

Attachment 7
Use and Management of Containers

**FORM EQP 5111 ATTACHMENT TEMPLATE C1
USE AND MANAGEMENT OF CONTAINERS**

R 299.9614 of the administrative rules promulgated pursuant to Part 111, Hazardous Waste Management, of Michigan's Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); R 29.4101 to R 29.4505 promulgated pursuant to the provisions of the Michigan Fire Protection Act, PA 207, as amended (Act 207); and Title 40 of the Code of Federal Regulations (CFR) §§270.14(d), 270.15, and Part 264, Subpart I, establish requirements for the use and management of containers. All references to 40 CFR citations specified herein are adopted by reference in R 299.11003.

This license application template addresses requirements for the use and management of containers at the Petro-Chem facility in Detroit, Michigan. This template addresses the condition of containers, compatibility of waste with containers, management of containers, inspections, containment, special requirements for ignitable or reactive waste, special requirements for incompatible wastes, and closure.

Operating License Applicant:

R 299.9614 use and management of containers

Construction Permit Applicant:

R 299.9614 use and management of containers

This template is organized as follows:

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INTRODUCTION

The container standards are performance standards for containers and container storage areas. Completion of this template should result in a demonstration of how your facility will meet these standards.

Please note that Template C11, Subpart CC, Air Emissions from Tanks, Containers, and Surface Impoundments, addresses air emissions for containers. Also note that while specific closure requirements for container storage areas are addressed in this template, you may reference information in Template A11, Closure and Postclosure Plan.

C1.A DESCRIPTION OF CONTAINERS

[R 299.9614 and 40 CFR §264.171]

All outer packages used for the storage of hazardous wastes generated or received from off-site sources will be DOT specification containers and compatible with the contents. Containers typically range in size from non-bulk (< 119 gal) to bulk and may be fiber, steel or plastic drums, pails, totes, boxes, or jerricans. A summary of DOT container types is included in Appendix I.

C1.B CONDITION OF CONTAINERS

[R 299.9614 and 40 CFR §264.171]

All containers are inspected upon arrival at Petro-Chem for structural integrity and compatibility with its contents as part of receiving process. An impaired container will be overpacked using a salvage drum for non-corrosive wastes and specifically a poly salvage drum for corrosive wastes. Overpacking the drum is achieved by lifting and placing the container in the appropriate salvage drum upright through the use of a forklift attachment if it is not safe to do this manually. All containers are inspected daily during storage to ensure the container remains intact without any leaks. If an impaired container is found while in storage, it will be overpacked using the method described above.

C1.C COMPATIBILITY OF WASTE WITH CONTAINERS

[R 299.9614 and 40 CFR §264.172]

All containers arriving at Petro-Chem are inspected for suitability with its contents. All containers are evaluated in accordance with 49 CFR Part 178, Specifications for Packaging and all containers that do not meet this specification, will be repackaged to this specification prior to storage.

C1.D MANAGEMENT OF CONTAINERS

[R 299.9614 and 40 CFR §264.173]

Containers are staged at one of the 10 CMB load/unload docks. After sorting, inspections are conducted and samples taken and analyzed for relevant parameters in accordance with the Waste Analysis Plan. Inspections will include container integrity, container closure requirements and proper labeling.

Compatible waste streams as determined by laboratory testing are then conveyed for consolidation or storage at a designated area. Incompatible wastes are separated and placed

into one of the storage areas physically separated from the other waste storage.

All containers are emptied to comply with 40 CFR 261.7(b)(1)(ii). Empty containers from the drum pumping activities, or labpack depacking area may be crushed and recycled as a usable scrap steel, reused, or transported intact to an off site drum reconditioner.

All containers are properly staged for sampling and consolidation. The container lid is opened just prior to these activities and closed right after sampling or consolidation has been completed.

C1.E INSPECTIONS

[R 299.9614 and 40 CFR §264.174]

See Template A5 for container inspection and storage inspection form.

