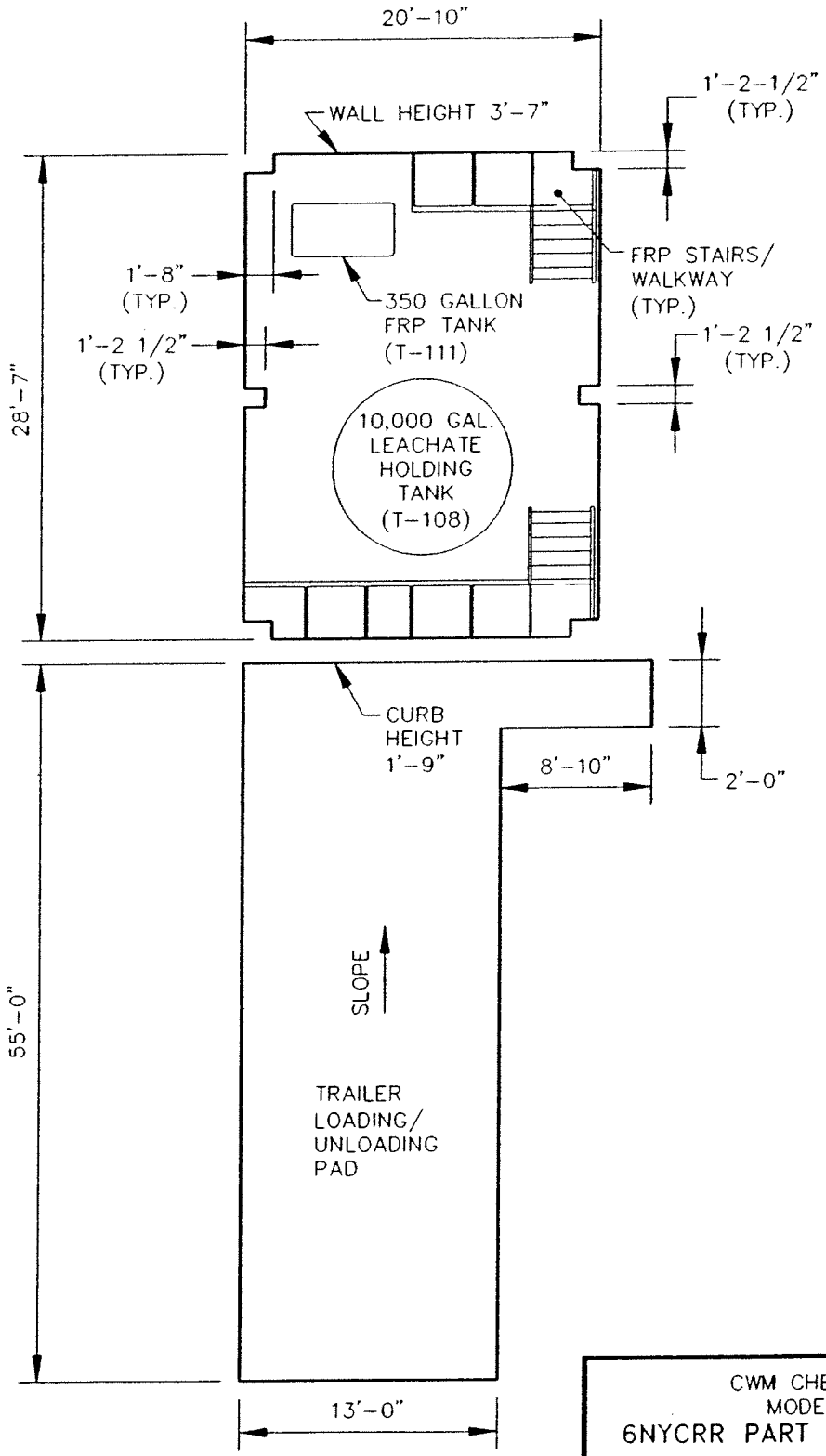
5,500 gallons + 1,781.0 gallons = 7,281.0 gallons

Conclusions:

Available volume exceeds required volume; therefore, containment volume is acceptable.

FIGURE D-13

TANK T-108 (SLF 7/11)
LEACHATE LOADING/UNLOADING PAD



PLAN

NOT TO SCALE

CWM CHEMICAL SERVICES, LLC
MODEL CITY, NEW YORK
6NYCRR PART 373 PERMIT APPLICATION

TANKS T-108 AND T-111

BBL BLASLAND, BOUCK & LEE, INC. *engineers & scientists*

FIGURE D-13

X: 05052X00
L: ON=*, OFF=*REF*
P: STD-PCP/AP
3/14/01 SYR-54-SDL DJP SDL ROC-54-SLM
05052080/05052G22.DWG

CLIENT: CWM PROJECT: Permit Renewal Prepared By: PJC Date: 02/15/2001
SUBJECT: Secondary Containment Calculations Reviewed By: CBT Date: 02/19/2001

SLF 7/11 LEACHATE LOADING/UNLOADING PAD

TASK:

Calculate the total volume within the secondary containment area.

