Spill Prevention, Control, and Countermeasures Plan

Responsible Administrator: Environmental Compliance Manager

Revised: December 2023

Summary: This Spill Prevention, Control, and Countermeasures (SPCC) Plan has been prepared for the University of California, Irvine Central Campus (UCI) located in the City of Irvine, California. This Plan has been developed in accordance with the regulatory requirements of Title 40 of the Code of Federal Regulations, Part 112 (40 CFR Part 112). This Plan has specifically been created to address potential spills from oil storage containers at UCI that are specified in this Plan. This Plan does not include operations conducted at off-site locations, such as the UCI Medical Center in Orange, California.
EMERGENCY CONTACTS AND PROCEDURES

In the event of a spill emergency the following should be contacted:

1. Fire Department - 911
2. U.C. Irvine Police Department  (949) 824-5223
3. U.C. Irvine Environmental, Health & Safety (EHS) Personnel

<table>
<thead>
<tr>
<th>Primary Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eric Hoang</td>
</tr>
<tr>
<td>Environmental Programs Specialist</td>
</tr>
<tr>
<td>Environmental Health &amp; Safety</td>
</tr>
<tr>
<td>Business Phone: (949) 824-2811</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Secondary Contact:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kirk Matin</td>
</tr>
<tr>
<td>Assistant Director, Env/Rad/HW</td>
</tr>
<tr>
<td>Environmental Health &amp; Safety</td>
</tr>
<tr>
<td>Business Phone: (949) 824-4578</td>
</tr>
</tbody>
</table>

4. Oil Spill Clean-up Contractor

<table>
<thead>
<tr>
<th>Clean Harbors</th>
</tr>
</thead>
<tbody>
<tr>
<td>(800) 645-8265</td>
</tr>
<tr>
<td>Estimated Response Time is 2 Hour</td>
</tr>
</tbody>
</table>

In the event of a spill, the following procedures should be followed:

1. If there is a fire or injury immediately call 911.
2. If there is a spill to the storm drain, immediately call EHS personnel.
3. If possible, stop the flow of fuel/oil by shutting a valve or turning off a pump.
4. Isolate and contain the spilled material by creating an earthen berm with a shovel or other available equipment (beware of fire danger).
5. Estimate the amount of spilled material.
6. Make the above notifications.
7. Use available cleanup equipment and/or spill contractors to clean up the spilled material and contaminated soil.
8. Document all spill response and cleanup efforts, including notification calls following UCI – EHS Response Plan and procedures list in Section 5.7 of this SPCC Plan.
CERTIFICATION PAGE

I hereby certify that I and an engineer working under my direction have examined the University of California, Irvine Campus Facilities. Being familiar with the provisions of 40 CFR, Part 112, I attest that this SPCC Plan has been prepared in accordance with good engineering practices and the requirements of 40 CFR 112; that this SPCC Plan establishes procedures for required inspections and testing, and is adequate for the facility. As the UCI Campus is large and complex, Ramboll’s inspection of the facility was limited only to oil storage areas identified and brought to its attention by the UCI EH&S Department, as provided in this plan. In performing its assignment, Ramboll relied upon publicly available information, information provided by UCI and information provided by third parties. Accordingly, the information in this plan is valid only to the extent that the information provided to Ramboll was accurate and complete.

__________________________
Signature

Beth Pekala
Name

12/01/2023
Date

Registration No.: 61967 State: California

MANAGEMENT APPROVAL

This SPCC Plan will be implemented as herein described.

__________________________
Eric Hoang
SPCC Designated Person
Spill Prevention, Control, and Countermeasures Plan
Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0 INTRODUCTION AND PLAN CONTENT</td>
<td>7</td>
</tr>
<tr>
<td>1.1 Introduction</td>
<td>7</td>
</tr>
<tr>
<td>1.2 Plan Purpose and Objectives</td>
<td>7</td>
</tr>
<tr>
<td>1.3 Plan Review and Update Requirements</td>
<td>7</td>
</tr>
<tr>
<td>1.4 Applicable Regulations</td>
<td>8</td>
</tr>
<tr>
<td>2.0 FACILITY INFORMATION</td>
<td>9</td>
</tr>
<tr>
<td>2.1 Facility Description</td>
<td>9</td>
</tr>
<tr>
<td>2.2 Vicinity Map</td>
<td>9</td>
</tr>
<tr>
<td>2.3 Campus Map</td>
<td>9</td>
</tr>
<tr>
<td>2.4 Standby Generators</td>
<td>9</td>
</tr>
<tr>
<td>2.5 Hazardous Waste Storage</td>
<td>10</td>
</tr>
<tr>
<td>3.0 BULK STORAGE CONTAINERS</td>
<td>11</td>
</tr>
<tr>
<td>3.1 Stationary Storage Tanks</td>
<td>11</td>
</tr>
<tr>
<td>3.2 Portable Storage Containers</td>
<td>11</td>
</tr>
<tr>
<td>3.3 Integrated Fuel Reservoirs on Standby Generators</td>
<td>11</td>
</tr>
<tr>
<td>3.4 Underground Storage Tanks (USTs)</td>
<td>11</td>
</tr>
<tr>
<td>3.5 Material Compatibility</td>
<td>11</td>
</tr>
<tr>
<td>3.6 Secondary Containment</td>
<td>11</td>
</tr>
<tr>
<td>3.7 Rainwater Drainage</td>
<td>12</td>
</tr>
<tr>
<td>3.8 Integrity Testing</td>
<td>12</td>
</tr>
<tr>
<td>3.9 Liquid Level Sensors</td>
<td>12</td>
</tr>
<tr>
<td>3.10 Visible Discharges</td>
<td>13</td>
</tr>
<tr>
<td>3.11 Oil-filled Equipment</td>
<td>13</td>
</tr>
<tr>
<td>3.12 Piping</td>
<td>13</td>
</tr>
<tr>
<td>4.0 PROCEDURES FOR OPERATIONS AND DISCHARGE PREVENTION</td>
<td>15</td>
</tr>
<tr>
<td>4.1 Tank Filling Procedures</td>
<td>15</td>
</tr>
<tr>
<td>4.1.1 North Campus Fueling Area</td>
<td>15</td>
</tr>
<tr>
<td>4.1.2 Standby Generator and Diesel Off Road Equipment Fuel Tank Loading</td>
<td>15</td>
</tr>
<tr>
<td>4.2 Product Dispensing Procedures</td>
<td>16</td>
</tr>
<tr>
<td>4.3 Loading Dock Operations</td>
<td>16</td>
</tr>
<tr>
<td>4.4 Used Cooking Oil Disposal</td>
<td>16</td>
</tr>
<tr>
<td>4.5 Used Cooking Oil Disposal Pickup</td>
<td>17</td>
</tr>
</tbody>
</table>
### 5.0 SPILL RESPONSE

5.1 Designated Person
5.2 Emergency Contacts
5.3 Spill Response Procedures
5.4 Available Spill Cleanup Equipment
5.5 Spilled Material Disposition
5.6 Spill History
5.7 Spill Notification and Reporting

### 6.0 SECURITY

6.1 Locked Storage Locations
6.2 Lighting
6.3 Interlocked Warning System
6.4 Protection from Vehicles
6.5 Campus Security

### 7.0 TRAINING, INSPECTIONS, AND RECORDS

7.1 Personnel Training
   7.1.1 Proper Tank Filling and Product Dispensing
   7.1.2 Training for the SPCC Plan
7.2 Inspections
   7.2.1 Tank Inspections
   7.2.2 Drum Storage Inspections
7.3 Annual SPCC Plan Compliance Inspection
7.4 Plan Review
7.5 Record Retention

### 8.0 CONFORMANCE WITH APPLICABLE REQUIREMENTS

8.1 Deviations from General Requirements
8.2 Deviations from Secondary Containment Requirement
8.3 Drainage Requirements for Potential Discharge Areas
8.4 Major Equipment Failure Scenarios