C1.F CONTAINMENT

[R 299.9614 and 40 CFR §§264.175 and 270.151]

C1.F.1 Secondary Containment System Design and Operation for Containers with Free Liquids

[R 299.9614 and 40 CFR §§264.175(a) and 270.15(a)]

See Drawing G-5 – Container Management Bldg Containment Areas in Volume II. Drawing 097 – CMB Containment Areas summarizes the available secondary and tertiary containment for the storage areas. CSA one overflows into area 14 which is the covered spill pit to the west of the CMB. Area ten which receives potential overflow from areas two thru nine is deficient; however, this area flows into the tertiary containment of over 290,000 gallons which is achieved by closing the emergency cut-off valve to the Detroit sewer collection system. The drawing is color coded to reflect the direction and routing of the various overflow pipes. Areas 12 & 13 overflow into area 11.

C1.F.1(a) Requirement for Base or Liner

[R 299.9614 and 40 CFR §264.175(b)(1) and 270.15(a)(1)]

C1.F.1(b) Containment System Drainage

[R 299.9614 and 40 CFR §264.175(b)(2) and 270.15(a)(2)]

See Drawing G-5 – Container Management Bldg Containment Areas

C1.F.1(c) Containment System Capacity

[R 299.9614 and 40 CFR §264.175(b)(3) and 270.15(a)(3)]

See Drawing G-5 – Container Management Bldg Containment Areas

C1.F.1(d) Control of Run-on

[R 299.9614 and 40 CFR §264.175(b)(4) and 270.15(a)(4)]

All container storage areas have sufficient excess capacity in addition to the capacity to contain 10 percent of the volume of containers. In addition, the Container Management Building, SBS Container Storage Area, SBS Solids Area and 1st Floor Operations are indoor container storage areas, whereas Dock 3 Truckwell, Dock 4 Truckwell and SBS Dock Storage are partially enclosed container storage areas.

C1.F.1(e) Removal of Liquids from Containment System
[R 299.9614 and 40 CFR §§264.175(b)(5) and 270.15(a)(5)]

All container storage areas are inspected daily to detect the presence of spilled, leaked and/or accumulated precipitation. Spills and leaks are addressed immediately upon detection and the removal of accumulated precipitation is initiated within 24 hours of detection.

Accumulated precipitation that may exist in the partially enclosed container storage areas will be pumped from these areas then evaluated for possible management through the Detroit Sanitary Sewer Collection System in accordance with Petro-Chem's current permit. Those that cannot be managed through the sewer collection system will be properly characterized and transferred off-site for further management. All spilled and leaked wastes will be properly characterized and managed based on the current data provided by the generator and the verification tests performed by Petro-Chem.

C1.F.2 Secondary Containment System Design and Operation for Containers with No Free Liquids
[R 299.9614 and 40 CFR §§264.175 and 270.15(b)(1)]

All container storage areas have secondary containment systems

C1.F.2(a) Containment System Drainage
[R 299.9614 and 40 CFR §§264.175 and 270.15(b)(2)]

See Drawing G – 5 Container Management Building Containment Areas

C1.F.2(b) Container Management
[R 299.9614 and 40 CFR §§264.175 and 270.15(b)(2)]

All containers are stored on pallets in the container storage areas.

C1.G SPECIAL REQUIREMENTS FOR IGNITABLE OR REACTIVE WASTE
[R 299.9614 and 40 CFR §§264.176 and 270.15(b)(2)]

All containers that hold reactive or ignitable wastes are stored in areas that are a minimum of fifty feet from Petro-Chem's property line.

C1.H SPECIAL REQUIREMENTS FOR INCOMPATIBLE WASTES
[R 299.9614 and 40 CFR §§264.177(c) and 270.15(b)(2)]

Reactivity tests are performed on wastes to be commingled to ensure incompatible wastes are not comingled into the same container. Container residues are also tested for reactivity to ensure the waste to be filled is not incompatible with the residue.

