# Spill Prevention Control and Countermeasure Plan (SPCC)

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## Revision History

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| 1 | WI EHS-6 | 1 | Add "Reviewed, Jun Wang 12/31/2021" on Page 7. | Approved |
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## Document Approvals

| # | Document ID | Approver | Reviewed On |
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| **Approval Level: Primary** | | | |
| 1 | WI EHS-6 | Song, Peter | 4/19/2022 |
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| 3 | WI EHS-6 | Edwards, Deb | 4/19/2022 |

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## 1 Background [40 CFR 112.1(a),(e)]

The Spill Prevention, Control and Countermeasure (SPCC) Plan ("Plan") is the method an owner of a facility uses to achieve conformance to Federal regulations found in 40 CFR 112. This regulation applies to any owner or operator of a non-transportation-related onshore or offshore facility engaged in drilling, producing, gathering, storing, processing, refining, transferring, distributing, using, or consuming oil and oil products which, due to its location, could reasonably be expected to discharge oil in quantities that may be harmful, as described in Part 110 of the regulation, into or upon the navigable waters of the United States or adjoining shorelines.

The purpose of a Plan is to form a comprehensive Federal spill prevention program that minimizes the potential for discharges of oil and hazardous liquids at a qualifying facility.

The design of a Plan is to complement existing laws, regulations, rules, standards, policies, and procedures pertaining to safety standards, fire prevention, and pollution prevention rules. Some states have SPCC-type regulations which must also be implemented when an SPCC Plan is written. The Plan must address all relevant spill prevention, control, and countermeasures necessary at the facility.

This document applies to this facility because the aggregate aboveground storage capacity of the facility is greater than 1,320 US gallons of oil or oil-containing product. For purposes of inventory, once the 1,320-gallon threshold is reached, containers with a capacity of 55 UW gallons or greater are counted toward the total oil inventory managed under 40 CFR 112, Oil Pollution Prevention.

## 2 Facility Status and Review

Conformance of a facility to SPCC regulations includes physically modifying the facility if needed, reviewing the Plan periodically, and documenting modifications and periodic review in this Plan. The status and review of the facility is an ongoing effort by the owner and can occur in one (or more) of three ways:

### 2.1 Plan Upgrades

At the time a Plan is written for a facility, and during the course of the life of the facility, there may be modifications (i.e., upgrades) to the facility that are necessary to incorporate into this Plan. These upgrades, if any, are listed in Table 2.1, as determined by the Environmental Health and Safety (EHS) Professional Engineer (PE) who certifies this plan. In this Plan, a table for documenting the completion of upgrades is shown as Table 2.2. It should be pointed out that some states promulgate their own regulations that supplement Federal SPCC regulations and, as such, state regulations, if any, are also implemented at this facility.

***Initial facility upgrades must be implemented within six months of the Original Plan Date of June 2016.***

**Table 2.1 – Required Facility Upgrades**

| Item # | Description | Completion Schedule |
|---|---|---|
| 1 | It appears there is a potential for an overflow of the oil-containing 3,000-gallon DAF sump due to at least three reasons:<br>1) High burst production rates entering the DAF system that the DAF clarifier may not be able to process before the sump pit overflows.<br>2) A large discharge from one of the “wets-side” P1 tanks.<br>3) An unexpected shutdown of the DAF clarifier.<br>The result of a sump overflow could cause a discharge to enter the storm water system and/or otherwise leave the bounds of the facility.<br>**Provide adequate secondary containment or suitable diversionary measures for the DAF sump.** | 1/1/2017 |
| 2 | The DAF clarifier produces primarily solids with some liquid oil content. The liquid volume varies. Product is temporarily stored in totes or other containers until it can be disposed of properly. Product containers could be punctured or leak.<br>**Provide an adequate measure, such as a spill kit, to respond to a discharge of a product container.** | 1/1/2017 |
| 3 | Some production/storage areas have 55-gallon drums of oil-containing liquid lacking secondary containment.<br>**Ensure containers of this type or larger have adequate secondary containment unless floor drains are present.** | 1/1/2017 |

**Table 2.2 – Documentation of Facility Upgrades**

| Item # | Description | Completed By/Date |
|---|---|---|
| 1 | Spill Kits provided. | Jun Wang 6/13/2018 |
| 2 | Spill Kits provided. | Jun Wang 6/13/2018 |
| 3 | A Spill Kit is provided at Door 19.<br>Absorbent Materials are provided at Pre-Weigh.<br>Compounding and Color have floor drains to WWT. | Jun Wang 6/13/2018 |
| 4 | No update. | Jun Wang 12/19/2018 |
| 5 | No update. | Jun Wang 6/20/2019 |
| 6 | WW resumed. 10 Totes WW sludge. | Jun Wang 12/19/2019 |
| 7 | No update. | Jun Wang 3/31/2020 |
| 8 | Secondary containment at WW Treatment Plant. | Jun Wang 2/19/2021 |
| 9 | Capacity of secondary containment at WW needs to be updated. | Jun Wang 7/19/2021 |
| 10 | Updated Emergency contacts | Jun Wang 10/6/2021 |
| 11 | P3-8, P3-9 and P3-10 tanks are removed permanently. | Jun Wang 10/6/2021 |
| 12 | | |
| 13 | | |
| 14 | | |
| 15 | | |

2.2 Facility and Plan Amendments [40 CFR 112.5(a),(c) and 40 CFR 112.6(a)(2)]

This Plan will be amended when there is a change in the facility design, construction, operation, or maintenance that materially affects the potential for a discharge to navigable waters or adjoining shorelines. Examples include adding or removing containers, reconstruction, replacement, or installation of piping systems, changes to secondary containment systems, changes in product stored at this facility, or revisions to standard operating procedures. These are examples of ***technical changes***. Technical changes must be certified by a PE. Changes in names, addresses, phone numbers, and similar information in this Plan are called ***Administrative Changes***. Technical changes are documented in Table 2.3; however, administrative changes are not listed.

**Amendments must be prepared within six months of the facility change, and implemented as soon as possible, but not later than six months following any amendment.**

**Table 2.3 – Technical Amendment Log**

| Review Date | Description | Completed By/Date |
|---|---|---|
| 6/13/2018 | Oil storage identified. | Jun Wang 6/13/2018 |
| 12/20/2018 | Waste oil storage at waste storage.<br>Mineral oil at Compounding. | Jun Wang 12/20/2018 |
| 6/20/2019 | No update. | Jun Wang 6/20/2019 |
| 12/19/2019 | Wastewater sludge risk to SW drain. Need trench drain. | Jun Wang 12/19/2019 |
| 3/31/2020 | Oil storage identified. | Jun Wang 3/31/2020 |
| 2/19/2021 | Containment at wastewater plan is installed. | Jun Wang 2/19/2021 |
| 7/19/2021 | Safety shower/eye wash station installed at wastewater plant. | Jun Wang 7/19/2021 |
| | | |
| | | |
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2.3 Five-Year Review [40 CFR 112.5(b)]

A review and evaluation of this Plan is completed at least once every five years. As a result of this review and evaluation, ***this Plan is amended within six months of the review*** to include more effective prevention and control technology if the technology has been field-proven at the time of the review and will significantly reduce the likelihood of a discharge.

***To comply with Federal regulations, this document will undergo a five-year review and evaluation no later than:***

***June 30, 2026***

Completion of the review and evaluation is documented using Table 2.4.

