

**FORM EQP 5111 ATTACHMENT MODULE C2
TANK SYSTEMS**

This document is an attachment to the Michigan Department of Environment, Great Lakes, and Energy's (EGLE) *Instructions for Completing Form EQP 5111, Operating License Application Form for Hazardous Waste Treatment, Storage, and Disposal Facilities*. See Form EQP 5111 for details on how to use this attachment.

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 module addresses requirements for tank systems at the Dow Silicones Corporation Facility in Midland, Michigan. This module 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 module is organized as follows:

(Check as appropriate)

- Existing Tank System
 New Tank System

This module is organized as follows:

- C2.A ASSESSMENT OF EXISTING TANK SYSTEM
C2.A.1 Design Standards
C2.A.2 Dimensions and Capacity of Each Tank
C2.A.3 Description of Feed Systems, Safety Cutoff, Bypass System, and Pressure Controls
C2.A.3(a) Feed Systems
C2.A.3(b) Safety Cutoff or Bypass Systems
C2.A.3(c) Pressure Controls
C2.A.4 Diagram of Piping, Instrumentation, and Process Flow
C2.A.5 Characteristics of Waste
C2.A.6 Existing Corrosion Protection Measures
C2.A.7 Documented Age of Tank System

- C2.A.8 Leak Tests, Inspections, and Other Examinations
 - C2.A.8(a) Nonenterable Underground Tanks
 - C2.A.8(b) Other than Nonenterable Underground Tanks and for Ancillary Equipment
 - C2.A.8(c) Internal Inspections
- C2.A.9 Ancillary Equipment Assessment
- C2.A.10 Leaking or Unfit-for-Use Tank Systems
- C2.A.11 Tank Labels
- C2.B ASSESSMENT OF NEW TANK SYSTEM
- C2.C INSTALLATION OF NEW TANK SYSTEMS
- C2.D SECONDARY CONTAINMENT SYSTEMS AND RELEASE DETECTION
 - C2.D.1 Secondary Containment Implementation Schedule
 - C2.D.2 Secondary Containment Type and Performance Criteria
 - C2.D.3 Design Parameters
 - C2.D.3(a) Compatibility and Strength
 - C2.D.3(b) Foundation Integrity
 - C2.D.3(c) Leak Detection Capability
 - C2.D.3(d) Adequate Drainage
 - C2.D.4 External Liner Requirements
 - C2.D.5 Vault Systems Requirements
 - C2.D.6 Double-walled Tank Requirements
 - C2.D.7 Ancillary Equipment with Secondary Containment
 - C2.D.7(a) Secondary Containment Type and Performance Criteria
 - C2.D.7(b) Design Parameters
 - C2.D.7(c) Exempted Ancillary Equipment and Inspections
 - C2.D.8 Requirements for Tank Systems That Are Not in Compliance with Secondary Containment
 - C2.D.8(a) Aboveground Tanks
 - C2.D.8(b) Underground Tanks
- C2.E VARIANCES FOR SECONDARY CONTAINMENT
- C2.F CONTROLS AND PRACTICES TO PREVENT SPILLS AND OVERFILLS
 - C2.F.1 Spill Prevention Controls
 - C2.F.2 Overfill Prevention Controls
 - C2.F.3 Freeboard Maintenance
- C2.G INSPECTIONS
 - C2.G.1 Schedule and Procedures for Overfill Control System Inspections
 - C2.G.2 Daily Inspections of Aboveground Portions of Tank Systems and Monitoring and Leak Detection Data
 - C2.G.3 Daily Inspection of Construction Materials, Local Areas, and Secondary Containment System for Erosion and Leakage
 - C2.G.4 Inspection of Cathodic Protection Systems
 - C2.G.5 Inspection Requirements Before Full Secondary Containment is Provided
 - C2.G.5(a) Nonenterable Underground Tanks
 - C2.G.5(b) Other than Nonenterable Underground
 - C2.G.5(c) Ancillary Equipment
 - C2.G.6 Reporting Requirements

