Spill Prevention Control and Countermeasure Plan

The University of Michigan
Ann Arbor Campus

Revised:

May 2023

Prepared by:

FACILITIES & OPERATIONS
ENVIRONMENT, HEALTH & SAFETY
UNIVERSITY OF MICHIGAN

University of Michigan
Environment, Health & Safety
Campus Safety Services Building
1239 Kipke Drive, Ann Arbor, MI 48109-1010
Phone: 734 647-1143 • Fax: 734 763-1185
www.ehs.umich.edu

Table of Contents

Acronyms and Abbreviations iv
Plan Requirements Reference v
Distribution List vi-vi
Document Control and Revision History viii

1.0 General Information 1
1.1 Facility Information 1
1.2 Emergency Notification Phone Numbers 2
1.3 Management Approval 4
1.4 Engineer Certification 5
1.5 Substantial Harm Certification 6
1.6 Purpose of Plan 8
1.7 Implementation of the Plan 8
1.8 Plan Review and Revisions 8
2.0 Facility Description 9
2.1 Facility Drainage 10
2.2 Oil Storage, Distribution and Use 10
2.2.1 Oil-filled Operational Equipment 11
2.2.2 Portable Equipment Containing Oil Storage 11
2.3 Spill History 12
2.4 Potential Releases and Prevention Controls 12
2.5 Loading and Unloading Operations 12
3.0 Spill Response Plan 14
3.1 General Initial Response Measures and Spill Reporting 14
3.2 Spill Notification to Outside Entities 14
3.3 Remedial Action 14
4.0 Inspections, Tests, and Records 15
4.1 Inspections 15
4.2 Integrity Testing 15
4.3 Record Keeping 16
5.0 Personnel Training 16
6.0 Security 16
7.0 Facility Improvements 17

Tables

1 Aboveground Storage Tanks
2 Drum Storage
3 Elevator Hydraulic Tanks
4 Oil Water Separators
5 Transformers
6 Underground Storage Tanks

Figures

1	East Campus
2	North Campus
3	Central Campus
4	Medical Campus
5	South Campus
E1-E6	East Campus Oil Storage Location Maps
N1-N25	North Campus Oil Storage Location Maps
C1-C15	Central Campus Oil Storage Location Maps
M1-M5	Medical Campus Oil Storage Location Maps
S1-S15	South Campus Oil Storage Location Maps

Appendices

A	EHS Maintenance of Oil/Water Separators for Sanitary Guideline
B	Inspection Checklist
C	Example of Bulk Waste Disposal Summary Table
D	Section 112.5(a) SPCC Regulated Facility Changes

Acronyms and Abbreviations

AST	Aboveground Storage Tank
CPP	Central Power Plant
DOT	Department of Transportation
DPSS	Division of Public Safety & Security
EGLE	Michigan Department of Environment, Great Lakes & Energy
ERCP	Emergency Response Contingency Plan
HAZWOPER	Hazardous Waste Operations Emergency Response
HMM	Hazardous Materials Management
LARA	Michigan Department of Licensing & Regulatory Affairs
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollutant Discharge Elimination System
EHS	Environment, Health & Safety Department
PE	Professional Engineer
RA	Regional Administrator
SPCC Plan	Spill Prevention, Control, and Countermeasures Plan
SWPP Plan	Storm Water Pollution Prevention Plan
U-M	University of Michigan, Ann Arbor
US EPA	United States Environmental Protection Agency
UST	Underground Storage Tank

Plan Requirements Reference

Applicable Regulatory Citation	Plan Requirement	Location in Plan (by Section)
112.3 (d)	Plan review by P.E.	1.4
112.5 (b)	Plan revision every 5 years	1.8
112.7	Management approval of plan	1.3
112.7 (a)(2) & 112.7 (d)	Portable Units	2.2.2
112.7 (a)(3)	Facility Description	2.0
112.7 (a)(5)(b)	Facility drainage, diked & undiked areas, flapper valves	2.1
112.7 (c)	Appropriate containment	2.2, 2.4
112.7 (c)	Secondary containment	2.2, 2.4
112.7 (e)	Inspections and records	4.1
112.7 (f)	Training	5.0
112.7 (g)	Security	6.0
112.7 (h)	Tank Truck Loading and Unloading	2.5
112.8 (c)	Bulk storage tanks	2.2, 2.4
112.8 (c)(4)	Corrosion protection for buried tanks	2.4
112.8 (c)(6)	Integrity testing	4.2
112.8 (d)	Facility transfer operations	2.5
112.7(k)(1)	Spill History	2.3
112.20 (e)	Substantial harm certification	1.5