---

**FIGURES**

- Figure 1: Vicinity Map
- Figure 2: Campus Map

**APPENDICES**

- Appendix A: SPCC Regulation 40 CFR Part 112
- Appendix B: Table of Storage Tanks
- Appendix C: Tank and Secondary Containment Specifications
- Appendix D: SPCC Monthly Inspection Form
- Appendix E: Annual Tank Alarm Testing
- Appendix F: Tank Integrity Testing Records
## UC Irvine
### SPCC Plan Revision/Annual Review

<table>
<thead>
<tr>
<th>Revision No.</th>
<th>Date</th>
<th>Revised By</th>
<th>Reason for Revision / Annual Review</th>
<th>Sections Revised</th>
<th>Reason For Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>09/00</td>
<td>GC Environmental, Inc.</td>
<td>Initial Preparation for North Campus only.</td>
<td>All New</td>
<td>---</td>
</tr>
<tr>
<td>1</td>
<td>3/05</td>
<td>Ramboll (formerly ENVIRON International Corporation)</td>
<td>Reformat and update pursuant to July 17, 2002 amendments of 40 CFR Part 112; include entire UCI campus.</td>
<td>All Sections</td>
<td>Update</td>
</tr>
<tr>
<td>2</td>
<td>8/07</td>
<td>Ramboll (formerly ENVIRON International Corporation)</td>
<td>Prepare updates to changes in storage equipment, procedures, and regulations.</td>
<td>All Sections</td>
<td>Update</td>
</tr>
<tr>
<td>3</td>
<td>10/08</td>
<td>Kirk Matin</td>
<td>Changes in storage equipment.</td>
<td>All Sections</td>
<td>Update</td>
</tr>
<tr>
<td>4</td>
<td>1/09</td>
<td>Kirk Matin</td>
<td>Changes in storage equipment.</td>
<td>All Sections</td>
<td>Update</td>
</tr>
<tr>
<td>5</td>
<td>9/09</td>
<td>Kirk Matin</td>
<td>Changes in storage equipment and contact information.</td>
<td>All Sections</td>
<td>Update</td>
</tr>
<tr>
<td>6</td>
<td>5/10</td>
<td>Kirk Matin</td>
<td>Changes in storage equipment and contact information.</td>
<td>All Sections</td>
<td>Update</td>
</tr>
<tr>
<td>7</td>
<td>5/11</td>
<td>Kirk Matin</td>
<td>Changes in storage equipment.</td>
<td>All Sections</td>
<td>Update</td>
</tr>
<tr>
<td>8</td>
<td>10/11</td>
<td>Kirk Matin / Ricardo Cruz</td>
<td>Update contact information.</td>
<td>All Sections</td>
<td>Update</td>
</tr>
<tr>
<td>9</td>
<td>5/12</td>
<td>Kirk Matin / Ricardo Cruz</td>
<td>Revised SPCC Plan.</td>
<td>All Sections</td>
<td>Update</td>
</tr>
<tr>
<td>10</td>
<td>7/12</td>
<td>Ramboll (formerly ENVIRON International Corporation)</td>
<td>5-yr update, revised and re-certified SPCC Plan.</td>
<td>All Sections</td>
<td>Update</td>
</tr>
<tr>
<td>11</td>
<td>1/13</td>
<td>Ramboll formerly (ENVIRON International Corporation)</td>
<td>Clarify tank integrity requirements, added annual test for liquid level sensors; corrected conformance table</td>
<td>3.7, 3.8, 7.2, 8.0</td>
<td>Clarify requirements</td>
</tr>
<tr>
<td>12</td>
<td>4/13</td>
<td>Ramboll (formerly ENVIRON International Corporation)</td>
<td>Clarify engineer’s certification statement; add spill notification and reporting procedures; add additional release predictions; add new 120-gallon portable refueling tank; include state regulatory citations; include secondary containment calculations for Social Science Lab and Rowland Hall (Appendix C); describe piping conformance</td>
<td>Certification page, 1.4 3.11, 5.7, 8.4, Appendices B and D</td>
<td>Response to agency inspection report</td>
</tr>
<tr>
<td>13</td>
<td>7/13</td>
<td>Kirk Matin</td>
<td>Central Plant fuel tank changed to 200 gallon double walled.</td>
<td>Secondary Containment</td>
<td>Update</td>
</tr>
<tr>
<td>14</td>
<td>1/14</td>
<td>Kirk Matin</td>
<td>Annual Review</td>
<td>All Sections</td>
<td>Annual Review</td>
</tr>
</tbody>
</table>

---

Page 5
<table>
<thead>
<tr>
<th>Revision No.</th>
<th>Date</th>
<th>Revised By</th>
<th>Reason for Revision / Annual Review</th>
<th>Sections Revised</th>
<th>Reason For Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>1/15</td>
<td>Kirk Matin</td>
<td>Annual Review Added Business Unit 2 Generator</td>
<td>All Sections</td>
<td>Annual Review Update</td>
</tr>
<tr>
<td>15</td>
<td>1/16</td>
<td>Kirk Matin</td>
<td>Added Mesa Court Generator</td>
<td>Appendix B</td>
<td>Update</td>
</tr>
<tr>
<td>16</td>
<td>5/16</td>
<td>Kirk Matin</td>
<td>Added: UNEX Generator Oil Spill Clean-up Contractor, Clean Harbors Removed Social Sci Plaza A Fire Pump Emergency Contacts, Ricardo Cruz and Haz Mat Services.</td>
<td>Appendix B Emergency Contacts</td>
<td>Update</td>
</tr>
<tr>
<td>17</td>
<td>1/17</td>
<td>Kirk Matin</td>
<td>Annual Review</td>
<td>All Sections</td>
<td>Annual Review Update</td>
</tr>
<tr>
<td>18</td>
<td>11/17</td>
<td>Kirk Matin</td>
<td>Updated Central Plant portable diesel fuel trailer to single walled. Updated elevator and transformer list.</td>
<td>Section 2.4 Appendix B</td>
<td>Update</td>
</tr>
<tr>
<td>19</td>
<td>1/18</td>
<td>Kirk Matin</td>
<td>Annual Review</td>
<td>All Sections</td>
<td>Annual Review Update</td>
</tr>
<tr>
<td>20</td>
<td>5/18</td>
<td>Kirk Matin/Ramboll</td>
<td>Updated the generator portable diesel fuel trailer secondary containment storage area.</td>
<td>Section 2.4 Appendix B and C</td>
<td>Update, 5-year Certification</td>
</tr>
<tr>
<td>21</td>
<td>1/19</td>
<td>Kirk Matin</td>
<td>Added Engineering Lab Facility storage building. Annual Review.</td>
<td>All Sections</td>
<td>Annual Review Update</td>
</tr>
<tr>
<td>22</td>
<td>1/20</td>
<td>Kirk Matin/Eric Hoang</td>
<td>Updated Contacts Removed Grounds Oil Drums</td>
<td>All Sections Appendix B</td>
<td>Annual Review Update</td>
</tr>
<tr>
<td>23</td>
<td>1/21</td>
<td>Kirk Matin/Eric Hoang</td>
<td>Annual Review</td>
<td>All Sections</td>
<td>Annual Review Update</td>
</tr>
<tr>
<td>24</td>
<td>9/21</td>
<td>Kirk Matin/Eric Hoang</td>
<td>Added Anteatery &amp; Brandywine Food Oil Tanks, Hydrogen Station Compressor, ISEB</td>
<td>Appendix B</td>
<td>Update</td>
</tr>
<tr>
<td>25</td>
<td>1/22</td>
<td>Kirk Matin/Eric Hoang</td>
<td>Annual Review</td>
<td>All Sections</td>
<td>Annual Review Update</td>
</tr>
<tr>
<td>26</td>
<td>3/22</td>
<td>Eric Hoang</td>
<td>Added five Verano 8 &amp; Hewitt Hall #2 diesel fuel storage tanks, updated elevators</td>
<td>Appendix B</td>
<td>Update</td>
</tr>
<tr>
<td>27</td>
<td>1/23</td>
<td>Eric Hoang</td>
<td>Annual Review</td>
<td>All Sections</td>
<td>Annual Review Update</td>
</tr>
<tr>
<td>28</td>
<td>8/23</td>
<td>Kirk Matin/Eric Hoang</td>
<td>Added Plumwood House, College of Health Sciences, Health Sciences Parking</td>
<td>Appendix B</td>
<td>Update</td>
</tr>
<tr>
<td>29</td>
<td>10/23</td>
<td>Ramboll</td>
<td>5-yr update, revised and re-certified SPCC Plan</td>
<td>All Sections</td>
<td>Update</td>
</tr>
</tbody>
</table>
1.0 Introduction and Plan Content

1.1 Introduction
This Spill Prevention, Control, and Countermeasures (SPCC) Plan has been prepared for the University of California, Irvine Central Campus (UCI) located in the City of Irvine, California. This Plan has been developed in accordance with the regulatory requirements of Title 40 of the Code of Federal Regulations, Part 112 (40 CFR Part 112). This Plan has specifically been created to address potential spills from oil storage containers at UCI that are specified in this Plan. This Plan does not include operations conducted at off-site locations, such as the UCI Medical Center in Orange, California.