The CMB has separate walls for squirt protection between containment cells to prevent slightly incompatible materials from coming in contact in the event of a ruptured drum. All container storage areas have secondary overflow containment systems that are designed to maintain separation of possible incompatibles during any firefighting water addition. Peroxides, oxidizers, dangerous when wet and other reactive materials are stored in separate containment sheds on the 1st floor operations

C1.I CLOSURE

[R 299.9614 and 40 CFR §264.178]

All trans-shipment wastes in storage are shipped off-site for recycling or disposal based on the generator's request. The receiving facility is based on the data available from the generator's waste characterization report and the verification tests performed by Petro-Chem at the time of arrival. All containerized wastes that can be comingled at the labpack processing area will be processed. All containerized fuel type wastes will be comingled then transferred to the tank systems for fuel blending then sent off-site to BIFs for energy recovery. All soils beneath and around the container storage areas will be sampled, tested and managed according to the methods described in A11.A5

DOT CONTAINER TYPES

A sample UN Marking:

⊗ 1H2 / Y1.8 / 100 / 06 / F / OA30900

UN	The United Nations Coding System
1	Type of Container <ol style="list-style-type: none"> 1. Drums/Pails 2. Barrels 3. Jerricans 4. Boxes 5. Bags 6. Composite Packagings
H	Material of Construction <ol style="list-style-type: none"> A. Steel B. Aluminum C. Wood D. Fiber E. Plastic
2	Category Within Type <ol style="list-style-type: none"> 1. Closed head 2. Open head
Y	Packaging Group for which container was tested <ol style="list-style-type: none"> X. for Packaging Group I, II, III Y. for Packaging Group II and III Z. for Packaging Group III <p>Packaging Group I: Great Danger - high hazard level Packaging Group II: Medium Danger - medium hazard level Packaging Group III: Minor Danger - low hazard level</p>
1.8	Density or specific gravity of material packed OR For packaging intended for Solids (powders, pills, capsules, tablets) or that have inner packaging, this marking will indicate the maximum gross mass (weight) in kilograms.
100	Hydraulic pressure in kilo-pascal (kPa) OR For packaging intended for Solids or that have inner packaging, an "S" in upper case will follow the gross mass.

DOT CONTAINER TYPES

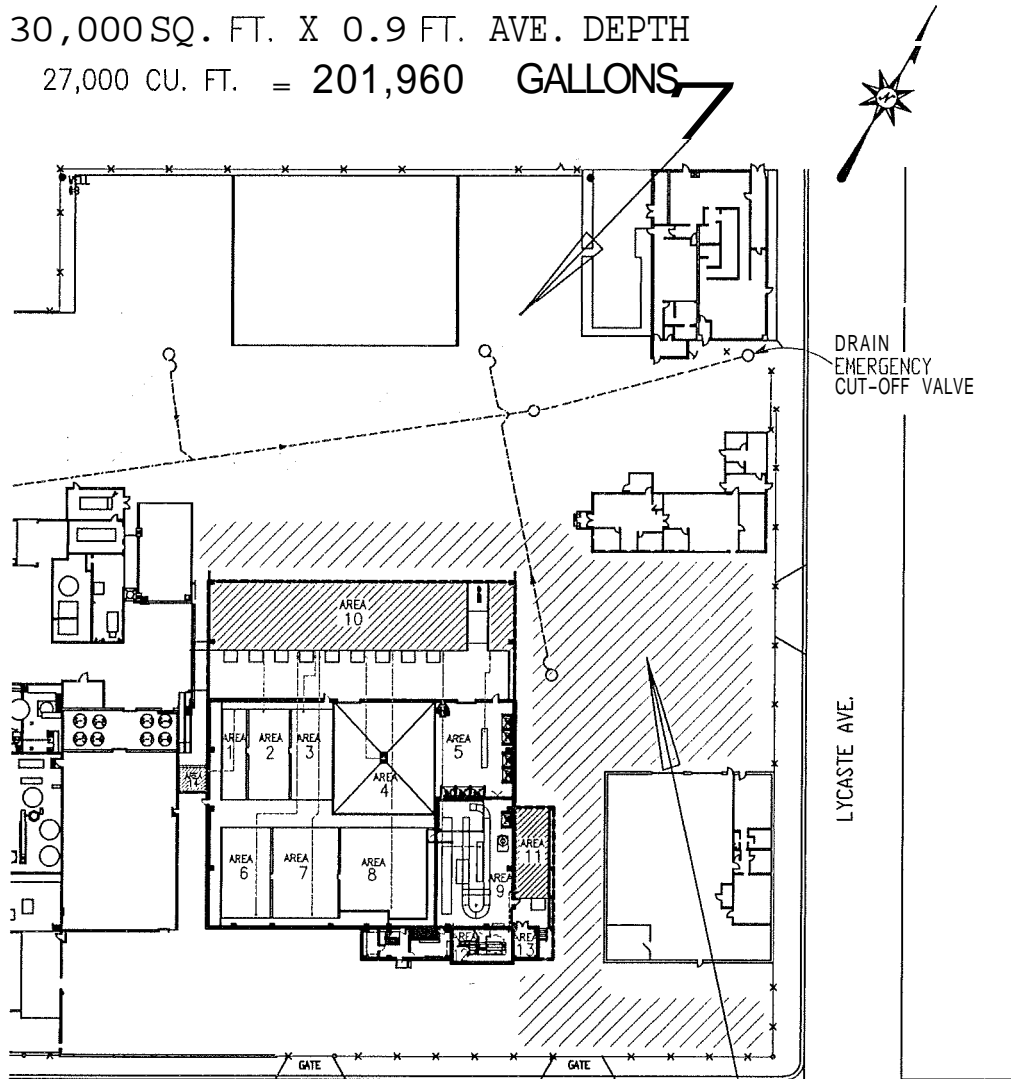
06	Current year
- C o u n t r y where container was manufactured	
OA30900	Code for manufacturing plant