Distribution List

Copy	Person	Location
1.	Michael Dressler	EHS-HazMat
2.	Brandi Campbell	EHS-EP3
3.	Rick Norman	Local Emergency Planning Committee
4.	Brad Walvort	DPSS Emergency Preparedness
5.	Malcolm Bamling	Central Power Plant
6.	Julie Coppernoll/Scott Guenther	Transportation Department
7.	Jean Boote	Transportation Fleet Services
8.	Bill Kirkpatrick	College of Engineering - Lay Auto Lab
9.	Matt Weiland	Radrick Farms Golf Course
10.	Steve Plunkett	University of Michigan Golf Course
11.	Joel LaRocca/Steve Keckan	U-M Hospital
12.	Mike Stadler	Nichols Arboretum & Matthaei Botanical Gardens
13.	Matthew Rankin	Grounds
14.	Joe Majors	Sheep Research
15.	Steve Pringle	High Voltage
16.	Dave Lammers	Power & Lighting Shop
17.	Glen Theeck	Hoover Heating Plant
18.	Shannon Meeks	Ross School of Business/Wyly Hall
19.	Tom Griffin	Aerospace Engineering
20.	Camie Munsell	Health Sciences Region - Emergency Generators
21.	Hayley Briggs	North Campus Region – Emergency Generators
22.	Tom Dixon	MBNI
23.	John Chambers	Food Services – Union, MI League, Pierpont
24.	Aerik LaFave	Plumbing Shop
25.	Carl McLaughlin III	RUB/ASC
26.	Samuel Moran	Waste Management
27.	Terri McMahon	Elevator Shop
28	Don Norton	North Campus Research Complex-Power House
29.	Maryellen Tracy/Preston Smith	North Campus Research Complex-Bldg 18
30.	Angela Mercer	U-M Stadium
31.	Josh Janks	South Quad
32.	Alan Augustine	Mitchell Field
33.	Eric Lakin	MACC
34.	Josh Fryd	ASC&P/Tennis
35.	Brian Allen	Law Quad

36.	Paul Clark	Parking Services - NCSB

Document Control and Revision History

In accordance with 40 CFR 112.5(b), a review and evaluation of this SPCC Plan is conducted at least every three years prior to August 16, 2002, and at least every five years after August 17, 2002. These reviews and evaluations are recorded below:

			Is PE recertification Required? Yes or No
Initial Date:	February 2000	By: CH2M HILL	YES
Revision Date:	October 22, 2001	By: OSEH – Andrew Berki	YES
Revision Date:	December 14, 2001	By: OSEH – Brandi Campbell	YES
Revision Date:	July 2, 2002	By: OSEH - Brandi Campbell	YES
Revision Date:	April 17, 2003	By: OSEH - Brandi Campbell	NO
Revision Date:	August 31, 2003	By: Clayton Group Services	NO
Revision Date:	March 31, 2004	By: OSEH - Brandi Campbell	YES
Revision Date:	January 13, 2006	By: OSEH – Brandi Campbell	YES
Revision Date:	June 23, 2010	By: OSEH – Jody Kositzky	YES
Revision Date:	May 10, 2013	By: OSEH – Jody Schaub	YES
Revision Date:	June 20, 2016	By: OSEH – Jody Mathias	YES
Revision Date:	February 9, 2018	By: EHS – Jody Mathias	YES
Revision Date:	February 23, 2023	By: EHS – Jody Mathias	YES
Revision Date:	May 2, 2023	By: EHS – Brandi Campbell	NO

1.0 General Information

1.1 Facility Information

1. NAME OF FACILITY:	The University of Michigan-Ann Arbor
2. FACILITY STREET ADDRESS	University of Michigan-Ann Arbor Ann Arbor, MI 48109
3. FACILITY MAILING ADDRESS	The University of Michigan Campus Safety Services Building 1239 Kipke Drive Ann Arbor, MI 48109-1010
4. FACILITY PHONE NUMBER	734-647-1143 (7:30AM - 4:30PM) 734-763-1131 (24 hours – Division of Public Safety & Security - DPSS)
5. NEAREST SURFACE WATER BODY/ DISTANCE	Huron River / 0 – 10 miles (approximate)

In the event of an emergency, U-M Environment, Health & Safety (EHS) has a 24-hour Emergency Response Team that responds to all types of spills. During normal working hours of 7:30am-4:30pm, spills are reported to U-M EHS, Hazardous Materials Management (HMM) at 734-763-4568. If a spill is identified after regular hours of operation, U-M staff are trained to contact the U-M DPSS at 734-763-1131 (911 from a campus phone), who in turn contact a member of the EHS emergency response team to arrive on site and clean up the spill.