**Table 2.4 – Technical Amendment Log**

| Review Date | Will Plan Be Amended as a Result of this Review? | Completed By/Date |
|---|---|---|
| 6/13/2018 | ☒ Yes ☐ No | Jun Wang 6/13/2018 |
| 12/20/2018 | ☒ Yes ☐ No | Jun Wang 12/20/2018 |
| 6/13/2019 | ☒ Yes ☐ No | Jun Wang 6/13/2019 |
| 3/31/2020 | ☒ Yes ☐ No | Jun Wang 3/31/2020 |
| 9/30/2020 | ☒ Yes ☐ No | Jun Wang 9/30/2020 |
| 2/19/2021 | ☒ Yes ☐ No | Jun Wang 2/19/2021 |
| 7/19/2021 | ☒ Yes ☐ No | Jun Wang 7/19/2021 |
| 10/7/2021 | ☒ Yes ☐ No | Jun Wang 10/7/2021 |
| 12/31/2021 | ☐ Yes ☒ No | Jun Wang 12/31/2021 |
| | ☐ Yes ☐ No | |
| | ☐ Yes ☐ No | |
| | ☐ Yes ☐ No | |
| | ☐ Yes ☐ No | |
| | ☐ Yes ☐ No | |
| | ☐ Yes ☐ No | |
| | ☐ Yes ☐ No | |
| | ☐ Yes ☐ No | |
| | ☐ Yes ☐ No | |
| | ☐ Yes ☐ No | |

## 3 Engineer's Certification [40 CFR 112.3(d)(1)]

By means of this certification, the PE attests:

1. I am familiar with the requirements of 40 CFR 112.
2. I or my agent have visited and examined the facility.
3. This Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards, and with the requirements of 40 CFR 112.
4. Procedures for required inspections and testing have been established.
5. This Plan is adequate for the facility.

Engineer Stamp

_____ _____

Engineer Signature Date

_____ _____

Engineer License # Texas Registration #

## 4 Owner Responsibility [40 CFR 112.3(d)(2)]

The above PE certification does not relieve the owner of their duty to prepare and fully implement this Plan in accordance with the requirement of 40 CFR 112.

## 5 Plan Availability [40 CFR 112.3(e)(1),(2)]

A complete copy of this Plan is maintained at the facility and is available to the Regional Administrator for on-site review during normal working hours.

## 6 Discharge Notification [40 CFR 112.4(a),(b)]

Following implementation of this Plan, if the facility discharges more than 1,000 gallons of oil in a single discharge into or upon the navigable waters of the United States or adjoining shorelines, or discharges more than 42 US gallons (1-bbl) of oil in each of two discharges within any twelve-month period, the following information must be submitted to the Regional Administrator (Region VI EPA) and the State of Texas Commission for Environmental Quality (TCEQ) within 60 days:

1. Name of facility.
2. Name of reporting person.
3. Location of the facility.

4. Maximum storage or handling capacity of the facility and normal daily throughput.

5. Corrective action and countermeasures taken, including a description of equipment repairs and replacements.

6. An adequate description of the facility, including maps, flow diagrams, and topographical maps, as necessary.

7. The cause of such discharge, including a failure analysis of the system or subsystem in which the failure occurred.

8. Additional preventive measures taken or contemplated to minimize the possibility of recurrence.

9. Such other information as the Regional Administrator may reasonably require pertinent to the Plan or discharge.

## 7 General Requirements "Part A" [40 CFR 112.7(a)]

### 7.1 Management Approval [40 CFR 112.7(a)]

This Plan is maintained and updated by BMSC in accordance with good engineering practices and regulatory requirements. This Plan has the full approval of management at a level of authority to commit the necessary resources to be fully implemented.

_____ _____

Signature Date

_____ _____

Printed Name Title

### 7.2 Plan Format [40 CFR 112.7(a)]

The specified sequence in this section for preparing an SPCC Plan is followed in this Plan; therefore, a cross-reference is not applicable to this Plan. Additionally, all applicable requirements for this Plan are met.

### 7.3 Regulatory Conformance [40 CFR 112.7(a)(1)]

This Plan has been prepared to conform to requirements of the Code of Federal Regulations, Title 40 Part 112 (CFR 40 112). The facility owner, Beauty Manufacturing Solutions Corporation (BMSC) of Coppell, Texas, is committed to do its part to avoid discharges that could impact navigable waters of the United States. BMSC ensures this Plan is implemented in a manner that conforms to the SPCC regulation.

Additionally, BMSC has performed and completed a determination of the applicability of substantial harm criteria, as specified by 40 CFR 112.20. Appendix A shows the completed form. BMSC has concluded their Facility Response Plan (FRP); therefore, an FRP is not applicable as part of this SPCC Plan.

7.4 Regulatory Deviation [40 CFR 112.7(a)(2)]

BMSC does not deviate from applicable requirements listed in 40 CFR 112. Additionally, the following guidelines are followed:

7.4.1 No equivalent environmental protection is part of this Plan.

7.4.2 For some containers, compliance with 40 CFR 112.8(c)(6), Visual Inspection and Integrity Testing, is performed by conduction only monthly visual inspections if the following conditions are met:

7.4.2.1 The container is less than 30,000 gallons.

7.4.2.2 The container does not contact the ground.

7.4.2.3 The container can be inspected on all sides.

7.4.3 Justification for the above exemption includes:

7.4.3.1 The container is inspected often (monthly).

7.4.3.2 An oil service container has a minimal failure risk due to internal corrosion.

7.4.4 Integrity testing methods used for concrete tanks and sumps are problematic in many cases; therefore, at least every five years these tanks and sumps are pumped out, inspected, and repaired if leaks or cracks are found. Records of sump inspection and repair are not kept due to the lack of coverage by UST Federal regulations.

7.5 Facility Description and Layout [40 CFR 112.7(a)(2)]

7.5.1 BMSC is located in Dallas County at 1250 Freeport Parkway, Coppell, Texas 75019. Coordinates for the site are:

Latitude: N 32 deg 22 min 18.52 sec

Longitude: W 97 deg 00 min 26.41 sec

7.5.2 BMSC is a small company that develops, formulates, and produces a variety of baby care, personal care, and beauty care products. Raw materials are unloaded at the facility by trailer truck. Raw materials are received in bags, packages, containers, or pumped into tanks. Products produced for the marketplace are individually packaged, labeled, wrapped, palletized, and warehouse prior to shipment by truck.

7.5.3 Travel directions from the Dallas/Fort Worth International Airport, Dallas, Texas are:

| Description | Distance |
|---|---|
| Head toward S 22nd Ave. on W 32nd Street | 183 feet |
| Make a U-Turn onto W 32nd Street | 0.1 miles |
| Turn slightly right onto S. Service Road | 442 feet |
| Turn left onto Crossunder No. 7 Road toward North Airport Exit 6E Employee Parking | 0.1 miles |
| Turn left onto N Service Road toward US Post Office/American Air Cargo | 3.6 miles |
| Take ramp onto N Airfield Drive toward Airfield Drive Eat | 1.2 miles |
| Turn left onto Freeport Parkway | 1.6 miles |
| Arrive at BMSC on the right. | |

7.5.4 The facility includes a two-story building, surrounded by pavement, with three main production lines inside the building:

7.5.4.1 An alcohol-based production line (“alcohol side”) on the building’s east side producing perfumes and colognes.

7.5.4.2 Multiple water-based production lines (“wet side”) on the building’s west side and on the second floor, producing body washes, baby shampoo, and lotions.

7.5.4.3 A facial “color” line on the building’s second floor producing lip gloss, lipstick, eye shadow, and facial powder-base.

See General Process Flow in Appendix B.