1.2 Plan Purpose and Objectives
The objectives of this Plan are to define the spill prevention, control, and countermeasures implemented by UCI Environmental Health & Safety (EHS) Department for the UCI facility. The Plan is an integral part in establishing an efficient and effective spill prevention program. The SPCC Plan addresses the following topics:

- Bulk Storage Containers;
- Personnel Training and Spill Prevention Procedures;
- Bulk Liquid Transfer Operations;
- Facility Drainage;
- Inspections and Records; and
- Security.

1.3 Plan Review and Update Requirements
This Plan shall be reviewed and updated on an annual basis to ensure all the requirements within this Plan are achieved. The SPCC “Designated Person” shall be responsible for all reviews and updates made to this Plan. (The Designated Person is identified on the front emergency contact page.) The Plan will be reviewed and updated when necessary under the following circumstances:

- Annual review;
- Subsequent to the commission or decommission of any aboveground storage tanks (ASTs);
- Subsequent to the replacement, reconstruction, or movement of ASTs;
- Subsequent to any construction or demolition that could alter secondary containment systems of the ASTs; and
- Subsequent to any revisions of standard operation or maintenance procedures at the facility.
The SPCC Plan must be reviewed and certified by a professional engineer every five years and whenever a Plan amendment is performed.

1.4 Applicable Regulations
Federal regulations regarding SPCC Plan development and implementation are attached in Appendix A, which is 40 CFR Part 112. Additionally, the California Aboveground Petroleum Storage Act (APSA) “tank facility” requirements apply to the UCI Campus as it stores more than 1,320 gallons of petroleum-based oils on-site. The APSA tank facility requirements are found in California Health and Safety Code, Chapter 6.67, Section 25270.3, and mirror requirements for an SPCC facility under 40 CFR Part 112, except for administrative requirements of notification and fees to the local Unified Program Agency (UPA).
2.0 Facility Information

2.1 Facility Description
The UC Irvine Central Campus is located on 1,470 acres in the City of Irvine, County of Orange, California. The campus is situated south of Interstate 405 freeway and north of State Route 73. (Refer to Figure 1 for a topographic vicinity map.) The facility is bound by Jamboree Road to the north, Campus Drive to the northeast, Culver Drive to the east, Bonita Canyon Road to the south and State Route 73 to the west.

2.2 Vicinity Map
Figure 1 provides a vicinity map that shows the campus location with reference to local area streets.

2.3 Campus Map
Figure 2 shows the general layout and buildings located on the UC Irvine Campus. This figure is updated several times a year by UCI Student Affairs.

2.4 Standby Generators
In many areas around UCI, diesel-fired internal combustion engines are used as standby generators of electricity in case of a power failure. These standby generators are primarily located adjacent to the buildings to which they provide power. All of the standby generators have either a nearby external fuel storage tank or a fuel tank that is installed directly beneath and attached to its standby generator. For standby generators with an external fuel storage tank, these tanks are defined as “bulk storage containers” and are described in Section 3.0 of this Plan. For the standby generators with an integrated fuel tank, the reservoir at the bottom of tank is also considered bulk storage container; however the engine above that tank is defined as “oil-filled operating equipment,” which is not a “bulk storage container” pursuant to the SPCC regulation. All fuel tanks are required to have some means of secondary containment; however, oil-filled operating equipment (i.e., the engines) are not subject to the requirements of 40 CFR 112.8(c).

All standby generators with attached storage tanks meet the secondary containment control requirements by having double wall or reservoir basins in the fuel holding tanks. All standby generators with fuel-holding tanks are included in Appendix B.

UCI Facilities Management periodically operates all emergency generators for testing and replenishes storage tanks with diesel fuel. UCI Facilities Management personnel perform filling of the generator fuel tanks by using a truck trailer-mounted single-walled tank. When not in use, the portable refueling tank is stored in a concrete berm secondary containment area at the UCI Electrical Substation.
2.5 Hazardous Waste Storage

Hazardous waste generated at the main campus is most commonly collected in 30-gallon poly drums and transported to the Environmental Health & Safety Building (Campus Building 41) where containers are stored inside a locked storage room until the waste is picked up by an offsite hazardous waste management contractor. The storage room has grated trenches that are designed to capture spills and drain liquid to an underground containment tank.
3.0 Bulk Storage Containers

Detailed information regarding the campus’ storage tanks and containers including tank specifications and secondary containment is provided in Appendix B and Appendix C.

3.1 Stationary Storage Tanks

Appendix B lists the stationary storage tanks at UCI including campus map building number, locations, tank capacity, contents, tank type, equipment type, and details regarding secondary containment.

3.2 Portable Storage Containers

Portable containers of oil-based materials are kept throughout the UCI campus. Although the containers are portable, they typically remain located in their respective areas and generally are not transported around the facility. Appendix B lists the portable storage tanks at UCI including campus map building number, locations, tank capacity, contents, tank type, equipment type, and details regarding secondary containment.

3.3 Integrated Fuel Reservoirs on Standby Generators

A list of all standby generators with integrated fuel-holding tanks is included in Appendix B. All standby generators store diesel fuel and the listing includes the capacity of each reservoir.

3.4 Underground Storage Tanks (USTs)

Under §112.1(d)(4), the SPCC Rule exempts completely buried storage tanks, as well as connected underground piping, underground ancillary equipment, and containment systems, when such tanks are subject to all of the technical requirements of 40 CFR Part 280 or a state program approved under 40 CFR Part 281 (the Underground Storage Tank regulations). UCI operates four 20,000-gallon diesel USTs at the Central Plant, but these USTs are subject to applicable California state UST programs, and are not discussed further in this SPCC Plan. However, for completeness, the tanks are included in the container inventory in Appendix B and locations can be viewed in Figure 2.

3.5 Material Compatibility

The steel used for storing diesel fuel, used cooking oil and motor oil are constructed using acceptable compatible materials. Plastic or resin tanks used to store used cooling oil are constructed using compatible materials.

3.6 Secondary Containment

The secondary containment method for the tanks is listed under “Comments” in Appendix B. Tanks indicated as double-walled are constructed with an integrated containment system. Tanks indicated as single wall have secondary containment (e.g. in most cases, a concrete
containment berm) as described in the comments. 55-gallon drums are placed on secondary containment pallets.

3.7 Rainwater Drainage
Many containment areas are located outside and will collect rainwater within the containment area in the event of a storm. Containment areas are designed with a plug or valve that may be manually opened to remove accumulated rainwater, or manually pumped out. Before any rainwater is removed from the containment areas, the operator must follow best management practice (BMP) procedures that are described in UCI’s storm water management plan (SWMP). After the accumulated rainwater is drained off from the containment area, the plug must be inserted and secured back in position or the valve must be closed to prevent discharge.

