

Attachment 8
Tank Systems

TANK SYSTEMS

R 299.9615 and R 299.9627 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), 270.16, 270.24, and 270.27 (Part 264, Subpart J and Part 60, Appendix A) establish requirements for tank systems. All references to 40 CFR citations specified herein are adopted by reference in R 299.11003.

This license application template addresses requirements for tank systems at the Petro-Chem facility in Detroit Michigan. This template includes assessments of new and existing tank systems; installation of new tank systems; secondary containment systems and release detection; variances for secondary containment; controls and practices to prevent spills and overfills; inspections; response to leaks or spills and disposition of leaking or unfit-for-use tank systems; closure and postclosure requirements; requirements for storing or treating ignitable, reactive, or incompatible wastes

This template is organized as follows:

[X] Existing Tank System

[X] New Tank System

TANK MANAGEMENT UNITS

Drawing Process 2 identifies the locations of the current Tank Management Units at the PCPG site. The areas included in the Tank Management Unit are:

- Tank System 1 (Formerly PCPG West Tank Farm) (16 – 30)
- Tank System 2 (Formerly SBS Tank Farm) (35 – 40)
- Tank System 3 (SDG Waste Storage Tank Farm) (61 – 72)
- CMB Tanks TK001, TK002
- all associated piping and containment devices.

Appendix 1 of this template provides a listing of all tanks located at the site, including all regulated tanks and non-regulated tanks. All tanks and piping used by PCPG are located above ground. All tanks used for blending, and inbound are constructed of carbon steel or stainless steel. All tanks are grounded to prevent accumulation of static electricity generated during material transfers and carbon steel tanks are painted to reduce the potential for corrosion. The pH of the materials to be placed into each tank is determined and controlled as necessary to prevent corrosion. Materials used for construction of the tank systems are compatible with the materials accepted at the PCPG site. Tanks are placarded to comply with the requirements of NFPA 704, Identification of the Fire Hazards of Materials, 1990 Edition.

Inspection of all tanks at the PCPG site is carried out in accordance with 40 CFR 264.15 and includes tanks, containment units, and ancillary equipment. A copy of

the inspection log is outlined in detail in the Inspection Section of this application. PCPG inspects all the tank systems daily to detect corrosion or the release of waste, as well as areas immediately surrounding the externally accessible portion of the tank system, including secondary containment, to detect any release of hazardous wastes. Notations of the observations made are recorded along with the date, time, and name of the inspector. Spilled materials discovered during this inspection are cleaned up by pumping or absorption, and the area decontaminated using detergents and/or high pressure water spray. Collected spillage is treated onsite in the same method as the original material. Any deficiencies identified during the inspection are so noted in the inspection log along with the date and nature of the corrective action taken.

A tank farm inventory is taken daily and analysis performed on each tank as required (Inspection Plan, Tank Farm Reports)

A. Locations, Capacities and Details

The Tank Management Units subject to this application include the Tank System 1 (PCPG West Tank Farm); Tank System 2 (SBS Tank Farm), Tank System 3 (SDG Waste Storage Tank Farm) and CMB Tanks TK001 & TK002.

B. Sequence of Bulk Handling Activities

1. Liquids

Bulk tankers entering the Petro-Chem site are directed to a sampling and staging area. The manifest is inspected, contents of the tankers sampled, and sample analysis performed in accordance with the Waste Analysis Plan prior to the tanker being unloaded.

After any required analysis is complete and the shipment accepted as described in the Waste Analysis Plan, the driver is directed to one of the unloading areas.

At the unloading area, operations personnel connect discharge hoses and the vapor balance hose to the tanker and unload the tanker to the assigned storage or blending tank.

The operations personnel then secure the valves and disconnect the tank wagon's liquid and vapor return hoses that were used. The open ends of the lines are capped. Tank wagons will then be inspected and/or weighed at a truck scale to verify that the tank is empty. If significant amounts of the manifested quantity of the waste cannot be removed and remains inside the tank wagon, the generator is contacted and the discrepancy is handled using the procedures outlined in the Waste Analysis Plan.

2. Solids

Bulk solids received onsite in roll off containers may be directed to the staging and sampling area at the Site. Samples are obtained from the waste as described in the Waste Analysis Plan Section of this Application. Upon approval, the roll off container may be transferred to the unloading bay in the SBS Building.

Liquid waste suspension from the SBS, West & CMB Tank Farms are transferred to tankers for transportation to offsite licensed Hazardous Waste Boilers or Industrial Furnaces. Loading activities are conducted in the West PCPG and SBS Loading/Unloading Pad using procedures identical to those described for liquid wastes.

C. Bulk Liquid Loading/Unloading Areas

The PCPG site currently includes five loading/unloading areas for receiving and shipping bulk liquid waste feed stocks, liquid and hazardous waste fuels,

The PCPG West & SBS Loading/Unloading Pads for receipt and shipment of waste related materials. Each can accommodate up to 3 bulk tankers concurrently.

All loading/unloading areas at the PCPG site are designed with reinforced concrete pads and integral curbing to prevent run-off and to identify, contain, collect materials by pumping or absorption, and allow decontamination by use of detergents and/or high pressure water spray of any accidental release that may occur during loading/unloading operation. Each loading/unloading area is sufficiently impervious to prevent migration of contaminants to the surroundings.

1. The West Loading/Unloading Pad (associated with the PCPG West Tank Farm) includes a double sloped lined concrete pad with a center collection sump. All piping and ancillary equipment, including filters, are included within the concrete containment. This pad also has a canopy to reduce entry of precipitation.
2. The SBS Loading Pad is located adjoining the SBS Tank Farm to the south. Containment is provided by a monolithically poured microsilicate concrete, with a central collection trough. Additional containment volume is provided by channels into the SBS Tank Farm. Up to two Tank Wagons can use this area at one time. A canopy covers the top and the west side of this area to minimize infiltration of precipitation. Precipitation and spillage is collected by portable pump or by vacuum loading truck as described below.

Explosion-proof pumps are used for transferring materials from bulk tankers in all areas. Bottom loading/unloading of bulk tankers is normally utilized to minimize the threat of fire or explosion, and to facilitate the use of a vapor balance system. The vapor balance system associated with the East and West Loading/Unloading Pad is employed for control of vapors from bulk loading/unloading activities and is described later in the tank farm discussion. A static grounding system is also utilized within all areas to minimize the potential for fire.

Any materials or precipitation that accumulates on the pads are removed using portable pumps or a vacuum truck, or absorbed onto mops or absorbent. These collected run-on materials are currently either blended with the liquids in the fuels program or stored in the wastewater storage