- C2.H RESPONSE TO LEAKS OR SPILLS AND DISPOSITION OF LEAKING OR UNFIT-FOR-USE TANK SYSTEMS
 - C2.H.1 Response Actions for Leaks and Spills
 - C2.H.1(a) Waste Flow Stoppage
 - C2.H.1(b) Waste Removal
 - C2.H.1(c) Visible Release Containment
 - C2.H.1(d) Repair, Replacement, or Closure
 - C2.H.1(e) Certification of Major Repairs
 - C2.H.2 Required Notifications and Reports
- C2.I CLOSURE AND POSTCLOSURE REQUIREMENTS
 - C2.I.1 Category A
 - C2.I.1(a) Closure Plan
 - C2.I.1(b) Closure Activities
 - C2.I.1(c) Cost Estimate for Closure
 - C2.I.1(d) Financial Assurance for Closure
- C2.J SPECIAL REQUIREMENTS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTES
 - C2.J.1 Ignitable or Reactive Wastes Precautions
 - C2.J.2 Distance Requirements for Ignitable or Reactive Wastes
 - C2.J.3 Incompatible Wastes

List of Appendices

- Appendix C2-1
 - Drawing X1-38058, Slab Plan and Details
 - Drawing X1-60883, Tank Farm Slab and Foundation Details
 - Drawing W1-71228, Tank Farm Equipment Location Plan
 - Drawing W1-71229, Tank Farm Equipment – East & West Elevation
 - Drawing W1-71230, Tank Farm Equipment – South Elevation
 - Drawing W1-71485, Waste Chlorosilane Storage Tank
 - Drawing W1-71486, Waste Chlorosilane Storage Tank
 - Drawing W1-71487, Waste Chlorosilane Storage Tank
 - Drawing W1-71488, Waste Solvent Storage Tank
 - Drawing W1-71489, Waste Solvent Storage Tank
 - Drawing W1-71490, Waste Solvent Storage Tank
 - Drawing W1-71491, Waste Solvent Storage Tank
 - Drawing W1-60789, Waste Solvent Storage, Sheet 1
 - Drawing W1-60790, Waste Solvent Storage, Sheet 2
 - Drawing W1-60791, Waste Solvent Storage, Sheet 3
 - Drawing W1-60792, Waste Solvent Storage, Sheet 4
 - Drawing W1-60793, Waste Solvent Storage, Sheet 5
 - Drawing W1-60794, Waste Solvent Storage, Sheet 6
 - Drawing X1-60882, Tank Farm Slab and Foundation Plan
- Appendix C2-2
 - Certification of Tank Systems by Professional Engineer
- Appendix C2-4
 - Tank Farm Standard Operating Procedures

C2.A ASSESSMENT OF EXISTING TANK SYSTEM

[R 299.9615(1) and 40 CFR, Part 264, Subpart J]

All the tanks located at the facility have secondary containment. This section describes the six hazardous waste storage tanks at this facility and the procedures used to prevent hazards. See Appendix C2-1 for complete drawings of these tanks and ancillary equipment. All six hazardous waste storage tanks at this facility were installed after July 14, 1986 and the assessment was done within 12 months of the date that the waste became a hazardous waste.

The written tank assessment for all the tanks located at the facility, reviewed and certified by an independent, qualified, registered professional engineer, attesting that the hazardous waste storage tank systems installed at this facility have sufficient structural integrity and are acceptable for the storage of hazardous wastes was provided to the State of Michigan on November 20, 1989. Appendix C2-2 contains excerpts of the tank assessment. This assessment is kept at the facility and includes the following information:

1. The relevant design standards to which the tanks and ancillary equipment were constructed;
2. The hazardous characteristics of the wastes stored in the tanks;
3. The design considerations used to ensure that the tank foundations will withstand the weight of the fully loaded tanks and the forces of frost heave.