The Facility Response Coordinator is responsible for the Spill Prevention Program including employee training and awareness and coordination with management. The Facility Response Coordinator is also responsible for coordinating and leading spill response, spill response training, management approvals, and necessary equipment, materials, and outside services.

Facility Response Coordinator:	Danielle Sheen
Working Hours Phone Number:	(734) 763-9132(Office)
After Hours Phone Numbers:	(248) 875-1328 (Cell)
First Alternate:	Michael Dressler
Working Hours Phone Number:	(734) 763-4619 (Office)
After Hours Phone Numbers:	(734) 645-3526 (Cell)
Second Alternate:	John Kosco
Working Hours Phone Number:	(734) 615-6153 (Office)
After Hours Phone Numbers:	(517) 605-8815 (Cell)

NCRC Facility Response Coordinator:	Preston Smith
Working Hours Phone Number:	(734) 764-9019 (Office)
After Hours Phone Numbers:	(734) 355-7375 (Cell)
CPP Facility Response Coordinator:	Nathan Parker
Working Hours Phone Number:	(734) 647-1347 (Office)
After Hours Phone Numbers:	(720) 383-1061 (Cell)

1.2 Emergency Notification Phone Numbers

Depending on the nature of the spill, the Facility Response Coordinator will notify appropriate entities in the area (contractors, etc.) to ensure their safety.

Department	Phone Number(s)
U-M DPSS	(734) 763-1131 or 911 (from a campus phone)
U-M CPP Control Room	(734) 764-3476
U-M NCRC Control Room	(734) 764-9005
U-M EHS -Hazmat	(734) 763-4568
EGLE (24-hour Pollution Emergency Alerting System - PEAS)	(800) 292-4706
Environmental Protection Agency (EPA Region 5)	(312) 353-2000 (800) 621-8431
U.S. Coast Guard - Detroit Michigan	(313) 568-9525
U.S. Coast Guard – National Response Center	(800) 424-8802
City of Ann Arbor Police and Fire Department	911 (from an OFF-CAMPUS phone)
City of Ann Arbor Wastewater Treatment Plant	(734) 794-6450
Michigan Department of Health & Human Services	(517) 335-9030
State Fire Marshal (Detroit District)	(517) 241-8847
Washtenaw County Health Department	(734) 544-6700
Michigan Department of Agriculture & Rural Development (pesticides only)	(800) 292-3939
Downstream Water Department (Ypsilanti Community Utilities Authority)	(734) 484-4600

Department	Phone Number(s)
Spill Clean-up Contractor (Young's Environmental Cleanup Inc.)	1-800-496-8647

1.3 Management Approval

I hereby certify that management of this facility extends its full approval of this SPCC Plan and will commit the necessary resources for implementation.

Name: Henry D. Baier
Associate Vice President, Facilities and Operations

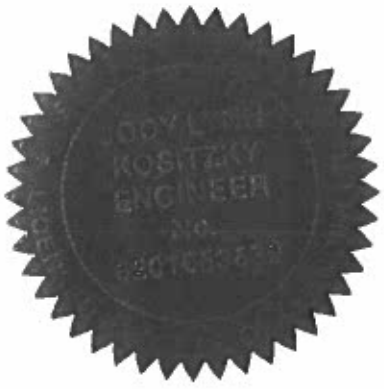
Signature: Henry D. Baier

Date: April 19, 2023

1.4 Engineer Certification

I hereby certify that I have visited and examined the facility and, being familiar with the provisions of Title 40 Part 112 of the *Code of Federal Regulations* (40 CFR Part 112) and this Plan, attest that this Plan has been prepared in accordance with good engineering practices and the regulations, and that it is adequate for the facility.

Certifying Engineer:	Jody Lynn Mathias, PE
State:	Michigan
Registration No.:	6201053639
Signature:	Jody Lynn (Kositzky) Mathias
Certification Date:	2/23/2023
Engineering Seal:	



1.5 Substantial Harm Certification

40 CFR 112 APPENDIX C, ATTACHMENT C-II - CERTIFICATION OF THE APPLICABILITY OF THE SUBSTANTIAL HARM CRITERIA

Facility Name: The University of Michigan-Ann Arbor
Facility Address: Ann Arbor, MI 48109

1. Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

Yes _____ No ____X____

2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary contamination that is sufficiently large to contain the capacity of the largest above-ground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground oil storage tank area?