7.5.5 Multiple feed tanks for the production lines are located in the building toward the southeast corner. Multiple floor drains are located in production areas to handle liquid excursions from tanks, area wash downs, and cleanups. These drains flow to a Diffused Air Flotation (DAF) clarifier system. See more details about the DAF later in this section.

7.5.6 Relative to this Plan, sized secondary containment is provided for five tanks (TF-1 through TF-5) located at the southeast wall of the first floor of the building. All other production areas rely on floor drains that travel to the DAF sump.

7.5.7 Employee offices are located on the south end of the building. A Reverse Osmosis (RO) and Ultraviolet (UV) water treatment system, along with boilers, are located just inside the building on the east side.

7.5.8 Outside of the east side of the building, there is a wastewater treatment plant which including an EQ Tank, a DAF clarifier and accompanying sump handle production waste streams from within the building. An ethanol tank is located in the vicinity of the DAF. Finished products are stored in a warehouse storage area in the north end of the building. Truck loading/unloading docs are located on the east side of the building, with parking on the north, south, and west sides of the building. Diagrams of the facility are presented in Appendix B in multiple diagrams.

7.5.9 Appendices B and H also show, as applicable:

7.5.9.1 Location of each fixed oil storage container.

7.5.9.2 Storage area where mobile or portable containers are located.

7.5.9.3 Transfer stations.

7.5.9.4 Connecting pipes.

7.6 Container Type and Storage [40 CFR 112.7(a)(3)(i)]

7.6.1 Appendix C details the type of oil in each fixed or mobile (portable) container and their storage capacity. 40 CFR 112 regulates all oil containers 55 gallons or greater when the aggregate aboveground storage capacity of the facility is 1,320 gallons of oil or greater. BMSC stores oil regulated under 40 CFR 112. Chemicals that do not contain oil are not regulated under 40 CFR 112.

7.6.2 A (non-exhaustive) list of products and containers excluded from this regulation include:

7.6.2.1 Permanently closed containers.

7.6.2.2 Motive power containers (e.g., oil pan on a truck, bulldozer).

7.6.2.3 Hot-mix asphalt containers.

7.6.2.4 Pesticide application equipment and related mix containers.

7.6.2.5 Off-shore oil drilling, production, or workover facility subject to other regulations.

7.6.2.6 Completely buried tanks.

7.6.2.7 Wastewater treatment facilities.

7.6.3 Containers used for standby storage, seasonal storage, or temporary storage are covered under 40 CFR 112.1(b)(3). Additionally, oil-filled electrical equipment, such as transformers, are covered under 40 CFR 112.7(k).

BMSC does not own oil-filled electrical equipment.

7.7 Discharge Prevention Measures and Procedures [40 CFR 112.7(a)(3)(ii)]

7.7.1 BMSC has prevention measures and procedures in place for the routine handling of products. Below is a list of procedures shown in Appendix D. A list of applicable forms is in Appendix F.

7.7.1.1 Monthly inspection of secondary containments, tanks, piping, and visual integrity.

7.7.1.2 Storm water discharge from secondary containment areas.

7.7.1.3 Loading/unloading trucks, totes, drums, and applicable containers 55 gallons or greater.

7.7.1.4 Spill control and containment of oil-containing liquids.

7.7.2 Forms are maintained as documentation of events with this Plan for a period of three years. Tank inspection forms are maintained for the life of the tanks. Usual and customary methods of storage of forms are permitted. Forms are to be available for inspection upon request.

7.8 Discharge/Drainage Controls [40 CFR 112.7(a)(3)(iii)]

Discharge and drainage controls are handled in a variety of ways at BMSC, including:

7.8.1 Inspection for oil, or oil sheen, in containment areas is performed by personnel at least monthly. The inspection occurs prior to removal of liquids from the containment area under responsible supervision. Form EHS-10, Monthly Facility Inspection Checklist, is used to document the event.

7.8.2 Example secondary containment calculations in Appendix E ensure tankage is contained prior to discharge, pumping, or drainage.

7.8.3 Drain valves, if present for secondary containments, are maintained in a closed position when not being operated; otherwise, containments are pumped out.

7.9 Discharge Countermeasures [40 CFR 112.7(a)(3)(iv)]

7.9.1 Discovery

Countermeasures for discharge discovery at BMSC include routine inspections. Secondary containments, equipment, piping, hoses, and other associated equipment or items (appurtenances) are inspected by personnel at least monthly. More frequent inspections are performed as needed to assist routine inspections.

7.9.2 Response

Upon discovery of a spill or discharge, the discovering person notifies their immediate supervisor and, if trained, uses spill response materials to clean up the spill. **Remember, SAFETY FIRST. If conditions are unsafe, do not enter the spill area.** Appropriately-trained spill responders may need to be called.

7.9.3 Cleanup

7.9.3.1 Small spills are handled by BMSC by using spill response equipment. Larger spills may require the assistance of a spill response organization. Employees are trained to handle small spills. See Appendix for spill response procedures.

7.9.3.2 Spill response equipment and Personal Protective Equipment (PPE) may include items such as dry chemical absorbents, gloves, masks, shovels, brooms, rakes, absorbent socks, pads, rags, mats, etc. Spill response contractors may be utilized to clean up spills (see Section 7.11).

7.9.3.3 Appendix G lists spill response equipment and PPE maintained by BMSC. Spill response equipment and PPE are replaced as depleted. A formal inventory count and suitability-for-use is performed and documented for PPE and spill response equipment at least once per year. Appendix G may be used for this review. Adjustment of inventory levels and types of equipment inventoried may be made at the time of the review.

7.10 Disposal of Recovered Materials [40 CFR 112.7(a)(3)(v)]

All products recovered, whether recycled, reused, treated on-site or off-site, or otherwise dispose of, are handled in accordance with applicable legal requirements.

Materials recovered as part of a spill event are containerized in drums, totes, overpacks, etc. Some disposal options, as follows, may be considered following a spill event.

7.10.1 Reuse/Recycle

Sometimes oil can be filtered or wrung out of an absorbent pad, and both the oil and the pad reused. In other cases, the oil may be wrung out of the pad and the oil reused, but the pad would need to be recycled in an energy recovery operation such as an incinerator. Reuse options are preferable to other disposal method; however, time and personnel involvement may not prove to be practical.

7.10.2 Incineration

Some facility can burn spent oil absorbent pads and related materials in an incinerator. The facilities are regulated under 40 CFR 264 or 40 CFR 265. Advantages of incineration are very low health risks and the best control of toxic organic contamination.

7.10.3 Landfill Disposal

Disposal in a municipal solid waste landfill (MSWLF) is the least desirable method of disposal of oil-containing products for a number of reasons:

7.10.3.1 A permitted MSWLF must be used. Many landfills have restrictions on what products they accept.

7.10.3.2 Quantities of materials to be disposed must be known and characterized. Samples must be tested and certified as non-hazardous before landfilling can occur.

7.10.3.3 There is a higher liability and expense to use a MSWLF when compared to other methods.

7.10.3.4 Prior approval from the state is required.

7.10.3.5 Landfilling leaves the presence of persistent undesirable products in the environment, including petroleum hydrocarbons, benzene, toluene, ethylbenzene, and xylenes.

7.10.4 Bioremediation

7.10.4.1 By using biological mechanisms, contaminants can be converted to mineralized end products such as water, carbon dioxide, and salts. This is called bioremediation. Bioremediation-related processes include biotransformation and biodegradation. Any of these methods would be preferred over another disposal method, such as use of a MSWLF.

7.10.4.2 Due to regulatory restrictions, the EHS Manager, or their designee, makes decisions about how to dispose of oil and spent materials following a spill event. Suitable contractors are used to haul off products.