The tanks are not installed in a seismic fault zone or in a saturated zone. The tanks are not installed underground, so requirement for a determination of their ability to withstand the forces of vehicular traffic does not apply.

C2.A.1 Design Standards

[R 299.9615 (1) and 40 CFR §264.191(b)(1)]

Design standards of the tanks and ancillary equipment are provided in the drawings included in Appendix C2-1.

C2.A.2 Dimensions and Capacity of Each Tank

[R 299.9615(1) and 40 CFR §270.16(b)]

The maximum capacities of each of the six hazardous waste storage tanks (Tank Numbers 19781, 19782, 19783, 19784, 19785 and 19786) are designed to be 10,000 gallons each. See Appendix C2-1 for complete information and drawings on the dimensions and capacities of the licensed facility hazardous waste storage tanks.

C2.A.3 Description of Feed Systems, Safety Cutoff, Bypass System, and Pressure Controls

[R 299.9615(1) and 40 CFR §270.16(c)]

C2.A.3(a) Feed Systems
[R 299.9615(1) and 40 CFR §270.16(c)]

See Appendix C2-1 for complete information and drawings on the feed systems, safety cutoff, bypass systems, and pressure controls of the licensed facility hazardous waste storage tanks.

C2.A.3(b) Safety Cutoff or Bypass Systems
[R 299.9615(1) and 40 CFR §270.16(c)]

See Appendix C2-1 for complete information and drawings on the feed systems, safety cutoff, bypass systems, and pressure controls of the licensed facility hazardous waste storage tanks.

C2.A.3(c) Pressure Controls
[R 299.9615(1) and 40 CFR §270.16(c)]

See Appendix C2-1 for complete information and drawings on the feed systems, safety cutoff, bypass systems, and pressure controls of the licensed facility hazardous waste storage tanks.

C2.A.4 Diagram of Piping, Instrumentation, and Process Flow
[R 299.9615(1) and 40 CFR §270.16(c)]

See Appendix C2-1 for complete information and drawings on the piping and instrumentation of the licensed facility hazardous waste storage tanks. There is no processing conducted in the facility tanks.

C2.A.5 Characteristics of Waste
[R 299.9615(1) and 40 CFR §264.191(b)(2)]

See Module A2 (Chemical and Physical Analyses), Module A3 (Waste Analysis Plan), and Appendix C2-2 for a description of the wastes handled at the facility and the tank assessment.

C2.A.6 Existing Corrosion Protection Measures
[R 299.9615(1) and 40 CFR §264.191(b)(3)]

(Check as appropriate)

External corrosion protection required:

- External shell of metal tank will be in contact with soil or water.
- Any external metal components of the tank system will be in contact with soil or water.

The characteristics of tank construction and lining materials for all tanks are compatible with stored materials and hazardous wastes to reduce the effects of tank corrosion and

erosion. All the tanks at the Dow Silicones Facility are fixed roof tanks and therefore water does not come in contact with the materials stored in the tank. All tanks, ancillary equipment and piping were surface prepared by sandblasting and then coated with a primer (0.003" thick), an intermediate coat (0.005" thick) and a finish coat (0.003" thick) to protect against external corrosion.

C2.A.7 Documented Age of Tank System
[R 299.9615(1) and 40 CFR §264.191(b)(4)]

The hazardous waste storage tanks were installed in 1989, with completion of installation certified on November 22, 1989 by a registered professional engineer. These tanks are therefore subject to the requirements of 40 CFR 264.193(a)(3) for secondary containment.

C2.A.8 Leak Tests, Inspections, and Other Examinations
[R 299.9615(1) and 40 CFR §264.191(b)(5)]

Leak tests are not performed. See Module A5 (Inspection Schedules) and Appendix A5-1 for details.

C2.A.8(a) Nonenterable Underground Tanks
[R 299.9615(1) and 40 CFR §264.191(b)(5)(i)]

There are no non-enterable underground tanks at the Dow Silicones facility.