Yes _____ No ____X____

3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III (to 40CFR112 Appendix C) or a comparable formula[1]) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to US Department of Commerce (DOC)/ National Oceanic and Atmospheric Administration's (NOAA) "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (see Appendix E, (to 40 CFR Part112) section 10, for availability) and the applicable Area Contingency Plan.

Yes _____ No ____X____

4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III (to 40 CFR 112) or a comparable formula[1]) such that a discharge from the facility would shut down a public drinking water intake[2]?

Yes _____ No ____X____

5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

Yes _____ No ____X____

---

[1] If a comparable formula is used, documentation of the reliability and analytical soundness of the comparable formula must be attached to this form.

[2] For the purposes of 40 CFR 112, public drinking water intakes are analogous to public water systems as described at 40 CFR 143.2(c).

Substantial Harm Certification
(continued)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Danielle Sheen

Signature

Danielle Sheen
Executive Director, Environment, Health & Safety Department

4/3/2023

Date

1.6 Purpose of Plan

The United States Environmental Protection Agency (US EPA) has developed regulations (40 CFR 112) for the prevention of pollution of waters of the United States by oil from non-transportation related onshore and offshore facilities. Because the facility's underground oil storage capacity is greater than 42,000 gallons, the facility is required to prepare and implement a Spill Prevention Control and Countermeasure (SPCC) Plan. The purpose of the SPCC Plan is to outline procedures to prevent the discharge of oil and oil products into the environment, especially to surface water.

SPCC regulations prohibit the discharge of oil when:

- It affects water quality.
- It causes a film, sheen, or discoloration of the water itself.
- It causes a film, sheen, or discoloration upon the water surface.
- It causes a film, sheen, or discoloration upon the adjoining shorelines.
- It causes a sludge or emulsion to be deposited beneath the surface of the water.
- It causes a sludge or emulsion to be deposited upon adjoining shorelines.

The SPCC Plan is not required to be filed with the US EPA, but a copy must be available for on site review by the Regional Administrator (RA) during normal working hours. The SPCC Plan must be submitted to the US EPA Region 5 RA and the state agency along with the other information specified in Section 112.4(a) if either of the following occurs:

1. The facility discharges more than 1,000 gallons of oil into or upon the navigable waters of the United States or adjoining shorelines in a single spill event, or

2. The facility discharges oil in quantities greater than 42 gallons in each of two spill events within any twelve-month period.

1.7 Implementation of the Plan

The provisions of this Plan required by 40 CFR 112 amended rules of 2002 were implemented by February 18, 2005. Training on implementation of the plan is provided to facility employees on an ongoing basis.

1.8 Plan Review and Revisions

The minimum review and revision requirements are listed below.

1. This SPCC Plan must be amended and recertified by a Professional Engineer (PE) within 6 months of a change in facility design, construction, operation, or maintenance that

materially affects the facility's potential for the discharge of oil or oil products into the environment.

2. Document reviews and updated PE certifications for the record must be conducted at least once every 5 years and recorded in the SPCC Plan.

3. The Plan will be revised more often if:
   - The Plan fails in an emergency.
   - The Response Coordinator or alternate information changes.
   - Processes or procedures identified change.
   - The EPA or EGLE determines the SPCC Plan is incomplete or inadequate.
   - There is a release that requires implementation of the SPCC Plan.
   - There is a single release of greater than 1,000 gallons in a single discharge.
   - There are more than two releases of greater than 42 gallons of oil within any 12-month period.

The SPCC Plan is available for review during normal business hours. When the SPCC Plan is updated, the appropriate agencies will be notified.

2.0 Facility Description

The University of Michigan (U-M) Ann Arbor campus (i.e., the facility) consists of five major campus areas: East Medical Campus (Figure 1); North Campus (Figure 2); Central Campus (Figure 3); Medical Center Campus (Figure 4); and Ross Athletic Campus (Figure 5). Offsite locations include Radrick Farms Golf Course and Sheep Research Farm (Figures O1-O3). The facility is located roughly 40 miles west of Detroit and sis located within the Huron River Watershed. The facility is a full-service university that provides education, housing, power, maintenance, medical, transportation, and food services. Research and development are also performed at the facility. The student body consists of approximately 48,150 graduate and undergraduate students, and the Medical Center serves approximately 2.6 million patients per year.