7.11 Facility Contact List [40 CFR 112.7(a)(3)(vi)]

| BMSC Contact/Title | Phone |
|---|---|
| Jun Wang – EHS Representative | Work (972) 241-9665 x315 |
| Daryl Hall – Safety & Security Manager | Work (972) 241-9665 x360<br>Cell (214) 912-6935 |
| Michael Ray – Director of Engineering | Work (972) 241-9665 x379<br>Cell (903) 651-3396 |
| Peter Song – CEO | Work (972) 241-9665 x204<br>Cell (972) 653-2274 |
| **Agency Contacts** | **Phone** |
| National Response Center | (800) 424-8802 |
| US EPA – Region 6<br>1201 Elm Street, Dallas, TX 75270 | (214) 665-6444<br>(800) 887-6063 |
| Texas Commission for Environmental Quality (TCEQ) | (800) 832-8224 |
| Local Emergency Planning Committee (LEPC) | (214) 653-7980 |
| **Additional Emergency Contacts** | **Phone** |
| Dallas County Sheriff | (214) 653-3450 or 911 |
| Coppell Fire Department | (972) 304-7055 or 911 |
| Elite Care Emergency Room | (469) 312-3080 (24 hours)<br>or 911 |
| **Spill Response Contractors** | **Phone** |
| Heritage Environmental Services, LLC | (877) 436-8778 (24 hours) |
| SWS Environmental Services<br>9204 Highway 287 NW, Fort Worth, TX 76131 | (877) 742-4215 (24 hours) |

7.12 Discharge Reporting [40 CFR 112.7(a)(4)]

7.12.1 In the event of a spill of oil or hazardous chemical that is reportable to Federal and/or state agencies, specific information should be available to the person making the notifications. This information includes:

- Reporting person's name.
- Facility location.
- Facility name.
- Telephone number.
- Date and time of the incident.
- Location of the incident.
- Source and cause of the release or spill.
- Type of material(s) released or spilled.
- Quantity of material(s) released or spilled.
- Medium (e.g., land, water) affected by release or spill.
- Danger or threat posed by the release or spill.
- Number of types of injuries or fatalities (if any).
- Weather conditions at the incident location.
- Name of the carrier or vessel, the rail car/truck number, or other identifying information (if applicable).
- Whether an evacuation has occurred.
- Other agencies notified or about to be notified.
- Any other information that may help emergency personnel respond to the incident.

7.12.2 It is not important that all of the above information be known at the time notifications are made. Form EHS-6, Discharge Notification, shall be used.

7.12.3 Refer to the Appendix D, Controlling, Containing, and Reporting an Oil or Chemical Spill.

7.13 Contingency Response Plan [40 CFR 112.7(a)(4),(5)]

7.13.1 BMSC in Coppell, Texas is not required to submit a contingency response plan under 40 CFR 112.20 since the location is not a substantial harm facility. A completed form declaring this fact is shown in Appendix A.

7.13.2 This Plan describes procedures used when a discharge occurs as shown in Section 7.9, Discharge Countermeasures, Section 7.10, Disposal of Recovered Materials, and Section 7.12, Discharge Reporting.

## 8 Discharge Direction, Flow, and Total Quantity [40 CFR 112.7(b)]

Facilities such as BMSC have tanks, unloading and loading operations, and other equipment known to pose a reasonable potential of oil discharge. Appendix C shows a prediction of the direction, rate of flow, and total quantity of oil that could be discharged from the facility as a result of each type of major equipment failure.

## 9 Containment, Diversionary Structures, and Inspections [40 CFR 112.7(c),(d),(e)]

As previously stated, facility diagrams are presented in Appendix B. Associated equipment, such as tankage and containment, and any other regulated liquids are also shown.

Calculations in Appendix E are performed to show the ability of secondary containment to be adequate4ly sized. Containment systems, including walls and floor, are designed to be capable of containing oil or regulated chemicals, and constructed so that any discharge from a primary containment system, such as a tank, will not escape the containment system before cleanup occurs.

This Plan does not contain structures or equipment for which sumps, collection systems, active or passive secondary containment, diversion into retention ponds, sorbent materials, or other equivalent prevention systems are considered to be impracticable to install and maintain.

Inspections and tests are required as part of this Plan. Written procedures for conducting inspections and tests are presented in Appendix D. Records of inspections and tests are:

- Signed by an appropriate supervisor or inspector.
- Kept with the Plan for a minimum of three years.
- Maintained under usual and customary business practices.
- Available for review by government agency personnel during normal business hours.

A list of forms for use when inspections and tests are performed are shown in Appendix F.

## 10 Personnel Training and Discharge Prevention Procedures [40 CFR 112.7(f)]

Oil-handling personnel, including new hires and those already employed at the facility are trained in, at minimum:

- The operation and maintenance of equipment to prevent discharges.
- Discharge procedure protocols.
- Applicable pollution control laws, rules, and regulations.
- General facility operations.
- The contents of the facility SPCC Plan.

The person designated as accountable for discharge prevention at the facility and who reports to facility management is listed in Section 7.11 as the first contact on the Facility Contact List. Discharge prevention briefings are scheduled and conducted for oil-handling personnel at least once a year to ensure adequate understanding of the Plan for the facility. The briefings highlight and describe, at minimum, the following:

- Known discharges.
- Failures.
- Malfunctioning components.
- Any recently-developed precautionary measures.

Records of oil-handling personnel training and discharge prevention briefings are maintained for a minimum of three years and stored with this Plan or in usual and customary methods. This training is to be recorded on Form HR-1, Training Form.

**11 Security** [40 CFR 112.7(g)]

Oil handling, processing, and storage areas at the facility are secured and access to them is controlled in the following ways:

- Master flow and drain valves are closed when not in supervised use and secured.
- Starter controls on oil pumps have measures to prevent unauthorized access.
- Oil-carrying pipelines are secured when out-of-service.
- Unloading/loading connections of oil-carrying pipelines are secured.
- The facility has addressed the appropriateness of security lighting and installed adequate security lighting to aid in the prevention of vandalism and the discovery of oil discharges.

**12 Facility Tank Car and Tank Truck Loading/Unloading Rack** [40 CFR 112.7(h)]

BMSC does not have loading racks; however, as a part of their commitment to avoid spills and for safe operations, the truck loading/unloading procedure in Appendix D is used.

**13 Container Repair, State Rules, & Oil-Filled Operational Equipment** [40 CFR 112.7(i),(j),(k)]

40 CFR 112.7(i): BMSC does not have field-constructed aboveground containers; therefore, brittle fracture evaluation is not applicable.

40 CFR 112.7(j): There are no applicable state rules, regulations, or guidelines that should be included in this Plan; therefore, this section is not available.

40 CFR 112.7(k): BMSC does not own qualified oil-filled operational equipment; therefore, this section is not applicable.

**14 Onshore Specific Requirements and Facility Drainage** [40 CFR 112.8(a),(b)]

40 CFR 112.8(a): This Plan meets requirements set forth in 40 CFR 112.7 and specific discharge prevention and containment procedures listed in 40 CFR 112.8.

40 CFR 112.8(b)(1): BMSC restrains drainage of liquid from diked storage. Drain valves are not used. When liquid is to be removed from a diked area (such as a containment), the liquid is pumped out. If a pump is used as a means to discharge liquid from a diked area, the condition of the accumulation is inspected in the diked area prior to activating the pump. The purpose of inspection is to ensure that no oil or hazardous chemical will be discharged into a drainage system or navigable waters. Oil is removed from the diked area by pumping, skimming, or other means, using appropriate methods.