C2.A.8(b) Other than Nonenterable Underground Tanks and for Ancillary Equipment
[R 299.9615(1) and 40 CFR §264.191(b)(5)(ii)]

There are no underground tanks (non-enterable or otherwise) at the Dow Silicones facility.

C2.A.8(c) Internal Inspections
[R 299.9615(1) and 40 CFR §264.191(b)(5)(ii)]

See Module A5 (Inspection Schedules) and Appendix A5-1.

C2.A.9 Ancillary Equipment Assessment
[R 299.9615(1) and 40 CFR §264.191(b)(5)(ii)]

Each tank has its own pipeline with fittings and valves properly labeled, and is provided with one or more of the following equipment and devices for monitoring and controlling safety cut-off during material flows: level switch, pneumatic activated valve with manual override and limit switches, manual valve, and solenoid valve.

All ancillary equipment to the hazardous waste storage tanks is located either within the 806 tank farm secondary containment dike or within the secondary containment provided for the tanker and container loading/unloading areas immediately adjacent to the 806

tank farm. The loading/unloading areas drain to the spill pond, as does the tank farm. Adequate containment for ancillary equipment is therefore provided. Leak detection for the ancillary equipment is provided by visual inspection by facility personnel. This consists of both a regular daily inspection and visual observation during all waste transfer operations.

C2.A.10 Leaking or Unfit-for-Use Tank Systems
[R 299.9615(1) and 40 CFR §264.191(b)(5)(ii)]

During an inspection of the facility, if a tank holding hazardous waste is found to be in poor condition (such as apparent structural defects or evident corrosion and leakage), the hazardous waste will be transferred to another tank in good condition. If the inspection identifies an unsatisfactory condition, such as an actual release or the potential for release, remedial actions as specified in Module A7 (Contingency Plan) will be promptly implemented.

C2.A.11 Tank Labels
[R 299.9615 (5)]

The tank systems are labeled in accordance with the NFPA Standard No. 704.

C2.B ASSESSMENT OF NEW TANK SYSTEM
[R 299.9615(1) and 40 CFR §264.192]

No new tanks have been installed at the facility since the last permit modification application was prepared and submitted.

C2.C INSTALLATION OF NEW TANK SYSTEMS
[R 299.9615(1) and 40 CFR §§264.192(b) through (g)]

No new tanks have been installed at the facility since the last permit modification application was prepared and submitted. There are no plans for installation of additional tank systems in the future.

C2.D SECONDARY CONTAINMENT SYSTEMS AND RELEASE DETECTION
[R 299.9615(1) and 40 CFR §264.193(a)]

C2.D.1 Secondary Containment Implementation Schedule
[R 299.9615(1) and 40 CFR §264.193(a)]

Secondary containment for existing tanks has been implemented in accordance with the schedule established in 40 CFR 264.193(a).

C2.D.2 Secondary Containment Type and Performance Criteria
[R 299.9615(1) and 40 CFR §264.193(b)]

(Check all that apply):

- Liner external to the tank*
- Vault*
- Double-walled tank*
- Device approved by the director*

C2.D.3 Design Parameters
[R 299.9615(1) and 40 CFR §264.193(c)]

The 806 tank farm is provided with a concrete dike and floor, with a containment trench around the inside of the containment area that serves as an external liner. A drawing showing the details of the design and construction of the tank farm secondary containment is provided in Appendix C2-1, "Tank Farm Slab and Foundation Plan" (drawing X1-60882).

The 806 tank farm secondary containment area is constructed of reinforced concrete and is sealed with a chemical resistant epoxy coating which is compatible with the waste stored in the tanks. This information is representative of the types of coatings used to coat and maintain secondary containment structures at this facility; other products of equivalent performance characteristics may be substituted.