A centralized power plant provides steam, hot water, air pressure, and electricity for about one-half of the roughly 27,000,000 square feet of infrastructure on the Ann Arbor campus. The Central Power Plant (CPP) uses natural-gas or No. 2 fuel oil to power the facility's operations. Underground storage tanks (USTs) at the power plant store up to 590,000 gallons of fuel oil for emergency generation purposes. In addition, emergency generator fuel tanks are located throughout the campus. The CPP is included in the oil storage, transfer, and loading and unloading discussions within this SPCC Plan.

A powerhouse is located at the North Campus Research Complex (NCRC). The Powerhouse provides and distributes steam and electric power to NCRC. The Powerhouse is equipped with a turbine electric generator that supplies the facility with a portion of its electric power, and seven

steam boilers that provide heat transfer and process steam. The Powerhouse is operated 24 hours a day, 7 days per week, 365 days a year.

The University also has a full-service transportation services department that provides maintenance and fuel for a fleet of approximately 1,000 vehicles.

As discussed in 40 CFR 112.1, USTs that are regulated by the Michigan Department of Licensing & Regulatory Affairs (LARA) (a State-approved program under 40 CFR 281) are not required to be included in this SPCC Plan however they have been included in this facility spill response document. Regulated USTs are presented in the figures.

The attached campus maps (Figures 1 through 5) identify the facility relative to the surrounding areas, including thoroughfares and surface waters.

2.1 Facility Drainage

The general topography of the facility varies from rolling to level. Onsite surface drainage generally flows into the onsite storm water system. Flow direction maps of the facility are located in the figure section and provide further detail regarding site-specific flow direction. The facility Municipal Separate Storm Sewer System (MS4) discharges through numerous points of connection with the City of Ann Arbor's MS4, along with over 75 direct discharges to the Huron River and tributaries to the Huron River (Allen Creek, Traver Creek, Fleming Creek, Mallet's Creek, Honey Creek, and Miller's Creek). Floor drains inside facility buildings discharge to the City of Ann Arbor sanitary sewer system, either directly or through oil/water separators, which is connected to the City's waste water treatment plant (WWTP).

Drainage ways that may discharge to the storm sewer system are monitored in accordance with the Michigan Department of Environment, Great Lakes & Energy (EGLE) permits, including National Pollutant Discharge Elimination System (NPDES) Permit for once through cooling water at the CPP, and the U-M facility's MS4 NPDES Permit. In addition, the U-M Environment, Health & Safety (EHS) Department maintains storm water and sanitary sewer maps of the U-M campuses.

2.2 Oil Storage, Distribution and Use

There are 26 USTs, 306 aboveground storage tanks (ASTs), and 162 transformers at the facility that contain oil products. Of those 306 ASTs, 183 are hydraulic reservoirs for elevators. In addition there are emergency generators affected by the plan, which include portable and stationary. Also included are 10 oil water separators and small quantities (in containers of 55 gallons or greater) of oil products are stored throughout the facility. A table with the name, contents, size and map of each storage container is included as Tables 1-6. The location of each storage container is shown on the flow drainage figures. All oil is stored in steel or fiberglass containers. Interior petroleum product drum storage areas are located within secondary containment or are situated within the building such that the building provides secondary containment in the event of a spill. A release

scenario in which these oil products would be discharged to navigable waters is considered unlikely. Appropriate containment and/or diversionary structures or equipment are provided for all of the bulk storage areas to prevent discharged oil from reaching navigable waters. Additional preventive measures performed at the facility are identified in Section 2.4 of this Plan. In addition, the facility has an effective facility-wide Emergency Response Contingency Plan (ERCP) that is implemented for all chemical releases, including incidental releases and minor spills of oil.

U-M also has construction projects that temporarily store aboveground storage tanks through the duration of the project. According to the University Construction Contract, the contractors are required to comply with all local, state and federal regulations. U-M performs periodic inspections and has the available resources to respond and remove any quantity of oil discharged that may be harmful.