Petro-Chem Maximum On-site Container Inventory

Area Description	55 drum equiv	#Roll-offs (40 yd ³)	Total Gallons
Container Management Building:			
CS1	616		33,880
CS2	440		24,200
CS3	352		19,360
CS4	176		9,680
CS5	264		14,520
CS6	264		14,520
CS7	28		1,540
Roll-off Storage			8,080
CS18 (Container Loading/Unloading)	1,744	9	95,920
CS19	4		220
Container Staging (CS7,CS8,CS19, QA Area)	674		37,119
1st Floor Operations (North Storage)	700		38,500
Drum Dock 3 (Truck Well)	300	2	16,500
Drum Dock 4 (Truck Well)	147	1	8,080
SBS Container Storage Building	272		14,960
SBS Dock Storage Area	368	4	20,240
SBS Solids Storage Area	147	1	8,080
72 Hour (Formerly 24 Hour) Truck Staging Area	363		20,000
Total Available Capacity:	6,859		385,399
Permitted Storage:	7,195		395,740
Excess Capacity:	-336		-10,341

Available capacity > permitted capacity

30,000 SQ. FT. X 0.9 FT. AVE. DEPTH
 27,000 CU. FT. = 201,960 GALLONS



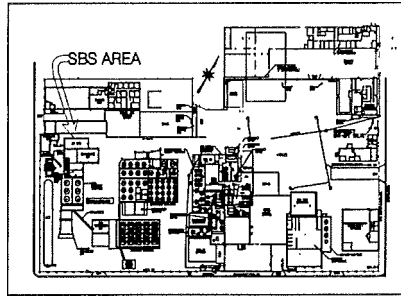
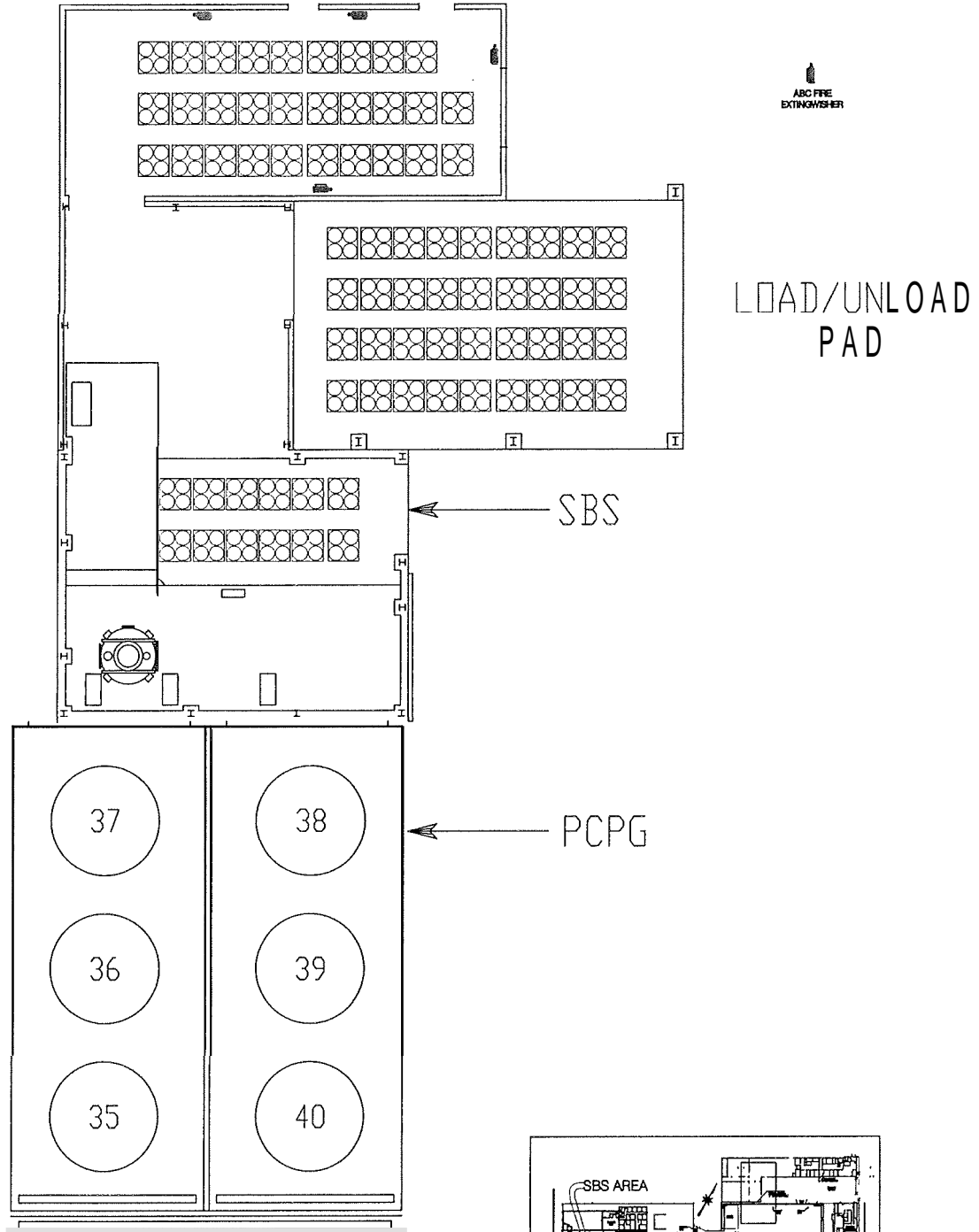
20,000 SQ. FT. X 0.6 FT. AVE. DEPTH
 12,000 CU. FT. = 89,760 GALLONS

ALL OVERFLOW FROM AREAS 10, 11 AND 14 WILL BE CONTAINED IN THE SITE PAVED LOT (OVER 290,000 GALLON CONTAINMENT AVAILABLE). THE DRAINAGE SYSTEM HAS AN EMERGENCY CUT-OFF VALVE TO KEEP DRAINAGE FROM EXITING SITE.