The dike walls, floor, and trench are free from cracks and gaps and are designed to accumulate liquids draining from the two tanker loading areas to the east and west of the tank farm. The tank farm secondary containment drains to a round sump at the south end of the tank farm that is equipped with a pump for transferring accumulated liquids to the wastewater sewer. If accumulated liquids are not pumped out and the volume exceeds the capacity of the sump and tank farm secondary containment, overflow from the sump flows through a coated concrete trench to the spill pond. The spill pond drawing (Y1-35727) is provided as Appendix C1-2.

The total containment capacity of the spill pond is 106,000 gallons. The effective containment capacity after subtracting for rainwater accumulation from 24 hours of a 100-year storm event is 76,806 gallons. The required capacity for the 809 Building container storage area, which is also served by the spill pond, is 10% of its maximum storage of 85,000 gallons, or 8,500 gallons. Subtracting this from the spill pond capacity leaves 68,306 gallons, which is more than the entire capacity of all six tanks in the 806 tank farm. Adequate containment is therefore provided.

C2.D.3(a) Compatibility and Strength
[R 299.9615(1) and 40 CFR §264.193(c)(1)]

All the tanks located in the 806 tank farm are constructed of or lined with materials that

are compatible with the wastes(s) to be placed in the tank system and have sufficient strength and thickness to prevent failure. The 806 tank farm is provided with a concrete dike and floor, with a containment trench around the inside of the containment area that serves as an external liner.

C2.D.3(b) Foundation Integrity
[R 299.9615(1) and 40 CFR §264.193(c)(2)]

The design considerations of the hazardous waste storage tank systems installed at this facility ensure that the tank foundations will withstand the weight of the fully loaded tanks and the forces of frost heave. The tanks are not installed in a seismic fault zone or in a saturated zone.

C2.D.3(c) Leak Detection Capability
[R 299.9615(1) and 40 CFR §264.193(c)(3)]

Detection of releases is provided by visual inspection and by an audible overflow alarm. Facility personnel are present during all waste transfers and visually monitor the containers and tanks used in the transfer to ensure immediate detection of any hazardous condition. Facility tanks and ancillary equipment are inspected daily whenever hazardous wastes are present, to promptly detect any releases, or conditions that could lead to releases.

Containment of releases is provided by the 806 tank farm secondary containment dike and the spill pond.

C2.D.3(d) Adequate Drainage
[R 299.9615(1) and 40 CFR §264.193(c)(4)]

The 806 tank farm is provided with a concrete dike and floor, with a containment trench around the inside of the containment area that serves as an external liner. The tank farm secondary containment drains to a round sump at the south end of the tank farm that is equipped with a pump for transferring accumulated liquids to the wastewater sewer. If accumulated liquids are not pumped out and the volume exceeds the capacity of the sump and tank farm secondary containment, overflow from the sump flows through a coated concrete trench to the spill pond. Spilled or leaked waste and accumulated precipitation will be removed from the secondary containment system within 24 hours, or in as timely a manner as is possible to prevent harm to human health and the environment.

C2.D.4 External Liner Requirements
[R 299.9615(1) and 40 CFR §264.193(e)(1)]

There are no external liners for the tanks at the facility.

C2.D.5 Vault systems Requirements
[R 299.9615(1) and 40 CFR §264.193(e)(2)]

There are no vaults associated with the Tank system.

C2.D.6 Double-walled Tank Requirements
[R 299.9615(1) and 40 CFR §264.193(e)(3)(i)]

There are no double-walled tanks at the facility.

C2.D.7 Ancillary Equipment with Secondary Containment
[R 299.9615(1) and 40 CFR §264.193 (f)]

See Appendix C2-1 for complete information and drawings on the piping and instrumentation of the hazardous waste storage tanks. There is no processing conducted in the tanks.

C2.D.7(a) Secondary Containment Type and Performance Criteria
[R 299.9615(1) and 40 CFR §264.193(f)]

All ancillary equipment to the hazardous waste storage tanks is located either within the 806 tank farm secondary containment dike or within the secondary containment provided for the tanker and container loading/unloading areas immediately adjacent to the 806 tank farm. The loading/unloading areas drain to the spill pond, as does the tank farm. Adequate containment for ancillary equipment is therefore provided. Leak detection for the ancillary equipment is provided by visual inspection by facility personnel. This consists of both a regular daily inspection and visual observation during all waste transfer operations.