2.2.1 Oil-filled Operational Equipment

According to 40 CFR 112.7(k), if the facility meets the qualification criteria in paragraph (k)(1) of this subsection, the facility may choose to implement alternate requirements for qualified oil-filled operational equipment in lieu of general secondary containment required in paragraph (c) of that section. The facility meets the qualification criteria in paragraph (k)(2), therefore in lieu of general secondary containment, an established and documented inspection and monitoring program has been implemented for the oil-filled operational equipment. Oil-filled operational equipment that are to be included under these requirements are transformers, hydraulic elevator reservoirs, and emergency generators. Emergency generators are inspected monthly to detect equipment failure and/or a discharge. Hydraulic elevator reservoirs are inspected at least quarterly. If a leak were to occur in an elevator reservoir, the elevator shop would be notified by occupants of the building immediately since it would affect the operation of the elevator. Transformers are inspected every 4 months to detect equipment failure and/or a discharge. Also, the facility ERCP incorporates the criteria for oil removal contingency plans specified in 40 CFR Part 109. In addition, as described in section 3.0 of this plan, the facility has resources to expeditiously control and remove any quantity of oil discharged that may be harmful.

2.2.2 Portable Equipment Containing Oil Storage

According to 40 CFR 112.7(d), if the facility determines that the installation of any of the structures or pieces of equipment listed in paragraphs (c) and (h)(1) of this section to prevent a discharge as described in 112.1(b) from any onshore or offshore facility is not practicable, the facility must clearly explain why such measures are not practicable. The facility operates portable equipment on a seasonal basis and during emergencies. The portable equipment consists of diesel fuel tanks greater than 55 gallons that were not designed to incorporate secondary containment. To meet the requirements of these rules, the facility ERCP incorporates the criteria for oil removal contingency plans specified in 40 CFR Part 109. Also, as described in section 3.0 of this plan, the facility has resources to expeditiously control and remove any quantity of oil discharged that may be harmful.

2.3 Spill History

The facility has not had any federally reportable oil spills in the 12 months prior to the last revision date of this Plan.

2.4 Potential Releases and Prevention Controls

New tank installations are fail-safe engineered to avoid spills. In addition, old tanks have been upgraded to prevent releases. Consideration has been given to a variety of warnings and shutoff devices during design and installation. Regulated facility UST systems meet the most recent UST upgrade standards and are equipped with overfill protection, high liquid level alarms and/or automatic shutoff, leak detection, and appropriate cathodic protection systems.

Containment and diversionary structures for indoor AST and drummed oil storage areas consist of secondary containment systems capable of holding 100% of the volume of oil products being stored in conjunction with absorbent materials, oil/water separators, and/or diversions to spill collection sumps. All outdoor drummed oil storage areas consist of secondary containment systems capable of holding 100% of the largest container or 10% of the volume of all the containers in the system, whichever is larger. The outdoor containment systems are either (1) covered to prevent rain accumulation or (2) the 25-year, 24-hour storm event volume is accounted for in the secondary containment capacity. Indoor AST areas are constructed with secondary containment for the entire contents of the largest single tank to prevent any releases.

In addition to automatic shutoff functions, containment for potential overfills from the ASTs generally consists of catch basins, and diversions of sheetflow to spill collection sumps, retention ponds, and sanitary sewer systems. Release prevention controls for USTs are provided as specified in this section. Buried piping is either double-walled, has cathodic protection, or is located in a concrete trench to reduce piping deterioration and prevent releases.

2.5 Loading and Unloading Operations

Catchment (containment for tank trucks) is used to prevent spills during oil loading and unloading operations. The catchment systems are specifically designed for each loading and unloading location. The size of the largest compartment in the tanker truck, area geography, size of storage tank, frequency of loading and unloading fuel, and location of the storm drains were all parameters that determined site-specific catchment design.

The different catchment systems used include portable and fixed engineering control systems. The portable catchment systems include spill dikes, visqueen, flexible berms, and the insertion of storm drain plugs or solid plate covers used in conjunction with storm drain spill mats. This approach enables U-M to maintain a catchment system capable of containing the volume of the largest compartment within the tanker truck servicing the area, while ensuring two separate means of blocking the downgradient storm drains. The permanent catchment engineering controls include berms, spill retention tanks, and catchment basins.

If the tanker truck servicing the area is double-walled, it has been determined that the catchment volume need only be the amount of oil likely to spill from the hose. If the tanker truck is not double-walled, but a U-M EHS HazMat representative is present during the transfer with a response vehicle containing spill response supplies, it has been determined that this is acceptable in lieu of catchment.

For loading operations, where a vacuum truck is utilized to collect oil, it has been determined, due to the constant operation of the vacuum on the truck during transfer of the oil, catchment is not required.