3.8 Integrity Testing
In accordance with the Steel Tank Institute SP-001 standard, integrity testing for all tanks and containers no larger than 5,000 gallons is achieved by performing visual inspections. Each aboveground bulk storage container, including tanks and drums, must be inspected for integrity on a monthly basis and whenever material repairs are performed on a tank or container. Section 7.2 provides details for monthly inspections. In addition, liquid level sensors should be tested annually, as described in Section 3.8. For tanks larger than 5,000 gallons, a formal external inspection by a certified inspector must be performed every 20 years. For the UCI campus, this includes only the 10,000-gallon tank, with 7,000-gallon gasoline fuel compartment at the UCI Facilities Fueling area (Building #91). The certified inspector must follow the SP-001 standard, including review of previous formal inspection reports, determination of original shell thickness, measurement of current shell thickness, and ultrasonic thickness testing. The ultrasonic thickness testing may lead to ultrasonic testing scan, if determined by the certified inspector. Records of the integrity testing should be kept in Appendix F of the SPCC Plan copy held by the SPCC Designated Person.

3.9 Liquid Level Sensors
The two outdoor aboveground storage containers storing fuels at North Campus are each equipped with a liquid level sensor that automatically cuts off the pump at a predetermined container content level to prevent overfilling the container. Additionally, some standby generators are equipped with liquid level sensors that sound an audible alarm or activate a visual alarm (such as flashing lights). A number of other containers are not equipped with high liquid level sensors, which is an exception to the requirements of 40 CFR §112.8(c)(8) (Please see Section 8 for additional information on deviations). However, all other tanks are filled manually with a nozzle inserted directly into the tank and the tank operator visually
observes when the liquid level reaches capacity, at which point the operator
disengages fuel flow to the tank. The liquid level sensors on the two outdoor
aboveground storage containers should be tested annually for proper
operation. Testing of the liquid level sensors may be performed by
intentionally exposing the liquid level sensor to liquid diesel fuel or other
methods that personnel deem effective and appropriate (see Appendix E).

3.10 Visible Discharges
In the event that operators observe discharges that result in a loss of oil from
any storage container, the operator must promptly remove any accumulation
of oil within the containment area.

3.11 Oil-filled Equipment
UCI operates a variety of oil-filled electrical and operating equipment such
as electrical transformers, research equipment, and elevators. In accordance
with the SPCC regulation, these types of oil-filled operating equipment are
not subject to the requirements for bulk storage containers set forth in
Section 3.0 of this Plan. All elevators are routinely maintained by contracted
elevator service companies that are required to inspect hydraulic reservoirs
for signs of leaks or deterioration. Elevator service contractors must have a
procedure in place to adequately contain and clean up any discovered spills
from hydraulic reservoirs and follow UCI’s hazardous waste management
procedures for proper disposal. Elevator hydraulic reservoirs are located
inside buildings, which provide discharge prevention in the event of a leak
or spill.1 UCI-owned transformers are maintained by UCI Facilities and
utility-owned transformers are maintained by Southern California Edison.
Please see Section 8.1 for additional information pertaining to listed facility
elevator reservoirs for units containing 55 gallons or more.

3.12 Piping
Piping from storage tanks to operating equipment must also be contained to
prevent discharge. All piping from diesel storage tanks to external
equipment (generators, fire pump, and fuel dispensers) is either buried or
inside containment berms to prevent discharge.

Campus Kitchens at two locations contain a 1,000-gallon virgin cooking oil
AST and a 1,000-gallon used cooking oil AST; these tanks are routed via
aboveground piping to a port in the loading docks, where virgin cooking oil
can be delivered and used cooking oil can be collected for off-site use. Per
SPCC regulation requirements for process transfer [40 CFR 112.8(d)(3)],
piping must have supports that minimize abrasion and corrosion and allow
for expansion and contraction. All aboveground piping has been constructed
with adequate supports aboveground that do not accumulate moisture,

1 Elevators and transformers throughout the facility were not inspected by Ramboll; rather, this plan
provides general SPCC approaches for such areas.
thereby minimizing corrosion. Aboveground piping is situated in places that are generally free from sources of abrasion (e.g., no moving parts or significant vibration). Further, all piping is comparatively small in diameter and not prone to significant effects from expansion and contraction. Piping is either constructed of galvanized materials, located indoors, and/or painted to further reduce the potential for corrosion. Lastly, monthly inspections will identify any signs of corrosions where repainting or piping replace is needed, all piping is routinely inspected for signs of corrosion and abrasion. Inspections include the aboveground piping and port where virgin cooking oil is delivered and used cooking oil is collected.

One steel single-walled 240-gallon external diesel fuel tank is located within a locked metal covered brick enclosure to the west of the building at the loading dock. The enclosure serves as secondary containment, coated with a watertight sealant, and the tank is positioned on a concrete floor. The tank is piped underground to a standby generator inside the building, which is at grade, and the pipeline spans a fourteen-foot distance buried within the concrete foundation. The pipeline does not continuously hold diesel, and diesel inside the pipeline would be expected to drain back into the external tank when the generator is not operating. The emergency generator, day tank, and pipeline were installed prior to 2002, the time when protective wrapping/coating and cathodic protection requirements for buried pipelines were required. The tank and associated piping are inspected monthly during regular SPCC inspections.
3.13 Tank Filling Procedures

3.13.1 North Campus Fueling Area
An outside service provider performs tank filling of the fuel tanks storing gasoline, diesel, diesel B20, and biodiesel B99 at North Campus, and on-site personnel who are trained in SPCC procedures provide oversight. The filling procedures consist of the following:

- The delivery person initially gauges the AST to determine amount of fuel or oil to be delivered. The order is compared with the available tank capacity.
- The delivery person makes a connection to electrically ground the delivery truck and system before off-loading begins.
- The delivery person constantly monitors the off-loading activity.

Additional guidelines include:

- The fuel tanks are equipped with a ground-level loading system and a “dry-break” adapter check valve which prevents spills or riser pipe drainback when the loading hose is disconnected.
- The loading point also has a spill containment pan with 16-gallon capacity and a hand pump to collect and manage any accidental spills or leaks.
- The system has automatic shutoff valves as well as an emergency shutoff valve.

3.13.2 Standby Generator and Diesel Off Road Equipment Fuel Tank Loading
UCI Anteater Recreation Center personnel perform filling of diesel off road equipment by using a truck trailer-mounted double-walled tank. When not in use, the portable refueling tank is stored at Anteater Recreation Center. UCI personnel perform tank loading. The filling procedures consist of the following:

- The portable double-walled tank is transported by trailer and parked on a level and flat surface in the vicinity of the equipment.
- The trailer remains attached to the parked vehicle with the emergency brake engaged.
- All tanks are filled through a fill port located on or near the top of the tank.
- A hose and nozzle is connected to the portable tank.
- After removing the fill cap, the operator inserts the filling nozzle into the fill port.
- The operator activates the fill pump and begins to fill the tank.
• The operator watches the filling operations to ensure the tank is not over-filled.
• Once the operator recognizes that the liquid level reaches near full, the operator disengages the filling nozzle to stop fuel flow.
• The cap is replaced on the tank and secured shut.
• The operator returns the hose and nozzle to the trailer and secures the equipment for transport.

3.14 Product Dispensing Procedures
Equipment and vehicles are refueled in the following manner:
• A dispenser key is provided for fueling.
• The person fueling follows the instructions posted at dispenser.
• The person fueling continuously monitors the entire fueling process.
• The person transferring new cooking oil to the direct pump system will continuously monitor the filling process and piping.

3.15 Loading Dock Operations
When receiving or shipping an oil product or waste. The following procedures are followed:
• Oil products are only accepted and/or shipped in approved Department of Transportation (DOT) containers.
• Oil containers are stored away from the edge of the loading dock.
• To the extent possible, oil containers are kept sheltered from rain.
• Oil drums are moved by using drum dollies or by forklift using a drum tote or other method of securing the drum during transport.
• When not in use, containers (and kitchen oil piping connections) are kept securely closed.

3.16 Used Cooking Oil Disposal
At the majority of Campus Kitchen facilities, used cooking oil is collected in small containers\(^2\) and poured into storage containers that are approximately 40 gallons.