C2.D.7(b) Design Parameters
[R 299.9615(1) and 40 CFR §264.193(f)]

All ancillary equipment to the hazardous waste storage tanks is located either within the 806 tank farm secondary containment dike or within the secondary containment provided for the tanker and container loading/unloading areas immediately adjacent to the 806 tank farm. All ancillary equipment at the facility are constructed of or lined with materials that are compatible with the wastes(s) to be placed in the tank system and have sufficient strength and thickness to prevent failure. Leak detection for the ancillary equipment is provided by visual inspection by facility personnel. The loading/unloading areas drain to the spill pond, as does the tank farm.

C2.D.7(c) Exempted Ancillary Equipment and Inspections
[R 299.9615(1) and 40 CFR §264.193(f)]

There is no ancillary equipment at the facility that would be exempt from the secondary containment requirement and the required daily inspections.

C2.D.8 Requirements for Tank Systems That Are Not in Compliance With Secondary Containment
[R 229.9615(2)]

All tanks that are used for storage at the facility have secondary containment structures. Concrete dike walls completely surround the treatment and storage tanks, providing secondary containment so as to be able to contain not less than 100% of the volume of the largest tank within the area. Therefore, requirements for secondary containment have been met and this section is not applicable.

C2.D.8(a) Aboveground Tanks
[R 229.9615(2)(a)]

Incompatible wastes are not mixed/stored in the hazardous waste storage tanks. Hazardous wastes are not placed in a tank that previously contained an incompatible waste, because each tank is dedicated to one type of waste. Aboveground tank systems that are used for the treatment or storage of liquid hazardous wastes, or hazardous wastes, which could generate free liquids during storage, are located in areas that are paved, diked, curbed, or otherwise structurally enclosed so as to be able to contain not less than 100 percent of the largest tank system within the enclosed area.

C2.D.8(b) Underground Tanks
[R 229.9615(2)(a)]

There are no underground storage tanks at the Dow Silicones facility; therefore, this section is not applicable.

C2.E VARIANCES FOR SECONDARY CONTAINMENT
[R 299.9615(1) and 40 CFR §264.193(g)]

(Check as appropriate)

- Technology-based Variance
- Risk-based Variance

There are no variances for secondary containment in accordance with R 299.9615(1) and 40 CFR §264.193(g) at the Dow Silicones facility.

C2.F CONTROLS AND PRACTICES TO PREVENT SPILLS AND OVERFILLS
[R 299.9615(1) and 40 CFR §264.194(b)]

C2.F.1 Spill Prevention Controls
[R 299.9615(1) and 40 CFR §264.194(b)]

All hazardous waste storage tanks are equipped with a high level (“High-High”) sensor with audible alarm. See Appendix C2-4, Tank Farm Standard Operating Procedures used at this facility to prevent spills and overflows at the 806 tank farm.

C2.F.2 Overfill Prevention Controls
[R 299.9615(1) and 40 CFR §264.194(b)]

All hazardous waste storage tanks are equipped with a high level (“High-High”) sensor

with audible alarm and automatic shutoffs to prevent overflow.

C2.F.3 Freeboard Maintenance
[R 299.9615(1) and 40 CFR §264.194(b)]

High-level sensors are set at a volume to maintain freeboard.

C2.G INSPECTIONS
[R 299.9615(1) and 40 CFR §264.195(a)]

See Module A5 (Inspection Schedules) and Appendix A5-1.

C2.G.1 Schedule and Procedures for Overfill Control System Inspections
[R 299.9615(1) and 40 CFR §264.195(a)]

Overfill control system is included as an appurtenance system to tanks and is inspected with each tank.