The Department of Transportation (DOT) 49 CFR 177.834 Loading and Unloading regulatory requirements are followed by tank truck operators. These requirements include: not smoking, keeping any fire or other person smoking away from the loading or unloading operation, ensuring the truck handbrake is set and the wheels are blocked, ensuring that the operator stays in attendance the entire time during the operation, ensuring that all valves are secure and closed after the operation, ensuring that all valves are inspected after closure for possible leaks, and ensuring that all flexible or fixed transfer lines are disconnected prior to departure.

To comply with the regulatory requirements of 49 CFR 177.834, a warning sign is posted at each location where fuel is being loaded or unloaded to prevent vehicular departure before complete disconnect of flexible or fixed transfer lines. Each posted warning sign states:

- Ensure Catchment is in Place
- No Smoking
- Secure Vehicle with Parking Brake and Block Wheels
- Stay in Attendance During Loading or Unloading
- Close and Secure all Valves After Loading or Unloading
- Inspect all Valves for Leaking
- Disconnect all Flexible or Fixed Transfer Lines Prior to Departure

U-M personnel at each location verify that these requirements are being followed by tank truck operators during fuel loading or unloading operations.

3.0 Spill Response Plan

3.1 General Initial Response Measures and Spill Reporting

U-M has an effective Emergency Response Contingency Plan (ERCP) that serves as a guidance document to assist U-M employees as well as outside responding agencies in dealing with emergency operations on the facility. The facility ERCP incorporates the majority of the criteria for oil removal contingency plans specified in 40 CFR Part 109. The ERCP addresses emergency situations involving natural disasters, fires, explosions, chemical releases, and biological and radiological incidents. The plan covers incidental releases and minor spills of chemicals, including oil products.

The plan specifies emergency procedures, identifies emergency coordinators, and describes the hierarchy of incident command. In addition, it also describes internal and external notifications, emergency response actions, and spill response actions.

To ensure that U-M personnel are familiar with the ERCP and how to approach incidents should they occur, 79 U-M personnel are currently certified in 32-hour Hazardous Waste Operations Emergency Response (HAZWOPER) Technician/Incident Command level training. In addition, U-M EHS has completed Federal Emergency Management Agency (FEMA) Incident Command System (ICS) 100 and 200 training.

3.2 Spill Notification to Outside Entities

U-M has an effective facility-wide ERCP that is implemented for all chemical releases. Emergency spill notifications (e.g., fire and police departments) are contained within the ERCP. Notifications and follow-up reporting regarding reportable quantities of released material are conducted by EHS.

3.3 Remedial Action

Because the nature and extent of potential oil spills can vary, the range of remedial actions will likewise vary. For small spills, leaks, or drips, the remedial action is as simple as removing the contaminated material (whether dirt, booms, or other adsorbents) and placing it in an approved container for subsequent treatment or disposal. A large spill, on the other hand, could result in an extensive cleanup of soil, groundwater, and surface water and may be beyond the immediately available facility resources. Licensed environmental remediation companies are under contract with U-M to respond if a spill occurs that is beyond the scope of U-M emergency response capabilities. The facility-wide ERCP specifies procedures for post-emergency actions such as cleanup and additional/follow-up notification.

U-M EHS has a 24-hour Emergency Response Team that responds to all types of spills specified in the ERCP including oil and/or oil products. If a spill is identified after regular hours of operation, U-M staff are trained to contact the U-M Department of Public Safety who in turn contact a member of the EHS emergency response team to arrive on site and clean up the spill. All members of the emergency response team have received HAZWOPER training and are proficient in cleaning up spills of this nature.

4.0 Inspections, Tests, and Records

An effective inspection (including necessary testing) and maintenance program is critical to preventing environmental incidents. Therefore, the main objectives of such a program should be to discover conditions that could cause breakdowns or failures that could affect the environment and to have a system to adjust, repair, or replace equipment.

4.1 Inspections

Inspections are performed on ASTs, USTs, drums, oil/water separators, and transformers on a routine schedule. ASTs, USTs, and drums are visually inspected on a monthly basis, with the exception of the hydraulic elevator reservoirs. The elevator reservoirs are inspected quarterly. As part of the outdoor inspection of the ASTs, inspections of secondary containment structures are also conducted. Transformers are visually inspected once every 4 months. Maintenance and parking areas have oil/water separators to prevent potential leaks from impacting the sanitary or storm sewers. The oil/water separators are inspected every six months and are maintained according to the EHS Maintenance of Oil/Water Separators for Sanitary Guideline, included as Appendix A.