At the Student Center, used cooking oil is pumped into a port that is plumbed to a 353-gallon used oil storage tank. The tank has a level gauge that prevents the pump from operating (under suction) when the tank is full. A red light alerts the operator that the tank is full and needs to be emptied.

Two Campus Kitchen facilities (Brandywise and The Anteatery) utilize a direct connection system which stores used kitchen oil in 1,000-gallon tanks with approved secondary containment. The storage containers are equipped with alarms that alert the kitchen staff if the containers are full and need to

\(^2\) Generally 5 gallons or less.
be emptied. The used oil tank are piped via aboveground piping to a port located on an exterior wall in the respective loading dock areas.

### 3.17 Used Cooking Oil Disposal Pickup

At Campus Kitchen facilities, a contractor (e.g., Baker Commodities) provides removal of used cooking oil for disposal at an off-site facility. The contractor uses an approximately 3,000-gallon tank truck to unload and empty the 40-gallon drums and used cooking oil storage tanks (Student Center, Brandywine, and Anteatery) via vacuum pump. The used cooking oil storage tanks are piped via aboveground piping from their locations in the kitchens into a port in the loading dock, where the vacuum truck can unload oil from the tank. The Kitchen Area supervisor is responsible for scheduling and oversight of the contractor’s activities. Alternatively, the 40-gallon drums may be hauled off-site on a flatbed truck.
4.0 Spill Response

4.1 Designated Person

Eric Hoang is the Designated Person responsible for SPCC management. The Alternate Designated Person is Kirk Matin. Emergency contact information for the Designated Persons is included on page 2 and in the following section.

4.2 Emergency Contacts

<table>
<thead>
<tr>
<th>Primary Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eric Hoang</td>
</tr>
<tr>
<td>Environmental Programs Specialist</td>
</tr>
<tr>
<td>Environmental Health &amp; Safety</td>
</tr>
<tr>
<td>Business Phone: (949) 824-2811</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Secondary Contact:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kirk Matin</td>
</tr>
<tr>
<td>Assistant Director, Env/Rad/HW</td>
</tr>
<tr>
<td>Environmental Health &amp; Safety</td>
</tr>
<tr>
<td>Business Phone: (949) 824-4578</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>U. C. Irvine Police Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone: (949) 824-5223</td>
</tr>
</tbody>
</table>

4.3 Spill Response Procedures

Steps to respond to spilled material are stated on page 2 of the Plan:

In the event of a spill, the following procedures should be followed:

1. If there is a fire or injury immediately call 911.
2. If there is a spill to the storm drain, immediately call EHS personnel.
3. If possible, stop the flow of fuel/oil by shutting a valve or turning off a pump.
4. Isolate and contain the spilled material by creating an earthen berm with a shovel or other available equipment (beware of fire danger).
5. Estimate the amount of spilled material.
6. Make the above notifications.
7. Use available cleanup equipment and/or spill contractors to clean up the spilled material and contaminated soil.
8. Document all spill response and cleanup efforts, including notification calls following UCI – EHS Response Plan and steps identified in Section 5.7 below.

4.4 Available Spill Cleanup Equipment

EHS has developed a Response Plan, on file in the EHS Department, that addresses countermeasures for response and cleanup of spilled hazardous materials. The EHS building maintains an emergency hazardous material response truck. This vehicle is equipped with hazardous material storage receptacles, absorbent booms, pads, and an absorbent powder. The truck also contains appropriate personal protective equipment (PPE). Larger quantities of the above listed supplies are stored in the EHS Building. UCI’s EHS vehicle fleet and fire department vehicles also contain limited amounts of emergency hazardous material cleanup supplies.

4.5 Spilled Material Disposition

All spilled material included in a cleanup shall be managed as hazardous waste, except for any portion of material that is recovered and deemed usable by the area manager. UCI EHS is responsible for managing the disposition of the materials cleaned up.

4.6 Spill History

January 24, 2022

A construction truck was exiting the construction site when the workers observed a truck was leaking diesel from the vehicle’s fuel tank onto the street. The truck returned to the construction site. Diesel spilled onto construction site soil before it was stopped. The workers used absorbent to collect diesel fuel on the street. Approximately 2 gallons of diesel entered the storm drain. Clean-up was performed by HAZWOPER certified personnel and regulatory notifications were submitted by UCI EHS.

April 13, 2023

A contractor punctured a fuel tank while refueling an excavator at a construction site. Approximately 20-gallons of diesel spilled on asphalt, with an estimated maximum of 5-gallons entering a storm drain. Clean-up was performed by HAZWOPER certified personnel and regulatory notifications were submitted by UCI EHS.

4.7 Spill Notification and Reporting

The UCI – EHS Response Plan includes an emergency notification regulatory call list. In any emergency event, UCI EHS will primarily follow those procedures. Below are the notifications that are applicable to oil discharges.

Notification to the Orange County Health Care Agency (OCHCA) and California Emergency Management Agency (CalEMA) are required for any
spill or event that results in a significant or threatened release of oil. UCI EHS is responsible to provide the initial notification immediately upon discovery via telephone to OCHCA at (714) 433-6000 and CalEMA at (800) 852-7550 and subsequently prepare follow-up written reports. Information regarding initial notification information and reporting information are provided later in this section.

Notification to the National Response Center is required for any spill event that discharged more than 1,000 U.S. gallons of oil in a single discharge, or discharged more than 42 gallons of oil in each of two discharges, occurring within any twelve month period. UCI EHS is responsible to provide the initial notification via telephone (800) 424-8802 and prepare a follow-up report either written or online³.

The initial notification telephone calls should include the following information, at a minimum, to the extent known:

- Identity of caller, including telephone number and facility address.
- Location, date and time of spill, release, or threatened release.
- Location of threatened or involved waterway or storm drains.
- Material/Chemical name (e.g., motor oil, diesel fuel, etc.).
- Estimated quantity involved.
- Description of what happened, including source and cause of spill, all potentially affected media.
- Damages or injuries caused by spill.
- Actions being used to stop, remove, and mitigate the effects of the spill.
- Whether an evacuation may be needed.

The follow-up written reports must include at least the following information and should be provided as soon as possible, not to exceed 60 days from the date of the spill event or 7 days, if the spill is Reportable Quantity⁴:

- Name and location of the facility.
- Owner/operator name.
- Name of person preparing the report.
- Maximum storage/handling capacity of the facility and normal daily throughput.
- Corrective actions and countermeasures taken, including descriptions of equipment repairs and replacements.
- Adequate description of the facility, including maps, flow diagrams, and topographical maps, as necessary.
- Cause of the discharge to navigable waters, including a failure analysis

³ [http://www.nrc.uscg.mil/](http://www.nrc.uscg.mil/)
⁴ Section 304 of the Emergency Planning and Community Right-to-Know Act
• Failure analysis of the system where the discharge occurred.
• Additional preventive measures taken or planned to take to minimize discharge reoccurrence.
5.0 Security

5.1 Locked Storage Locations
The security measures for the storage locations are as follows:

- The majority of diesel fuel tanks for standby generators are located within locked gates or inside locked buildings. Diesel fuel tanks associated with newer standby generators are installed within locked secondary containment containers.
- The gasoline/diesel AST at North Campus is accessible during business hours and non-accessible (locked gate) during non-operational hours (i.e., when the facility is unattended).
- The hazardous waste storage area in the EHS Building is inside the building that remains locked during non-operational hours (i.e., when the facility is unattended).
- The trailer-mounted diesel-refueling tank is stored outside within a locked gated area during non-operational hours (i.e., when the facility is unattended).

5.2 Lighting
Lighting at the University is provided with several different styles of fixtures mounted on buildings adjacent to the AST’s or on lighting posts. All outdoor AST’s and drum containment shelters have lighting above or directed towards the storage location. All ASTs and drums stored indoors are provided with indoor lighting. Any person in the area must maintain the lighting in storage areas in a manner that would allow visual discovery of liquid discharges occurring during hours of darkness.