C2.G.2 Daily Inspections of Aboveground Portions of Tank Systems and Monitoring and Leak Detection Data
[R 299.9615(1) and 40 CFR §264.195(b)]

Leak detection is included as an appurtenance system to tanks and is inspected with each tank.

C2.G.3 Daily Inspection of Construction Materials, Local Areas, and Secondary Containment System for Erosion and Leakage
[R 299.9615(1) and 40 CFR §264.195(b)(3)]

Erosion and Leakage are included as an appurtenance system to tanks and is inspected with each tank.

C2.G.4 Inspection of Cathodic Protection Systems
[R 299.9615(1) and 40 CFR §264.195(c)]

Cathodic protection system is included as an appurtenance system to tanks and is inspected with each tank.

C2.G.5 Inspection Requirements before Full Secondary Containment is Provided
[R 299.9615(1) and 40 CFR §264.193(i)]

The secondary containment for the tanks are inspected daily for cracks and/or gaps and are described in Module A5 (Inspection Schedules) and Appendix A5-1.

C2.G.5(a) Nonenterable Underground Tanks
[R 299.9615(1) and 40 CFR §264.193(i)(1)]

There are no non-enterable underground storage tanks at the Dow Silicones facility, therefore, this section is not applicable.

C2.G.5(b) Other Than Nonenterable Underground Tanks
[R 299.9615(1) and 40 CFR §264.193(i)(2)]

There are no underground storage tanks (non-enterable or otherwise) at the Dow Silicones facility.

C2.G.5(c) Ancillary Equipment
[R 299.9615(1) and 40 CFR §264.193(i)(3)]

See Module A5 (Inspection Schedules) and Appendix A5-1 for ancillary equipment inspection schedule and procedures.

C2.G.6 Reporting Requirements
[R 299.9615(1) and 40 CFR §264.193(i)(4)]

All inspections will be documented in the Operating Record maintained by the facility operations manager at the compliance room and are also backed up electronically on a CD and archived at the facility (see Appendix A5-1 for documentation forms).

C2.H RESPONSE TO LEAKS OR SPILLS AND DISPOSITION OF LEAKING OR UNFIT-FOR-USE TANK SYSTEMS
[R 299.9615(1) and 40 CFR §264.196]

See Module A7 (Contingency Plan).

C2.H.1 Response Actions for Leaks and Spills
[R 299.9615(1) and 40 CFR §264.196(a)]

See Module A7 (Contingency Plan) for response actions to be taken for leaks or spills at the facility.

C2.H.1(a) Waste Flow Stoppage
[R 299.9615(1) and 40 CFR §264.196(a)]

See Module A7 (Contingency Plan) for information on waste flow stoppage during leaks or spills and/or disposition of leaking or unfit-for-use tank systems at the facility.

C2.H.1(b) Waste Removal
[R 299.9615(1) and 40 CFR §264.196(b)]

See Module A7 (Contingency Plan) for information on waste removal in situations where leaks or spills and/or disposition of leaking or unfit-for-use tank systems occur at the facility.

C2.H.1(c) Visible Release Containment
[R 299.9615(1) and 40 CFR §264.196(c)]

See Module A7 (Contingency Plan) for information on visible release containment.

C2.H.1(d) Repair, Replacement, or Closure
[R 299.9615(1) and 40 CFR §264.196(e)]

See Module A7 (Contingency Plan) for information on repair, replacement or closure for leaks or spills and/or disposition of leaking or unfit-for-use tank systems at the facility.

C2.H.1(e) Certification of Major Repairs
[R 299.9615(1) and 40 CFR §264.196(f)]

See Module A7 (Contingency Plan) for information on certification of repairs.

C2.H.2 Required Notifications and Reports
[R 299.9615(1) and 40 CFR §264.194(d)]

See Module A7 (Contingency Plan) for required notifications and reports when there are leaks or spills and/or disposition of leaking or unfit-for-use tank systems at the facility.