CALCULATIONS:

Available Volume:

Containment Area:

(0.50(55.0′ x 1.7′ x 13.0′)) + (8.9′ x 2.0′ x 1.7′) = 638.0 CF

Subtractions:

Note:
Additional volume displacements such as truck stops will only account for a very small volume and will not be included in the net containment volume.

Total Available Volume:

(638.0 CF x 7.48 gal/CF) = 4,772.2 gallons + 15,708.7 gallons = 20,480.9 gallons

The Truck Ramp is connected to the Leachate Collection Building by a 3" pipe. A valve in the pipe is opened whenever transferring liquids to a tanker located in the Truck Ramp. Therefore, an additional 15,708.7 gallons of secondary containment is available within the building.

Required Volume:

One tanker truck with a maximum capacity of 5,500 gallons could be located in Truck Ramp.

25 Year, 24 Hour Precipitation Event:

(55.0′ x 13.0′ x 0.33′) + (8.9′ x 2.0′ x 0.33′) = 241.8 CF = 241.8 CF x 7.48 gal/CF = 1,808.7 gallons
0.333 feet is equivalent to 4.0 inches of precipitation (i.e., rain)
This assumes that the rain gutters for tanks fail.

Required Volume:

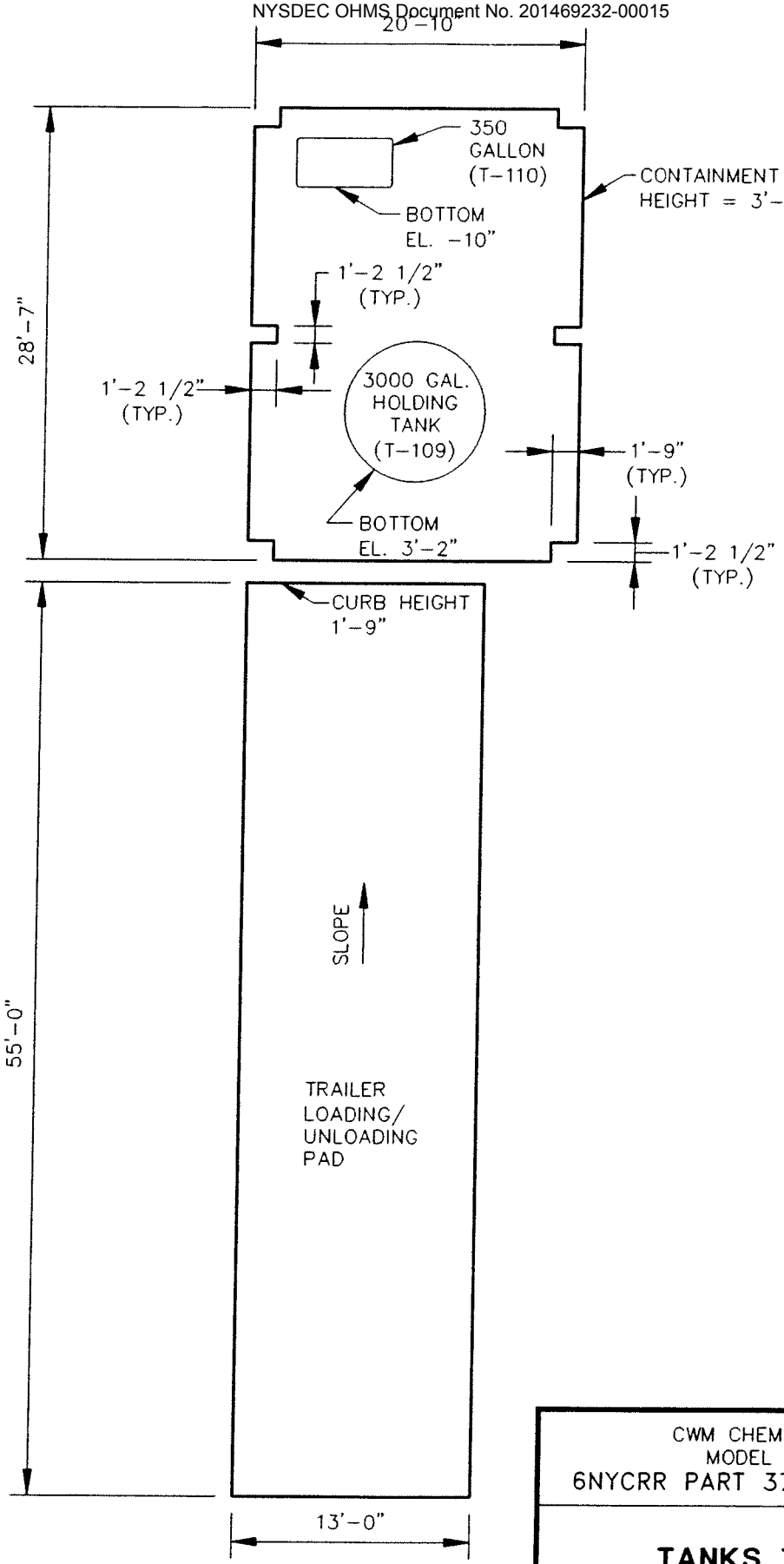
5,500 gallons + 1,808.7 gallons = 7,308.7 gallons