5.3 Interlocked Warning System
During loading and unloading operations of the North Campus Fueling AST, tanker truck drivers are required to be out of the trucks monitoring the operations. Drivers are also responsible for making and breaking connections of transfer lines. As such, an interlocked warning system is not necessary to prevent vehicular departure before complete disconnection of transfer lines.

5.4 Protection from Vehicles
Crash posts and cinder blocks are installed around all the large tanks that are near vehicle access ways, with the exception of the 854 and 856 generators; however, the generators are accessed via a dead-end alleyway receiving no through traffic, where access would consist only of maintenance vehicles arriving to service the generators and nearby equipment.
5.5 Campus Security

The UCI Police Department provides general campus security 24 hours a day, 7 days a week by patrolling the North and Central Campuses. Storage tanks have signs that instruct persons observing any spill or problem to call campus security at (949) 824-5223. UCI Police will then inform the EHS emergency contact.
6.0 Training, Inspections, and Records

6.1 Personnel Training

6.1.1 Proper Tank Filling and Product Dispensing
All new personnel are trained on proper fuel dispensing protocol by a trained supervisor. Training records regarding operating procedures are kept in personnel files.

6.1.2 Training for the SPCC Plan
Personnel who are involved with handling of oil materials must be trained on the SPCC Plan. Training will focus on personnel becoming familiar with the Plan to assure adequate understanding of the provisions stated in the Plan. Training will be provided at least once per year. Training for spill response and cleanup will be provided under the EHS Department training program for Emergency Response. UCI will manage and maintain training records through its internal training records database.

6.2 Inspections
The inspection frequency of all aboveground storage containers and associated piping are described in Appendix B. These inspections are intended to identify any visible signs of discharge, material corrosion, unusual activity, or other potential problems, including integrity. Any visible signs of discharge should be immediately reported to the EHS Department who will coordinate a prompt cleanup of oil. Any and all other recognized abnormalities should be corrected immediately; otherwise the problem must be reported to area manager and the SPCC Designated Person. The area manager and SPCC Designated Person or designee will coordinate a corrective action schedule that will focus on correcting the problem as soon as practicable.

Inspection records shall be obtained for each inspection and kept in logs that are maintained by the SPCC Designated Person. There will be a separate log including each of the following areas: standby generator tanks, North Campus operations, and EHS Services. An example copy of a log form is included in Appendix D.

6.2.1 Tank Inspections
UCI Facilities Management performs the mechanical and electrical inspections of all standby generators and storage tanks. These inspections are conducted during the routine operational testing of the standby generators and the firewater pump on a set schedule, which occurs at least monthly. Additionally, Facilities Management performs inspections on the diesel/gasoline tank at North Campus. Visual observations of the storage tanks and the associated
containment area are conducted during the inspections. For double-wall tanks, when possible the interstitial space must be checked for signs of liquid leaks.

6.2.2 Drum Storage Inspections

The inspection frequency of all drum storage areas are described in Appendix B. A designee of the SPCC Coordinator conducts inspections of drum storage areas.

6.3 Annual SPCC Plan Compliance Inspection

The Designated Person for each tank location is responsible for an annual SPCC Plan compliance inspection to ensure that all requirements identified with this Plan are being fulfilled.

6.4 Plan Review

Review of the SPCC Plan will be performed by EHS every 5 years (as required in 40 CFR 112.5(b)), see Appendix A. A Professional Engineer will certify any technical amendments to the Plan as required in 40 CFR 112.5(c).

6.5 Record Retention

Tank information, facility diagrams\(^5\), SPCC Plan updates, and any other information that is a part of this Plan are regularly updated and maintained in the UCI EHS Department by the SPCC Coordinator.

The department in charge of the tank maintains tank inspections records in their main office. Additionally, electronic records of inspections for standby generators are maintained in preventative maintenance software program accessible to various UCI departments via its online intranet.

All records must be maintained for a period of at least three years.

---

\(^5\) Campus Map, as updated regularly by UCI Student Affairs
# 7.0 Conformance with Applicable Requirements

<table>
<thead>
<tr>
<th>Regulatory Section (40 CFR)</th>
<th>Description</th>
<th>SPCC Plan Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>112.7(a)(1)</td>
<td>Provide conformance with applicable requirements (all sections)</td>
<td></td>
</tr>
<tr>
<td>112.7(a)(2)</td>
<td>Deviations from Standard, except secondary containment</td>
<td>§8.1</td>
</tr>
<tr>
<td>112.7(a)(3)</td>
<td>Physical layout and diagram</td>
<td>§2.1 and Figures 1 &amp; 2</td>
</tr>
<tr>
<td>112.7(a)(3)(i)</td>
<td>Type and quantity of oil storage</td>
<td>§3.1, §3.2, §3.3, App. B</td>
</tr>
<tr>
<td>112.7(a)(3)(ii)</td>
<td>Discharge prevention measures</td>
<td>§4.0 - §4.5</td>
</tr>
<tr>
<td>112.7(a)(3)(iii)</td>
<td>Drainage Controls and Secondary Containment</td>
<td>§3.1, §3.2 App. B &amp; App. C</td>
</tr>
<tr>
<td>112.7(a)(3)(iv)</td>
<td>Countermeasures for discharge discovery, response, and cleanup</td>
<td>§5.0 - §5.6</td>
</tr>
<tr>
<td>112.7(a)(3)(v)</td>
<td>Methods of disposal of recovered material</td>
<td>§5.5</td>
</tr>
<tr>
<td>112.7(a)(3)(vi)</td>
<td>Contact list and phone numbers</td>
<td>§5.2</td>
</tr>
<tr>
<td>112.7(a)(4)</td>
<td>Procedures for reporting discharge</td>
<td>§5.3</td>
</tr>
<tr>
<td>112.7(a)(5)</td>
<td>Making procedures readily available</td>
<td>§5.3</td>
</tr>
<tr>
<td>112.7(b)</td>
<td>Prediction of Major Equipment Failure</td>
<td>§8.4</td>
</tr>
<tr>
<td>112.7(c)</td>
<td>Provide secondary containment</td>
<td>§3.1, §3.2 App. B &amp; App. C</td>
</tr>
<tr>
<td>112.7(d)</td>
<td>Deviations from secondary containment requirement</td>
<td>§8.2</td>
</tr>
<tr>
<td>112.7(e)</td>
<td>Inspections, tests, and records</td>
<td>§7.0 - §7.5</td>
</tr>
<tr>
<td>112.7(f)</td>
<td>Personnel, training, and discharge prevention procedures</td>
<td>§4.0 - §4.5, §7.1</td>
</tr>
<tr>
<td>112.7(g)</td>
<td>Security</td>
<td>§6.0 - §6.5</td>
</tr>
<tr>
<td>112.7(h)</td>
<td>Tank truck loading/unloading</td>
<td>§4.1.1</td>
</tr>
<tr>
<td>112.7(i)</td>
<td>Field-constructed AST repair, alteration, reconstruction, or change in service.</td>
<td>Not applicable</td>
</tr>
<tr>
<td>112.7(j)</td>
<td>Additional prevention standards</td>
<td>§1.4</td>
</tr>
<tr>
<td>112.8(b)</td>
<td>Facility drainage</td>
<td>Not applicable; no diked storage areas</td>
</tr>
<tr>
<td>112.8(c)(1)</td>
<td>Material compatibility</td>
<td>§3.5</td>
</tr>
<tr>
<td>112.8(c)(2)</td>
<td>Secondary containment</td>
<td>§3.6</td>
</tr>
<tr>
<td>112.8(c)(3)</td>
<td>Discharge of rainwater</td>
<td>§3.7</td>
</tr>
<tr>
<td>112.8(c)(4)</td>
<td>Complete buried metallic storage tanks</td>
<td>§3.4</td>
</tr>
<tr>
<td>112.8(c)(5)</td>
<td>Partially buried or bunkered metallic tanks</td>
<td>Not applicable</td>
</tr>
<tr>
<td>112.8(c)(6)</td>
<td>Integrity testing</td>
<td>§3.8</td>
</tr>
<tr>
<td>112.8(c)(7)</td>
<td>Internal heating coils</td>
<td>Not applicable</td>
</tr>
<tr>
<td>112.8(c)(8)</td>
<td>Liquid level sensors</td>
<td>§3.9</td>
</tr>
<tr>
<td>112.8(c)(9)</td>
<td>Effluent treatment facilities</td>
<td>Not applicable</td>
</tr>
<tr>
<td>112.8(c)(10)</td>
<td>Correct visible discharges</td>
<td>Not applicable</td>
</tr>
<tr>
<td>112.8(c)(11)</td>
<td>Portable and mobile oil storage containers</td>
<td>§3.2</td>
</tr>
<tr>
<td>112.8(d)</td>
<td>Piping</td>
<td>§3.12</td>
</tr>
</tbody>
</table>
7.1 Deviations from General Requirements

With the exception of the aboveground storage containers storing vehicle fuels at North Campus and several other tanks with liquid level gauges, no other bulk storage containers are equipped with high liquid level sensors, which is an exception to the requirements of 40 CFR §112.8(c)(8). However, all other tanks are filled manually with a nozzle inserted directly into the tank and the tank operator visually observes when the liquid level reaches capacity, at which point the operator disengages fuel flow to the tank.