C2.I CLOSURE AND POST CLOSURE REQUIREMENTS
[R 299.9615(1) and 40 CFR §270.14(b)]

(Check as appropriate)

Category A - where decontamination is practical and secondary containment is provided

- Category B - *where decontamination or removal is not practical and where secondary containment is provided and tank system will be closed as a landfill*
- Category C - *where decontamination is practical and where secondary containment is not provided*
- Category D - *where decontamination or removal is not practical, and where secondary containment is not provided, and tank system will be closed as a landfill*

C2.I.1 Category A
[R 299.9615(1) and 40 CFR §264.197]

See Module A11 (Closure/Post-Closure Plan) for a detailed description of closure activities.

C2.I.1(a) Closure Plan
[40 CFR §264.112, except 264.112(d)(1)]

See Module A11 (Closure/Post-Closure Plan) for a detailed description of closure activities.

C2.I.1(b) Closure Activities
[40 CFR §264.111 through 114 and R 299.9613(3)]

See Module A11 (Closure/Post-Closure Plan) for a detailed description of closure activities.

C2.I.1(c) Cost Estimate for Closure
[R 299.9702 and 40 CFR §264.142]

See Module A12 (Closure and Postclosure Care Cost Estimates) for details on the closure cost estimate.

C2.I.1(d) Financial Assurance for Closure
[R 299.9703 and 40 CFR §264.143]

See Module A14 (Liability Mechanism and Financial Assurance Instrument) for a copy of the financial assurance mechanism for closure and post-closure care of the regulated units (800/1000 Block Landfill, 806 Tank Farm and 809 Container Storage Building).

C2.J SPECIAL REQUIREMENTS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTES
[R 299.9615(1) and 40 CFR §270.16(j)]

Ignitable and reactive wastes stored in the hazardous waste storage tanks at the 806 tank farm are protected from materials and conditions that could cause the wastes to

ignite or react. All wastes stored are ignitable and all six storage tanks are protected from static electricity buildup by being grounded and electrically bonded to ancillary equipment. All six tanks are also provided with nitrogen blanket systems that ensure the presence of an inert atmosphere in the headspace of the tank by excluding oxygen so that combustion cannot be supported.

The wastes stored in tanks 19784 and 19785 are water-reactive and are protected from atmospheric moisture by being blanketed with dry nitrogen gas. They are protected from precipitation because they are fixed roof tanks. Protection from mixing with waste streams containing water is ensured by Dow Silicones's materials characterization system that contains information on the constituents of all waste streams and the generating processes.

All six hazardous waste storage tanks are located more than 1,000 feet from the nearest property line, as shown on Midland Location Plot Plan, located in Appendix A1-1 in Module A1 (General Facility Description).

C2.J.1 Ignitable or Reactive Wastes Precautions
[R 299.9615(1) and 40 CFR §264.198]

There is no potential for the waste materials, treatment reagents, or products of any reactions to be flammable or explosive or produce violent chemical or physical reactions in the tanks.

C2.J.2 Distance Requirements for Ignitable or Reactive Wastes
[R 299.9615(1) and 40 CFR §264.198(a) and (b)]

All the tanks at the Dow Silicones facility were installed in accordance with the National Fire Protection Association (NFPA) Standard No. 30 – Flammable and Combustible Liquids Code. The facility maintains the required protective distances (at least 50 feet from the nearest property line) between the waste management area and the public ways, streets, alleys, or an adjoining property line. All six hazardous waste storage tanks are located more than 1,000 feet from the nearest property line, as shown on Midland Location Plot Plan, located in Appendix A1-1 in Module A1 (General Facility Description).

C2.J.3 Incompatible Wastes
[R 299.9615(1) and 40 CFR §264.199]

Incompatible wastes are not mixed in the hazardous waste storage tanks. Hazardous wastes are not placed in a tank that previously contained an incompatible waste, because each tank is dedicated to one type of waste. Should Dow Silicones ever wish to use a tank for storage of a hazardous waste that is incompatible with the previous contents of the tank, the tank would be thoroughly decontaminated prior to placing the new waste in it.