40 CFR 112.8(b)(2): Drain valves are not presently used in containments. Only uncontaminated storm water is released into a watercourse.

40 CFR 112.8(b)(3): If un-diked areas are located at the facility with the potential for a discharge, the areas are noted in Table 2.1, Required Facility Upgrades. Piping does not extend beyond containment walls unless drip catchment pans exist. Tank trucks do not unload in areas where discharges may occur outside loading areas because sufficiently sized catch pans are located at connection points and spill response materials are located in easily-accessible locations. Catchment basins (e.g., ponds, lagoons, etc.) are not located at this facility.

40 CFR 112.8(b)(4): Facility drainage is engineered as in paragraph 40 CFR 112.8(b)(3) above; therefore, this section does not apply.

40 CFR 112.8(b)(5): There are no treated drainage waters at this facility; therefore, this paragraph does not apply.

**15 Bulk Storage Containers** [40 CFR 112.8(c)]

40 CFR 112.8(c)(1): All containers at this facility are constructed to be compatible with the material being stored and with regard to storage conditions such as pressure and temperature.

40 CFR 112.8(c)(2): Except for mobile refuelers and other non-transportation-related tank trucks, a secondary means of containment is provided for the entire capacity of the largest single bulk storage container and sufficient freeboard to contain precipitation. This capability is provided for all bulk storage containers of 55 gallons or more of oil. For oil containers less than 55 gallons, sufficient means such as secondary containment, absorbent socks and pads, granular absorbent, etc., are present to contain and clean up the spill. All contaminated spill response equipment is containerized and disposed of properly. For disposal options see Section 7.10, Disposal of Recovered Materials.

The walls and floors of diked areas are sufficiently impervious to contain liquids, such as oil and chemicals, until they can be cleaned up.

40 CFR 112.8(c)(3): Drainage of contaminated storm water from diked areas is not allowed because:

- The bypass valve is normally kept in a closed position.
- Prior to release, storm water is inspected for the accumulation of oil and, if there is a sheen of oil (or greater) on the water, the oil is skimmed, vacuumed, or otherwise removed and disposed of properly.
- Under responsible supervision, the bypass valve is opened and then resealed following drainage.
- Adequate records are kept of the event, including records required under this regulation, alone with any issued permit.

40 CFR 112.8(c)(4): There are no completely buried metallic storage tanks at this facility installed on or after January 10, 1974; therefore, issues of corrosion, cathodic protection, and leak testing are not applicable.

40 CFR 112.8(c)(5): There are no partially-buried or bunkered metallic tanks for the storage of oil at this facility; therefore, issues of corrosion, cathodic protection, and leak testing are not applicable.

40 CFR 112.8(c)(6): Aboveground containers at this facility are tested or inspected for integrity on a regular schedule and if material repairs are made. If needed, BMSC follows industry standards by using guidance from the American Petroleum Institute (API) Standard 653 as the basis for performing integrity tests and inspections. Records of these inspections and tests are kept with this Plan or under usual and customary business practices of BMSC for the life of the tankage. See Section 7.4, Regulatory Deviation, for further information.

40 CFR 112.8(c)(7): If tanks with internal heating coils are used at the facility, leakage from defective heating coils must not reach an open watercourse; therefore, contamination from defective internal heating coils is controlled by one or both of the following methods:

- Monitoring the steam return and exhaust lines for contamination.
- Passing the steam return or exhaust lines through a settling tank, skimmer, or other separation or retention system.

40 CFR 112.8(c)(8): Recognized and Generally Accepted Good Engineering Practices (RAGAGEP) is used to engineer or update container installations. In keeping with this protocol, at least one of the following devices is installed:

- High liquid level alarms with an audible or visual signal at a constantly-attended operation or surveillance station. Alternatively, an audible air vent may suffice.
- High liquid level pump cutoff devices are set to stop flow at a predetermined container content level.
- A fast response system for determining the liquid level of each bulk storage container, such as digital computers, telepulse, radar, or direct vision gauges. If direct vision gauges are used, a person must be present to monitor the gauges and the overall filling of the bulk storage container.

If present, liquid level sensing devices are regularly tested to ensure proper operation according to the manufacturer’s recommendation or recognized industry standard.

40 CFR 112.8(c)(9): A DAF system at this facility is inspected at least once per operational day to ensure a system upset is caught before it could cause a discharge. Form EHS-10, Monthly Facility Inspection Checklist, may be used for this purpose.

40 CFR 112.8(c)(10): Visible discharges of oil from containers are promptly corrected, and includes, but is not limited to: seams, gaskets, piping, pumps, valves, rivets, and bolts.

Accumulations of oil in diked areas are promptly removed.

40 CFR 112.8(c)(11): Mobile and portable oil storage containers are equipped with a secondary containment basin or catchment (such as DAF sump via floor drains), sufficient to contain the capacity of the largest single compartment or container with sufficient freeboard to contain precipitation, as applicable.

**16 Facility Transfer Operations** [40 CFR 112.8(d)]

40 CFR 112.8(d)(1): Buried piping is not installed at this facility; therefore, issues of buried piping protection and wrapping, cathodic protection, and corrosion protection standards are not applicable.

40 CFR 112.8(d)(2): When piping is not in service or is in standby service for an extended period of time, terminal connections at the oil transfer point are capped or blank-flanged.

40 CFR 112.8(d)(3): Pipe supports are properly designed to minimize abrasion and corrosion and allow for expansion and contraction.

40 CFR 112.8(d)(4): All aboveground valves, piping, and appurtenances are inspected monthly. At the time of inspection, the following equipment is assessed:

- Flange joints.
- Expansion joints.
- Valve glands and bodies.
- Catch pans.
- Pipeline supports.
- Locking of valves.
- Metal surfaces.

There is no buried piping at this facility; therefore, integrity testing and leak testing of buried piping are not applicable.

40 CFR 112.8(d)(5): Verbal notification and/or warning signs are posted at this facility to ensure that no vehicle will endanger aboveground piping or other oil transfer operations, if necessary.