Per §112.7 (a)(3), a diagram “must mark the location and contents of each fixed oil storage container and the storage area where mobile or portable containers are located.” Given the campus’s size, numerous oil storage locations in and among buildings of complex configurations, a single or series of marked up diagrams would not provide the user an effective tool for locating oil storage throughout the campus. Rather, the diagram used for SPCC purposes is the “Campus Map” used in conjunction with the storage tank listing in Appendix B that specifies each storage location building number. Since the “Campus Map” is updated by UCI Student Affairs several times a year, it is impractical to modify the SPCC storage diagram every time the main campus map is updated. Using this approach provides for consistency in UCI’s management systems.

A complete listing of oil-filled operating equipment (elevators and electrical transformers) for units containing 55 gallons or more is included in this Plan in Appendix B. Numerous elevators and transformers are located throughout the campus. Elevator service contractors are required to provide oil spill prevention and cleanup services according to their company policies. Many electrical transformers of various sizes are scattered throughout the campus. UCI Facilities is responsible for maintenance of electrical transformers. Further, this plan was developed without the certifying engineer’s inspection of oil-filled operating equipment; except where specifically provided herein, conformance to the SPCC Rule per oil associated with elevators and electrical transformers is not provided under the engineer’s certification.

Other than the requirements listed above, no other deviations from the general SPCC requirements are present at the facility.

7.2 Deviations from Secondary Containment Requirement

No deviations from secondary containment requirements are present at the facility.
7.3 Drainage Requirements for Potential Discharge Areas

There are no areas of potential discharge of oil from storage locations since containment (i.e., berms, walls, or double-wall construction) is provided for all storage tanks and portable containers.

To mitigate potential discharge from the onsite loading rack at North Campus during fueling operations, a berm is constructed around the area. The containment capacity of the area is designed to store up to 4,200 gallons, which is the largest storage compartment of a fueling truck.

All piping is constructed within secondary containment areas, buried, or constructed to flow into secondary containment areas in order to prevent potential discharges.

7.4 Major Equipment Failure Scenarios

Several types of oil-containing equipment are present at the UCI campus, each with a relatively low degree of potential for major equipment failure. The table below provides the types of major equipment failure for each type of equipment.

<table>
<thead>
<tr>
<th>Area</th>
<th>Type of failure (discharge scenario)</th>
<th>Potential discharge volume (gallons)</th>
<th>Direction of flow for uncontained off-site discharge</th>
<th>Secondary containment method</th>
<th>Secondary containment capacity (gallons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulk Storage Containers and Mobile Portable Containers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stationary tanks outdoors</td>
<td>Leaking tank or fitting</td>
<td>0</td>
<td>None</td>
<td>Double wall or containment berm</td>
<td>Sufficient to hold 100% plus storm freeboard</td>
</tr>
<tr>
<td>Stationary tanks indoors or in buried bunkers</td>
<td>Leaking tank or fitting</td>
<td>0</td>
<td>None</td>
<td>Double wall, containment berm, or building walls</td>
<td>Sufficient to hold 100%</td>
</tr>
<tr>
<td>Drum storage areas</td>
<td>Leaking drum; tip over</td>
<td>≤55</td>
<td>North to San Diego Creek (via storm drain outfall)</td>
<td>Pallets, shelters, drains to underground tank (EHS Dept.)</td>
<td>&gt;55</td>
</tr>
<tr>
<td>Portable, trailer-mounted tanks</td>
<td>Leaking tank or fitting; tip over</td>
<td>≤120</td>
<td>North to San Diego Creek (via storm drain outfall)</td>
<td>Containment plate</td>
<td>&gt;120</td>
</tr>
<tr>
<td>Elevators inside buildings</td>
<td>Reservoir leak; hose break</td>
<td>0</td>
<td>None</td>
<td>Building floors; elevator rooms; pits</td>
<td>(not verified)</td>
</tr>
</tbody>
</table>

Oil-filled Operational Equipment
<table>
<thead>
<tr>
<th>Area</th>
<th>Type of failure (discharge scenario)</th>
<th>Potential discharge volume (gallons)</th>
<th>Direction of flow for uncontained off-site discharge</th>
<th>Secondary containment method</th>
<th>Secondary containment capacity (gallons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical transformers</td>
<td>Leak, corrosion, fire</td>
<td>&lt;597</td>
<td>North to San Diego Creek (via storm drain outfall)</td>
<td>Active containment (response)</td>
<td>(not required)</td>
</tr>
<tr>
<td><strong>Piping, Valves, etc.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bulk storage containers piped to equipment, dispensers, etc.</td>
<td>Leak, faulty pump, automatic shut-off failure</td>
<td>&lt;7,000 (North Campus)</td>
<td>South to San Diego Creek (via duck ponds)</td>
<td>Active containment (response)</td>
<td>Varies; some have no permanent fixtures</td>
</tr>
<tr>
<td><strong>Product Transfer Areas (location where oil is loaded to or from a container or dispenser)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Filling diesel fuel reservoirs for emergency generators</td>
<td>Operator error, dispenser failure</td>
<td>≤120</td>
<td>North to San Diego Creek (via storm drain outfall)</td>
<td>Active containment (response)</td>
<td>Worst-case none; varies by location of incident</td>
</tr>
<tr>
<td>Facilities Management Fueling</td>
<td>Tank truck failure, operator error</td>
<td>≤4,200</td>
<td>North to San Diego Creek (via storm drain outfall)</td>
<td>Two underground interceptors</td>
<td>2,400 (interceptors); 4,400 temporary berm</td>
</tr>
<tr>
<td>Used Cooking Oil bulk truck pick-up from tanks or portable containers</td>
<td>Tank truck leak</td>
<td>≤3,000 (Brandywine, and Anteatery)</td>
<td>North to San Diego Creek (via storm drain outfall)</td>
<td>Active containment (response)</td>
<td>Worst-case none; varies by location of incident</td>
</tr>
</tbody>
</table>

The worst-case scenario would be a spill that could happen at the Facilities Management Fueling Area during tank loading. An approximately 4,200-gallon tank truck is used to fill either the diesel fuel or gasoline fuel tank compartment. A spill of the tank truck vessel could possibly discharge 100 or more gallons per minute. This area is sloped to collect liquids in nearby drain that leads to a series of two interceptors. The combined capacity of the interceptors is about 1,200 gallons. The area is bermed with a storage capacity of approximately 4,400 gallons. Loading of the tanks in this area is not conducted during storm events.
FIGURES

- Figure 1  Vicinity Map
- Figure 2  Campus Map
https://uci.edu/visit/maps.php
APPENDIX A

SPCC Regulation 40 CFR Part 112
APPENDIX B

Table of Storage Tanks
APPENDIX C

Tank and Secondary Containment Specifications
Secondary Containment Calculations for ASTs

McGaugh Hall:

Description: One 500-gallon horizontal cylindrical tank in bermed area; sits on legs; tank bottom several inches above ground. Tank located indoors.