CONCLUSIONS:

Available volume exceeds required volume; therefore, containment volume is acceptable.

FIGURE D-12

TANK T-109 (SLF 10)
LEACHATE LOADING/UNLOADING PAD



PLAN

NOT TO SCALE

X: 05052X00
L: ON=*, OFF=*REF*
P: STD-PCP/AP
3/14/01 SYR-54-SDL DJP SDL ROC-54-SLM
05052080/05052G25.DWG

CWM CHEMICAL SERVICES, LLC
MODEL CITY, NEW YORK
6NYCRR PART 373 PERMIT APPLICATION

TANKS T-109 & T-110

BBL BLASLAND, BOUCK & LEE, INC. *engineers & scientists*

FIGURE **D-12**

CLIENT: CWM PROJECT: Permit Renewal Prepared By: PJC Date: 02/15/2001
SUBJECT: Secondary Containment Calculations Reviewed By: CBT Date: 02/19/2001

SLF 10 LEACHATE LOADING/UNLOADING PAD

TASK:

Calculate the total volume within the secondary containment area.

CALCULATIONS:

Available Volume:

Containment Area:

($^1/_2$(55.0′ x 1.7′ x 13.0′)) = 607.8 CF

Subtractions:

Note:
Additional volume displacements such as truck stops will only account for a very small volume and will not be included in the net containment volume.

Total Available Volume:

.8 CF x 7.48 gal/CF) = 4,546.3 gallons + 15,708.7 gallons = 20,255 gallons

The Truck Ramp is connected to the Leachate Collection Building by a 3" pipe. A valve in the pipe is opened whenever transferring liquids to a tanker located in the Truck Ramp. Therefore, an additional 15,708.7 gallons of secondary containment is available within the building.

Required Volume:

One tanker truck with a maximum capacity of 5,500 gallons could be located in Truck Ramp.

25 Year, 24 Hour Precipitation Event:

(55.0′ x 13.0′ x 0.33′) = 238.1 CF = 238.1 CF x 7.48 gal/CF = 1,781.0 gallons
0.333 feet is equivalent to 4.0 inches of precipitation (i.e., rain).

Required Volume:

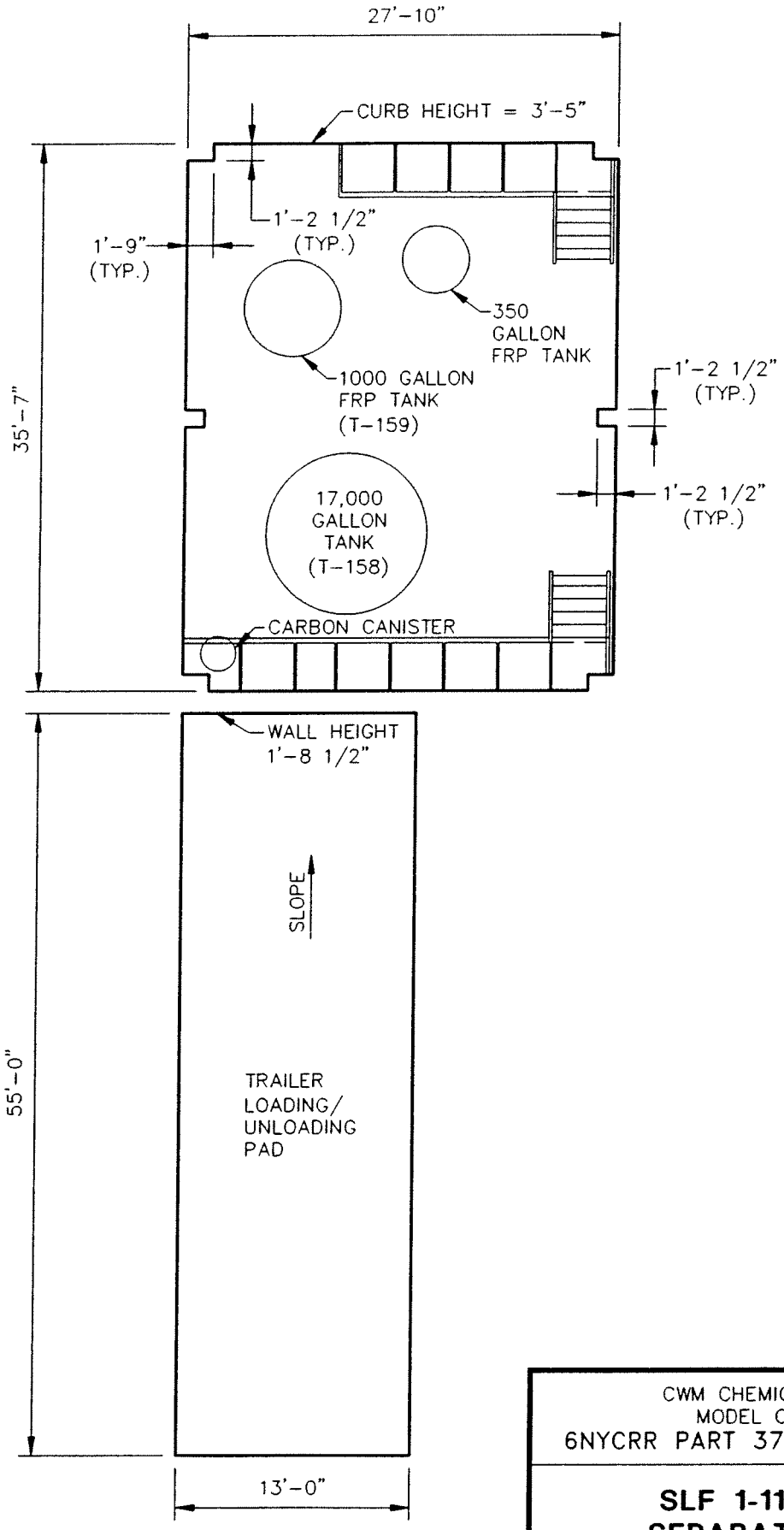
5,500 gallons + 1,781.0 gallons = 7,281.0 gallons

CONCLUSIONS:

Available volume exceeds required volume; therefore, containment volume is acceptable.

FIGURE D-14

TANK T-158 (SLF 1-11 OWS)
BUILDING LOADING/UNLOADING PAD



PLAN

NOT TO SCALE

X: 05052X00
L: ON=*, OFF=*REF*
P: STD-PCP/AP
3/14/01 SYR-54-SDL DJP SDL ROC-54-SLM
05052080/05052G23.DWG

CWM CHEMICAL SERVICES, LLC
MODEL CITY, NEW YORK
6NYCRR PART 373 PERMIT APPLICATION

SLF 1-11 OIL/WATER SEPARATOR BUILDING

BBL BLASLAND, BOUCK & LEE, INC.
engineers & scientists

FIGURE
D-14

CLIENT: CWM PROJECT: Permit Renewal Prepared By: PJC Date: 02/15/2001
SUBJECT: Secondary Containment Calculations Reviewed By: CBT Date: 02/19/2001

SLF 1-11 OWS BUILDING LOADING/UNLOADING PAD

TASK:

Calculate the total volume within the secondary containment area.

CALCULATIONS:

Available Volume:

Containment Area:

($^1/_2$(55.0′ x 1.7′ x 13.0′)) = 607.8 CF

Subtractions:

Note:
Additional volume displacements such as truck stops will only account for a very small volume and will not be included in the net containment volume.

Total Available Volume:

.8 CF x 7.48 gal/CF) = 4,546.3 gallons + 24,876.2 = 29,422.5 gallons

The Truck Ramp is connected to the Leachate Collection Building by a 3" pipe. A valve in the pipe is opened whenever transferring liquids to a tanker located in the Truck Ramp. Therefore, an additional 24,876.2 gallons of secondary containment is available within the building.

Required Volume:

One tanker truck with a maximum capacity of 5,500 gallons could be located in Truck Ramp.

25 Year, 24 Hour Precipitation Event:

(55.0′ x 13.0′ x 0.33′) = 238.1 CF = 238.1 CF x 7.48 gal/CF = 1,781.0 gallons
0.333 feet is equivalent to 4.0 inches of precipitation (i.e., rain).
This assumes that the rain gutters for tanks fail.

Required Volume:

5,500 gallons + 1,781.0 gallons = 7,281.0 gallons

CONCLUSIONS:

Available volume exceeds required volume; therefore, containment volume is acceptable.