## Appendix A: Certification of the Applicability of the Substantial Harm Criteria Checklist

## Appendix B: Figures

## Appendix C: Storage Containers and Equipment

| Volume (gal) | Container ID[1] | Location | Potential Failure Type | Potential Discharge Volume (gal)[(2)] | Discharge Flow Direction | Secondary Containment | Secondary Containment Capacity & Adequacy |
|---|---|---|---|---|---|---|---|
| **Tanks** | | | | | | | |
| 7,000 | TF-1 | Wet Bulk Storage | Tank Overfill Fitting Leak Seam Failure | 10 – 7,000 | Inside: Radial into Receiving<br>Outside: East then South | Poured Concrete Containment | 18,660 gal Adequate: Yes |
| 7,000 | TF-2 | | | 10 – 7,000 | | | |
| 7,000 | TF-3 | | | 10 – 7,000 | | | |
| 13,000 | TF-4 | | | 10 – 13,000 | | | |
| 7,000 | TF-5 | | | 10 – 7,000 | | | |
| 10,000 | TF-6 | Outside East Side of Building | N/A Not Oil | | | | |
| 2,500 | P1-1 | Wet Compounding | Tank Overfill Fitting Leak Seam Failure | 10 – 2,500 | Radial to Drains | DAF Sump | 3,000 gal Adequate: Not for tankage over 3,000 gal. |
| 1,250 | P1-2 | | | 10 – 1,250 | | | 3,000 gal Adequate: Yes |
| 3,250 | P1-3 | | | 10 – 3,250 | | | 3,000 gal Adequate: Not for tankage over 3,000 gal. |
| 1,950 | P1-4 | | | 10 – 1,950 | | | 3,000 gal Adequate: Yes |
| 1,950 | P1-5 | | | 10 – 1,950 | | | 3,000 gal Adequate: Yes |
| 5,000 | P1-6 | | | 10 – 5,000 | | | 3,000 gal Adequate: Not for tankage over 3,000 gal. |
| 2,500 | P1-7 | | | 10 – 2,500 | | | 3,000 gal Adequate: Yes |
| 5,000 | P1-8 | | | 10 – 5,000 | | | 3,000 gal Adequate: Not for tankage over 3,000 gal. |
| 1,000 | P2-1 | | | 10 – 1,000 | | | 3,000 gal Adequate: Yes |
| 500 | P2-2 | | | 2.5 – 500 | | | |
| 500 | P2-3 | | | 2.5 – 500 | | | |
| 250 | P2-4 | | | 2.5 – 250 | | | |
| 500 | P2-5 | | | 2.5 – 500 | | | |
| 250 | P2-6 | | | 2.5 – 250 | | | |
| 250 | P2-7 | | | 2.5 – 250 | | | |
| 1,300 | P2-8 | | | 10 – 1,300 | | | |
| 125 | P2-9 | | | 2.5 – 125 | | | |
| 65 | P2-10 | | | 2.5 – 65 | | | |
| 80 | P2-11 | Wet Compounding | Tank Overfill Fitting Leak Seam Failure | 2.5 – 80 | Radial to Drains | DAF Sump | 3,000 gal Adequate: Yes |

| Volume (gal) | Container ID[1] | Location | Potential Failure Type | Potential Discharge Volume (gal)[(2)] | Discharge Flow Direction | Secondary Containment | Secondary Containment Capacity & Adequacy |
|---|---|---|---|---|---|---|---|
| 40 | P2-12 | | N/A <55 gallons | | | | |
| 30 | P2-13 | | | | | | |
| 15 | P2-13a | | | | | | |
| 50 | CT-1 – CT-22 | | N/A <55 gallons, Mobile | | | | |
| 50 | CIP-1 | Wet Bulk Product Storage | N/A <55 gallons | | | | |
| 50 | CIP-2 | | | | | | |
| 50 | CIP-3 | | | | | | |
| 5,200 | P3-1 | Wet Bulk Product Storage | Tank Overfill Fitting Leak Seam Failure | 10 – 5,200 | Radial to Drains | DAF Sump | 3,000 gal Adequate: No |
| 5,200 | P3-2 | | | | | | |
| 5,200 | P3-3 | | | | | | |
| 5,200 | P3-4 | | | | | | |
| 5,200 | P3-5 | | | | | | |
| 5,200 | P3-6 | | | | | | |
| 5,200 | P3-7 | | | | | | |
| 130 | CPI-1 | Color Compounding | Tank Overfill Fitting Leak Seam Failure | 2.5 – 130 | Radial to Drains | DAF Sump | Adequate: Yes |
| 65 | CPI-2 | | | 2.5 – 65 | | | |
| 50 | CPI-3 | | N/A <55 gallons | | | | |
| 25 | CPI-4 | | | | | | |
| 25 | CPI-5 | | | | | | |
| 100 | CPI-6 | | Tank Overfill Fitting Leak Seam Failure | 2.5 – 100 | Radial to Drains | DAF Sump | Adequate: Yes |
| 20 | CPI-7 | | N/A <55 gallons | | | | |
| 25 | CPI-8 | | | | | | |
| **Oil-Filled Operational Equipment (e.g., hydraulic equipment, transformers)** | | | | | | | |
| N/A | | | | | | | |
| **Piping, Valves, etc.** | | | | | | | |
| Piping/Valves Inside Building Between Storage Tanks & Process/ Product Tanks | | Wet Bulk Storage Tank Area to Wet Compounding | Fitting Leak or Failure | 1 – 15 | Radial into Receiving | Receiving Floor Area, Spill Kit | Adequate: Yes |
| Piping/Valves Inside Building Between Storage Tanks & Process/ Product Tanks | | Wet Compounding, Wet Product Storage Area, Color Compounding | Fitting Leak or Failure | 1 – 15 | Radial to Drains | Spill Kit | Adequate: Yes |
| **Product Transfer Areas (location where oil is loaded to or from a container, pipe, or other equipment)** | | | | | | | |
| Tank Truck Unloading Area (TF-1 – TF-5) | | Outside East Side of Building | Fitting Leak or Failure, Hose Line Failure | 1 – 15 | East, then South | Spill Kit | Adequate: Yes |

| Volume (gal) | Container ID[1] | Location | Potential Failure Type | Potential Discharge Volume (gal)[(2)] | Discharge Flow Direction | Secondary Containment | Secondary Containment Capacity & Adequacy |
|---|---|---|---|---|---|---|---|
| **Other Oil-Handling Areas or Oil-Filled Equipment (flow-through process vessels at an oil production facility)** | | | | | | | |
| Sump Tank at DAF | | Outside East Side of Building | Tank Overflow | See Note 3 | East, then South | Spill Kit | Adequate: Yes |
| **Aboveground Oil Storage Containers** | | | | | | | |
| 10 x 300-gallon Sludge Totes | | Wastewater | Totes Failure | 1 – 300 | East, then South | Spill Kit | Adequate: No |
| 300-gallon Tote Puretol 7 Mineral Oil | | Color Sanitation | Tote Failure | 1 – 300 | Portable Containment & Floor Drain | N/A | Adequate: Yes |
| All 55-gallon Steel Drums | | Pre-Weigh Storage Area | Fitting Leak Seam Failure | 1 – 55 | To Shop Floor | Absorbents | |
| 1 x 300-gallon IBC Tote Puretol 7 Mineral Oil | | Compounding | | 1 – 300 | | Inside Shop | |
| 1 x 55-gallon Drum Puretol 7 Mineral Oil | | | | 1 – 55 | To Portable Containment & Floor | Portable Containment | |
| 6 x 55-gallon Drums Waste Oil | | Waste Storage Area | Lid Not Intact / Tightly Sealed | 1 – 55 | To Portable Containment | Portable Containment & Spill Kit Nearby | |
| 7 x 300-gallon Tote Waste Oil | | | Tote Failure | 1 – 300 | To Warehouse Floor | Inside Warehouse | |
| **Oil-Filled Operational Equipment** | | | | | | | |
| 2 x 500-gallon Transformers | | Wastewater Treatment Plant Area | Gasket or Valve Failure | 1 – 50 | East, then South | Self-Contained & Spill Kit Nearby | Adequate: Yes |

[1] Container ID corresponds to diagrams in Appendix B.

[2] Based on examples in 40 CFR 112.

[3] DAF sump tank may overflow if DAF is not operational or if too much liquid is received from drains inside the building at one time. Volume from five 6-inch drains in the Wet Bulk Product Storage area could cause tankage >2,000 gallons to enter from the largest tank and overflow the DAF sump If the sump is full at the time of the incident.

## Appendix C: Oil Storage Containers and Capacities

This table include a complete list of all oil storage containers with a capacity of 55 US gallons or more, unless otherwise exempt from the rule. For mobile/portable containers, an estimated number of containers, types of oil, and anticipated capacities are provided.