An inspection checklist is completed for each individual site. Annually an EHS representative performs site visits to review the checklists, ensure inspections are being performed properly, and provide training.

When a specific site receives the SPCC Plan, the owner/operator conducts a site-specific briefing of the plan. The regulatory requirements, inspection protocols, and spill response procedures are discussed in the briefing. Once site personnel are briefed on the plan, they sign an SPCC personnel training log. Personnel training logs and annual records inspection checklists are stored in the EHS files and the records are maintained for 3 years.

4.2 Integrity Testing

Based on 40 CFR 112.8(c)(6), integrity testing on bulk storage containers is required. An inventory of oil storage is included in the table section of this plan.

Integrity testing of ASTs, supports, foundations, and containment are performed monthly via visual inspections. For ASTs with capacities greater than 1,100 gallons, additional integrity testing will be based on industry standards. Above ground storage tanks shall be subject to periodic integrity testing, using such techniques as hydrostatic testing, visual inspection, or a system of nondestructive shell thickness testing, as per manufacturer's recommendations. Field notes documenting these integrity tests inspections are maintained in on-site inspection records.

4.3 Record Keeping

All records generated with for the SPCC Plan (i.e., inspection worksheets, integrity testing results, and training records) will be maintained for a minimum of 3 years. These inspection records are filed on-site at each specific building. The annual visit logs are located at EHS.

5.0 Personnel Training

All appropriate personnel at the facility are trained in:

- The laws and regulations regarding spills, releases, and pollution control.
- The contents of the SPCC.
- The operation and maintenance of equipment to prevent discharges.

The level of employee training depends on the person's level of responsibility for spill prevention or control. Operations personnel with the day-to-day responsibility for spill prevention and response are given additional training. This includes exercises to complete the inspection checklists and thoroughly explain spill prevention and response activities.

Spill prevention and response training is provided to the personnel designated as either responding to oil discharges or having the responsibility for working in and around areas where oil is stored, distributed, and used. Informal briefings are held annually to assure adequate understanding of the SPCC and to update employees on changes in the regulations, laws, or in-house procedures. Such briefings highlight and describe known spill events or failures, malfunctioning components, and recently developed precautionary measures. EHS maintains the annual training records.

6.0 Security

To assist in preventing a spill or release from being caused by accidental or unauthorized entry or vandalism, the following security measures are taken:

- Direct outward flow valves are locked in the closed position when non-operating or in standby.
- All connecting lines and piping disconnected from the container and blanked off when not in service or when in standby for more than 6 months.
- Unmanned fuel pumps are equipped with electronic locks, allowing only authorized, trained personnel to use the fuel pumps.
- Adequate lighting is provided for the visual detection of spills by both facility personnel and the general public.
- ASTs are reinforced in areas with vehicular traffic.
- All of the transportation and ground areas handling or storing oil are surrounded by fencing that is kept locked during non-working hours.
- Buildings storing oil are kept locked during non-working hours.

7.0 Facility Improvements

Updates since 2003 to this SPCC entered after the certification date listed in Section 1.3 should be described in the table below. Including the name of the section that was updated, a description of the update, the date the update was completed, and the signature of the person authorizing the update. A PE must approve all technical amendments or updates. Regulated amendments implemented in accordance with Section 112.5(a) can be found in Appendix D, UMAA SPCC Regulated Facility Changes.

Plan Amendments and Updates

Sections Updated	Date
Distribution List - updated contact names, added Section 2.3 to cover portable units, emergency generators were added, updated flow drainage maps.	2/19/04
Updated flow drainage maps, added to section 2.2 discussing temporary construction ASTs, updated spill record, updated integrity testing in section 4.2	11/30/05
Integrated plan separated into individual plans, Updated SPCC written plan, updated storage tables, updated flow drainage maps	06/23/10

Sections Updated	Date
Updated SPCC written plan, updated storage tables, updated flow drainage maps	05/10/13
Updated SPCC written plan, storage tables, and oil storage location maps	06/20/16
Updated SPCC written plan to reflect change in department name from OSEH to EHS.	02/09/18
Updated SPCC written plan, facility contacts, storage tables, and oil storage location maps	02/23/2023
Updated distribution contacts.	05/03/2023
Added Appendix D to incorporate technical amendments and section 112.5(a) Facility Changes review form	07/23/2025