THIS DRAWING IS USED TO
 HELP CLARIFY TETRA TECH'S
 DRAWING G-5

PSC	08/12/11	097
	CMB CONTAINMENT AREAS	
DRAWN BY: LEWIS KRYK		

Appendix III – Container Storage Areas



LOCATION PLAN

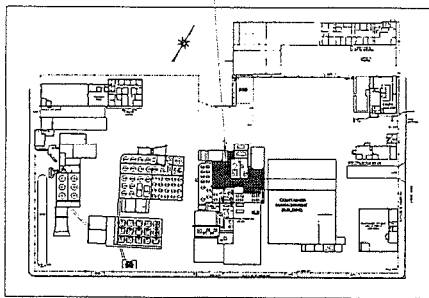


05 / 09 / 07
 SBS CONTAINER
 STORAGE AREA'S
 PERMITTED CAPACITIES
 DRAWN BY: LEWIS KRYK

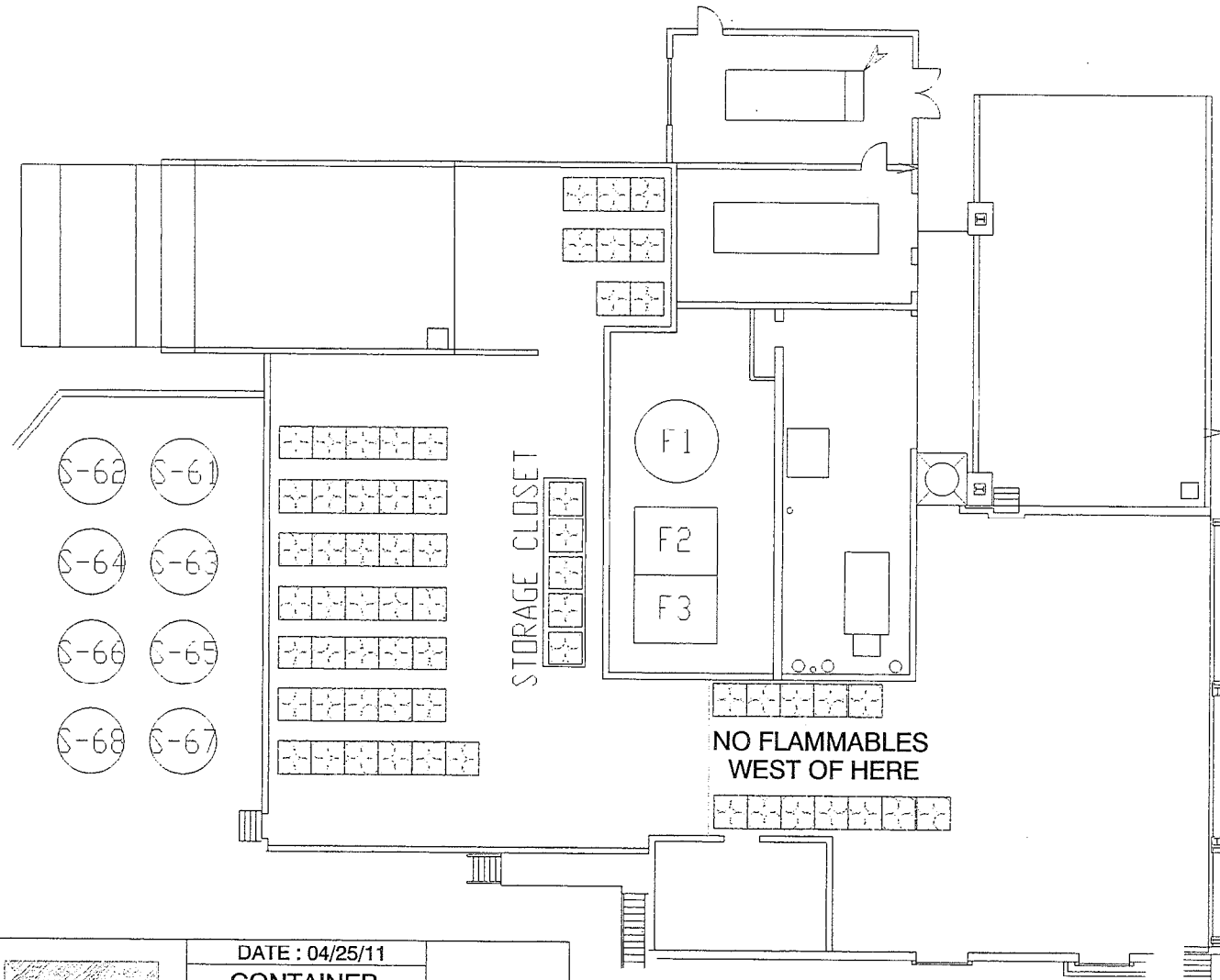