Total Aboveground Storage Capacity: 15,665

Facility Total Oil Storage Capacity: 15,665

| Oil Storage Container (A = Aboveground) | Type of Oil & Location | Location | Shell Capacity (gallons) |
|---|---|---|---|
| A – 10 Portable Sludge Totes | Wastewater Sludge | Wastewater Treatment Plant | 3,000 |
| A – 18 Portable Sludge Totes | | | 5,000 |
| A – 1 275-gallon IBC Tote | Puretol 7 Mineral Oil | Color Sanitation | 300 |
| A – 2 Steel Drums | Petrolatum 230 DDM | Pre-Weigh | 110 |
| A – 1 Steel Drum | Petrolatum 160 DMM | | 55 |
| A – 5 Steel Drums | Petrolatum Regent White USP | | 275 |
| A – 4 Steel Drums | Mineral Oil | | 220 |
| A – 7 Steel Drums | Safflower Oil Hybrid | | 385 |
| A – 1 Steel Drum | Soybean Oil | | 55 |
| A – 1 Steel Drum | Salad Oil | | 55 |
| A – 1 Steel Drum | Avocado Oil | | 55 |
| A – 1 Steel Drum | 100% Pure Natural Jojoba Oil | | 55 |
| A – 1 275-gallon IBC Tote | Puretol 7 Mineral Oil | Compounding Sanitation | 300 |
| A – 1 55-gallon Steel Drum | | Compounding | 55 |
| A – 7 275-gallon IBC Totes | | Waste Storage Area | 1,925 |
| 2 Transformers | Mineral Oil | | 1,000 |
| A – 6 HDPE Drums | Mineral Oil, Risil Mat, and Alcohol | | 330 |
| A – 5 Used Totes | Used Mineral Oil | Waste Storage Area | 1,500 |
| A – 18 Drums | Raw Materials | Heating Box | 990 |
| | Total | | 15,665 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

## Appendix D: List of Related Operating Procedures

POL-4, Hazard Communication (Section 8)
WI EHS-7, Containment Areas, Piping, and Valves Monthly Inspection
WI SCO-1, Tanker Unloading into Tank Farm

# Appendix E: Example Containment Calculations

## Calculation for Wet Bulk Storage Tanks (TF-1 through TF-5)

Part A – Determine required dike or berm dimensions for largest single tank.

1. Calculate the volume of the tank.

| | | | |
|---|---|---|---|
| Largest Tank Shell Capacity (gal) = | 13,000.00 | a | |
| Calculated Largest Tank Volume ($ft^3$) = | 1,737.97 | b | Convert gal to $ft^3$ (a / 7.48 $gal/ft^3$) |

2. Specify the containment wall height and one containment lateral dimension (D1) to calculate lateral dimension (D2).

| | | | |
|---|---|---|---|
| Height of Containment Wall, $SC_{Height}$ (ft.) = | 3.3 | c | |
| Height of Containment Wall, $SC_{Height}$ (in.) = | 39.6 | d | Convert ft. to in. (c x 12 in/ft) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Measured Lateral Dimension of Containment D1 (ft.) = | 60 | e | | | | | |
| Calculated Lateral Dimension of Containment D2 (ft.) = | 1,737.97 | / | 3.3 | / | 60 | = | 8.79 |
| | b ($ft^3$) | | c (ft.) | | e (ft.) | | f (ft.) |

3. Calculate volume of rain to be collected in the secondary containment with area $A_{SC}$ for the specified rain event.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 25-year 24-hour Rainfall Event for this Facility (in.) = | 0 | g | | | | | |
| Calculated Secondary Containment Area ($A_{SC}$) ($ft^2$) = | 60 | x | 8.78 | = | 526.66 | | |
| | e (ft.) | | f (ft.) | | h ($ft^2$) | | |
| Calculated Rain Volume ($V_{Rain}$)($ft^3$) = | 0 | / | 12 | x | 526.66 | = | 0.00 |
| | g (in.) | | in./ft. | | h ($ft^2$) | | i ($ft^3$) |

4. Calculate the required secondary containment volume ($V_{scReq}$) to account for the additional volume of rain ($V_{Rain}$).

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Calculated Volume of the Secondary Containment Required ($V_{SCReq}$) $V_{SCReq}$($ft^3$) = | 1,737.97 | + | 0.00 | = | 1,737.97 | | |
| | b ($ft^3$) | | i ($ft^3$) | | j ($ft^3$) | | |

If ***other containers*** are in the secondary containment, calculate the displacement volumes using Parts B, C, and D, as applicable, then add these to get the Total Displacement Volume ($ft^3$).

| | | | |
|---|---|---|---|
| Part B | Other Cylindrical Vertical Tanks in Same Berm w/Largest Tank = | 0.00 | p ($ft^3$) |
| Part C | Other Cylindrical Horizontal Tanks in Same Berm w/Largest Tank = | 0.00 | s or aa ($ft^3$) |
| Part D | Other Rectangular Tanks in Same Berm w/Largest Tank = | 0.00 | ag ($ft^3$) |
| | Total Displacement Volume (TDV) = | 0.00 | ($ft^3$) |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Net Required Secondary Containment $V_{NetSC}$ ($ft^3$) = | 1,737.97 | + | 0.00 | = | 1,737.97 | or | 13,000.00 | |
| | j ($ft^3$) | | TDV | | k ($ft^3$) | | gallons | |

| | | |
|---|---|---|
| Gross Measured Secondary Containment (gal) = | 18,661.20 | (60 ft. x 12.6 ft. x 3.3 ft.) / 7.48 $gal/ft^3$ |
| Net Required Secondary Containment (gal) = | 13,000.00 | |
| Difference (gal) = | 5,661.10 | |

Therefore, the secondary containment is ***ADEQUATE*** for the largest tank (TF-4) when considering its discharge volume, the displacement of other tanks in the berm (no displacement), and the indoor location of the tanks (no precipitation event).

## Calculation for Wet Compounding (P1-1 through P1-8)

Part A – Determine required dike or berm dimensions for largest single tank.

1. Calculate the volume of the tank.

| | | | |
|---|---|---|---|
| Largest Tank Shell Capacity (gal) = | 5,000.00 | a | |
| Calculated Largest Tank Volume ($ft^3$) = | 668.45 | b | Convert gal to $ft^3$ (a / 7.48 $gal/ft^3$) |

2. Specify the containment wall height and one containment lateral dimension (D1) to calculate lateral dimension (D2).

| | | | |
|---|---|---|---|
| Height of Containment Wall, $SC_{Height}$ (ft.) = | 6.5 | c | |
| Height of Containment Wall, $SC_{Height}$ (in.) = | 78 | d | Convert ft. to in. (c x 12 in/ft) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Measured Lateral Dimension of Containment D1 (ft.) = | 6.63 | e | | | | | |
| Calculated Lateral Dimension of Containment D2 (ft.) = | 668.45 | / | 6.5 | / | 6.63 | = | 15.51 |
| | b ($ft^3$) | | c (ft.) | | e (ft.) | | f (ft.) |

3. Calculate volume of rain to be collected in the secondary containment with area $A_{SC}$ for the specified rain event.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 25-year 24-hour Rainfall Event for this Facility (in.) = | 0 | g | | | | | |
| Calculated Secondary Containment Area ($A_{SC}$) ($ft^2$) = | 6.63 | x | 15.51 | = | 102.84 | | |
| | e (ft.) | | f (ft.) | | h ($ft^2$) | | |
| Calculated Rain Volume ($V_{Rain}$)($ft^3$) = | 0 | / | 12 | x | 102.84 | = | 0.00 |
| | g (in.) | | in./ft. | | h ($ft^2$) | | i ($ft^3$) |

4. Calculate the required secondary containment volume ($V_{SCReq}$) to account for the additional volume of rain ($V_{Rain}$).