038



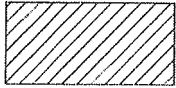
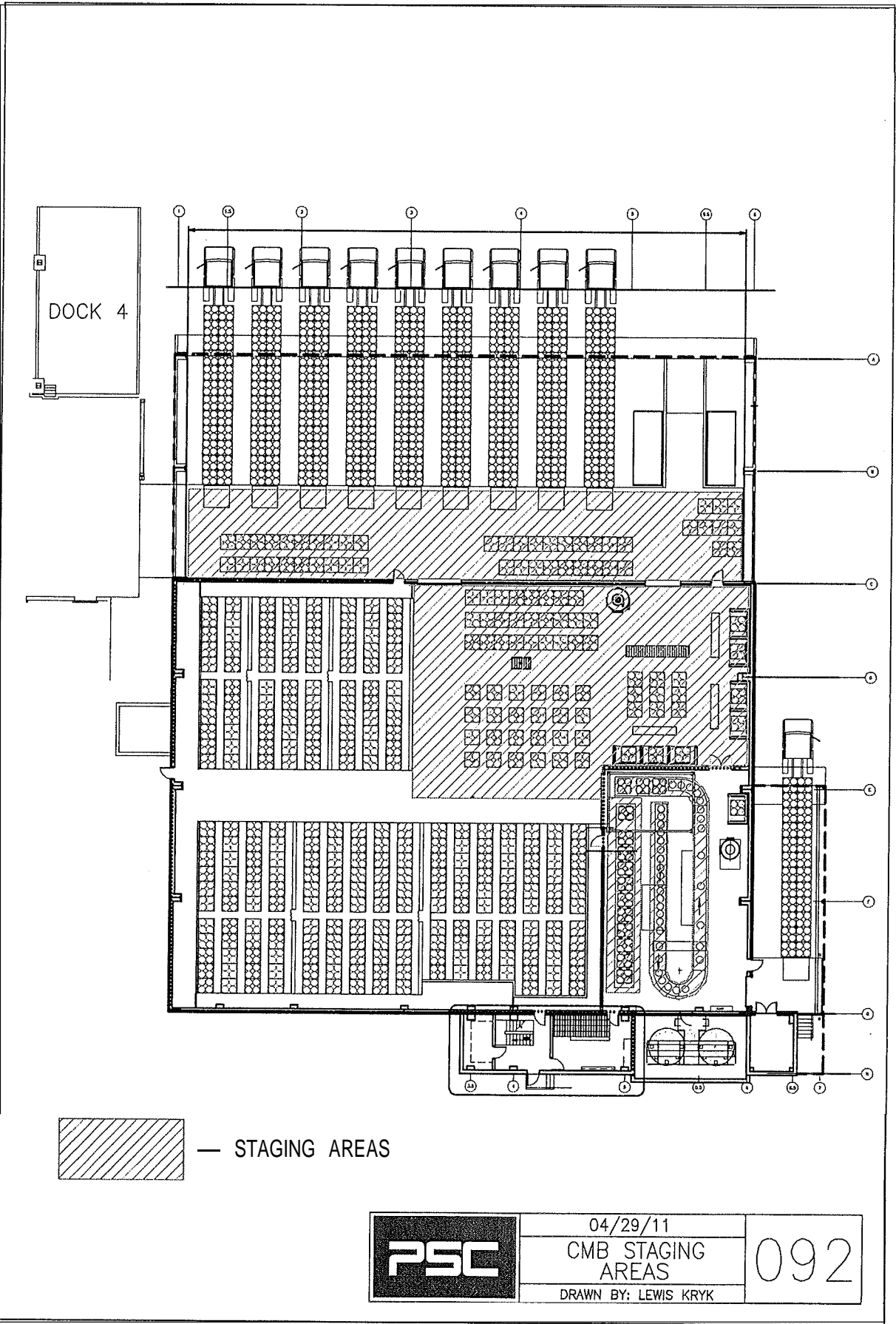
STORAGE AREA
CSA 9 to 11



LOCATION PLAN



	DATE : 04/25/11	093
	CONTAINER STORAGE AREA CSA 9 to 11	
LEWIS KRYK		



— STAGING AREAS



04/29/11
 CMB STAGING
 AREAS
 DRAWN BY: LEWIS KRYK

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