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Calculated Volume of the Secondary Containment Required ($V_{SCReq}$) $V_{SCReq}$($ft^3$) = | 668.45 | + | 0.00 | = | 668.45 | | |
| | b ($ft^3$) | | i ($ft^3$) | | j ($ft^3$) | | |

If ***other containers*** are in the secondary containment, calculate the displacement volumes using Parts B, C, and D, as applicable, then add these to get the Total Displacement Volume ($ft^3$).

| | | | |
|---|---|---|---|
| Part B | Other Cylindrical Vertical Tanks in Same Berm w/Largest Tank = | 0.00 | p ($ft^3$) |
| Part C | Other Cylindrical Horizontal Tanks in Same Berm w/Largest Tank = | 0.00 | s or aa ($ft^3$) |
| Part D | Other Rectangular Tanks in Same Berm w/Largest Tank = | 0.00 | ag ($ft^3$) |
| | Total Displacement Volume (TDV) = | 0.00 | ($ft^3$) |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Net Required Secondary Containment $V_{NetSC}$ ($ft^3$) = | 668.45 | + | 0.00 | = | 668.45 | or | 5,000.00 | |
| | j ($ft^3$) | | TDV | | k ($ft^3$) | | gallons | |

**NOTE:** Due to the fact that the 3,000-gallon DAF sump receives multiple streams from various processes in the building (floor washdowns, tank washouts, etc.), it is assumed the DAF sump would be almost full at the time of a discharge from one of the 5,000-gallon tanks (P1-6 or P1-8). The DAF clarifier is rated at processing 25 gal/min (~3,000 gallons per 8-hr shift). The present sump volume is not considered enough to compensate for a sudden discharge of the entire contents of a 5,000-gallon P1 tank. An 25,000-Gal EQ Tank has been installed. It is enough to compensate for sudden discharge.

| | | |
|---|---|---|
| Gross Measured Secondary Containment (gal) = | 2,137.18 | (6.63 ft. x 6.63 ft. x 6.5 ft.) / 7.48 $gal/ft^3$ |
| Net Required Secondary Containment (gal) = | 5,000.00 | |
| Assume DAF Sump is Full During the Event = | 2,137.18 | |
| Difference (gal) = | -5,000.00 | |

Therefore, the EQ Tank is ***ADEQUATE*** secondary containment for the largest tank when considering its discharge volume and considering the DAF sump would be full of liquid at the time of the discharge event (worst-case scenario).

## Calculation for Wastewater Treatment Plant

Part A – Determine required dike or berm dimensions for largest single tank.

1. Calculate the volume of the tank

| | | | |
|---|---|---|---|
| Largest Tank Shell Capacity (gal) = | 25,000.00 | a | |
| Calculated Largest Tank Volume ($ft^3$) = | 3,342 | b | Convert gal to $ft^3$ (a / 7.48 $gal/ft^3$) |

2. Calculate volume of containment

| | | | | | | |
|---|---|---|---|---|---|---|
| Height of Containment Wall, $SC_{Height}$ (ft.) = | 1.66 | c | | | | |
| Calculated Secondary Containment Area ($A_{SC}$) ($ft^2$) = | 29 | x | 24 | = | 696 | |
| Calculated Secondary Containment Area ($A_{SC}$) ($ft^2$) = | 38 | x | 76 | = | 2,888 | |
| | e (ft.) | | f (ft.) | | h ($ft^2$) | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Calculated containment Volume ($V_{Rain}$)($ft^3$) = | 1.66 | | | x | 696 + 2,888 | = | 4,161 |
| | g (ft.) | | | | h ($ft^2$) | | i ($ft^3$) |

| | | | |
|---|---|---|---|
| Calculated Wastewater Pit Volume ($ft^3$) = | 402 | b | Convert gal to $ft^3$ (a / 7.48 $gal/ft^3$) |
| Calculated Total Volume of containment and Pit ($ft^3$) = | 4563 | b | Convert gal to $ft^3$ (a / 7.48 $gal/ft^3$) |

3. Calculate volume of rain to be collected in the secondary containment with area ASC for the specified rain event.

| | | | | | | |
|---|---|---|---|---|---|---|
| 25-year 24-hour Rainfall Event for this Facility (in.) = | 7.2 | g | | | | |
| Calculated Secondary Containment Area ($A_{SC}$) ($ft^2$) = | 29 | x | 24 | = | 696 | |
| | e (ft.) | | f (ft.) | | h ($ft^2$) | |
| Calculated Secondary Containment Area ($A_{SC}$) ($ft^2$) = | 38 | x | 76 | = | 2888 | |
| | e (ft.) | | f (ft.) | | h ($ft^2$) | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Calculated Rain Volume ($V_{Rain}$)($ft^3$) = | 7.2 | / | 12 | x | 696 + 2,888 | = | 2150 | |
| | g (in.) | | in./ft. | | h ($ft^2$) | | i ($ft^3$) | |

4. Calculate Volume of DAF processing: Assume 25 GPM x 60 min/hr x 24 hr/day = 36,000 Gal = 4813 ft3

5. Calculate the required secondary containment volume (VSCReq) to account for the additional volume of rain (VRain).

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Calculated Volume of the Secondary Containment Required ($V_{SCReq}$) $V_{SCReq}$($ft^3$) = | 3342 | + | 2150 | = | 5492 | | | |
| | b ($ft^3$) | | i ($ft^3$) | | j ($ft^3$) | | | |
| Calculated Volume of the Secondary Containment Provide ($V_{SCReq}$) $V_{SCReq}$($ft^3$) = | 4563 | + | 4813 | = | 9376 | | | |
| | b ($ft^3$) | | i ($ft^3$) | | j ($ft^3$) | | | |

If ***other containers*** are in the secondary containment, calculate the displacement volumes using Parts B, C, and D, as applicable, then add these to get the Total Displacement Volume ($ft^3$).

| | | | |
|---|---|---|---|
| Part B | Other Cylindrical Vertical Tanks in Same Berm w/Largest Tank = | 0.00 | p ($ft^3$) |
| Part C | Other Cylindrical Horizontal Tanks in Same Berm w/Largest Tank = | 0.00 | s or aa ($ft^3$) |
| Part D | Other Rectangular Tanks in Same Berm w/Largest Tank = | 0.00 | ag ($ft^3$) |
| | Total Displacement Volume (TDV) = | 0 | ($ft^3$) |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Excess Secondary Containment provided $V_{NetSC}$ ($ft^3$) = | 9376 | - | 5492 | = | 3884 | or | 29,052 | |
| | j ($ft^3$) | | TDV | | k ($ft^3$) | | gallons | |

**NOTE:** Secondary Containment is ***ADEQUATE*** secondary containment for the largest tank when considering its discharge volume would be full of liquid at the time of the discharge event (worst-case scenario).

## Appendix F: List of Inspection and Reporting Forms

Form EHS-6, Discharge Notification
Form EHS-10, Monthly Facility Inspection Checklist
Form EHS-11, Containment Drainage Log
Form HR-1, Training Form

## Appendix G: Spill Control Equipment

| Equipment | Location | Quantity on Hand | Quantity Desired | Reorder Date/ Discontinued? |
|---|---|---|---|---|
| | | | | |
| | | | | |
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Equipment is reordered to replenish inventory, especially after a spill event. At least ***annually*** a review is performed and documented by signature and date below.

| Reviewer Name: | Signature: | Date: |
|---|---|---|

| Comments: |
|---|
| |

## Appendix H: Supplemental Drawings