Secondary Containment Specifications:
L-shaped
Overall Length: 155 inches
Overall Width: 127 inches
Overall Area: 19,685 in²
Notch Short Length: 78 inches
Notch Width: 54 inches
Notch Area: 4,212 in²
Containment Area: Overall Area – Notch Area = 15,473 in²
Height of wall: 12 inches

Required Containment Volume = Maximum Tank Volume: 500 gallons

Freeboard for Storm Water: (not applicable)

Available Containment Height: Height of wall = 12 inches

Available Capacity: (Containment Area 15,473 in²) x 12 in = 185,676 in³ = 800 gallons

Displaced Capacity: (not applicable)

Available Containment Volume: 800 gallons

The available containment volume (800 gallons) is greater than the required containment volume (550 gallons).
Secondary Containment Calculations for ASTs

Main Library (Langson Library):

Description: One 120-gallon rectangular tank in bermed area resting on floor. Tank located indoors and piping is not buried.

Secondary Containment Specifications:
L-shaped
Overall Length: 265 inches
Overall Width: 164 inches
Overall Area: 43,460 in²
Notch Short Length: 190 inches
Notch Width: 48 inches
Notch Area: 9,120 in²
Containment Area: Overall Area – Notch Area = 34,340 in²
Height of wall: 6 inches

Required Containment Volume = Maximum Tank Volume: 120 gallons

Freeboard for Storm Water: (not applicable)

Available Containment Height: Height of wall = 6 inches

Available Capacity: (Containment Area 34,340 in²) x 6 in = 206,040 in³ = 890 gallons

Displaced Capacity: (not applicable)

Available Containment Volume: 890 gallons

The available containment volume (890 gallons) is greater than the required containment volume (120 gallons).
Secondary Containment Calculations for ASTs

**Computer Science:**

**Description:** Single 300-gallon horizontal cylindrical tank in bermed area; sits on legs; tank bottom several inches above ground. Tank located outdoors. A portion of the containment area is situated underneath a roof, and therefore, freeboard for storm water is not required for covered portion.

**Secondary Containment Specifications:**

| L-shaped                | Overall Length: 357 inches |
|                        | Overall Width: 120 inches |
|                        | Overall Area: 42,840 in² |
| Notch Short Length: 261 inches | Notch Width: 107 inches |
|                        | Notch Area: 27,927 in² |
| Containment Area: Overall Area – Notch Area = 14,913 in² |
| Covered Length: 144 inches | Covered Width: 13 inches |
|                        | Covered Area: 1,872 in² |
| Uncovered Area: Containment Area – Covered Area = 13,041 in² |
| Height of wall: 10 inches |

**Required Containment Volume = Maximum Tank Volume:** 300 gallons

**Freeboard for Storm Water:** 25-year, 24-hour storm event: 4 inches

**Available Containment Height:**

- (covered area): Height of wall = 10 inches
- (uncovered area): Height of wall – Freeboard for storm water = 6 inches

**Available Capacity (Covered Area):** (Covered Area 1,872 in²) x 10 in = 18,720 in³ = 81 gallons

**Available Capacity (Uncovered Area):** (Uncovered Area 13,041 in²) x 6 in = 78,246 in³ = 338 gallons

**Total Available Capacity:** 419 gallons

**Displaced Capacity:** (negligible)

**Available Containment Volume:** **419 gallons**

The available containment volume (419 gallons) is greater than the required containment volume (300 gallons).
Secondary Containment Calculations for ASTs

Central Plant:

Description: 200 gallon double walled tank in bermed area; tank bottom resting on concrete pad. Tank located outdoors.

Secondary Containment Specifications:
Length: 281 inches
Width: 135 inches
Area: 37,935 in²
Height of wall: 11 inches

Required Containment Volume = Maximum Tank Volume: 200 gallons

Freeboard for Storm Water: 25-year, 24-hour storm event: 4 inches

Available Containment Height: Height of wall – Freeboard for storm water = 7 inches

Available Capacity: (Total Area 37,935 in²) x 7 in = 265,545 in³ = 1,149 gallons

Displaced Capacity: (negligible)

Available Containment Volume: 1,149 gallons

The available containment volume (1,149 gallons) is greater than the required containment volume (425 gallons).
Secondary Containment Calculations for ASTs

Engineering Laboratory Facility:

**Description:** Two 250-gallon double walled rectangular tanks, 10 55-gallons drums inside a bermed area resting on the floor. The tanks and drums are located indoors.

**Secondary Containment Specifications:**
Length: 106 inches  
Width: 153 inches  
Area: 16,218 in²  
Height of wall: 6 inches

**Required Containment Volume = Maximum Tank Volume:** 55 gallons

**Freeboard for Storm Water:** N/A

**Available Containment Height:** Height of wall – 6 inches

**Available Capacity:** (Total Area 16,218 in²) x 6 in = 97,308 in³ = 421 gallons

**Displaced Capacity:** negligible

**Available Containment Volume:** 421 gallons  
The available containment volume (421 gallons) exceeds the required containment volume (55 gallons).
Secondary Containment Calculations for ASTs

Rowland Hall:

Description: One steel single-walled 240-gallon external diesel fuel tank is located within a locked metal covered brick enclosure to the west of the building at the loading dock. The enclosure serves as secondary containment, coated with a watertight sealant, and the tank is positioned on a concrete floor. The tank is piped underground to a standby generator inside the building, which is at grade, and the pipeline spans a fourteen-foot distance buried within the concrete foundation. The pipeline does not continuously hold diesel, and diesel inside the pipeline would be expected to drain back into the external tank when the generator is not operating. The emergency generator, day tank, and pipeline were installed prior to 2002, the time when protective wrapping/coating and cathodic protection requirements for buried pipelines were required. The tank and associated piping are inspected monthly during regular SPCC inspections.

Secondary Containment Specifications:
Length: 57 inches  
Width: 57 inches  
Area: 3,249 in²  
Height of wall: 47 inches  

Required Containment Volume = Maximum Tank Volume: 240 gallons

Freeboard for Storm Water: N/A

Available Containment Height: Height of wall – 47 inches  

Available Capacity: (Total Area 3,249 in²) x 47 in = 152,703 in³ = 661 gallons

Displaced Capacity: negligible

Available Containment Volume: 661 gallons  
The available containment volume (661 gallons) is exceeds the required containment volume (240 gallons).
Secondary Containment Calculations for ASTs

Social Science Lab:

**Description:** One steel single-walled 240-gallon external diesel fuel tank is located within a locked covered brick enclosure to the south of the building at the loading dock. The tank is piped to an adjacent standby generator. A bunker constructed of brick surrounds the tank with a locked metal cover. The interior of the brick walls are coated with a watertight sealant and the tank sits upon a concrete floor. Since the bunker completely surrounds the tank, the bunker itself provides secondary containment.

**Secondary Containment Specifications:**

Length: 57 inches  
Width: 57 inches  
Area: 3,249 in²  
Height of wall: 55 inches

**Required Containment Volume = Maximum Tank Volume:** 240 gallons

**Freeboard for Storm Water:** N/A

**Available Containment Height:** Height of wall – 55 inches

**Available Capacity:** (Total Area 3,249 in²) x 55 in = 178,695 in³ = 773 gallons

**Displaced Capacity:** negligible

**Available Containment Volume:** 773 gallons

The available containment volume (773 gallons) is exceeds the required containment volume (240 gallons).
Portable Fuel Dispensing Tank on Trailer:

**Description:** 110 gallon single-walled tank on a trailer used to fill standby generator fuel tanks. When not in use, the portable refueling tank is stored in a concrete berm secondary containment area at the UCI Electrical Substation. The tank and containment area are located outdoors.

**Secondary Containment Specifications:**
Length: 125 inches  
Width: 117 inches  
Area: 14,625 in²  
Height of wall: 6 inches

**Required Containment Volume** = **Maximum Tank Volume:** 110 gallons

**Freeboard for Storm Water:** 25-year, 24-hour storm event: 4 inches

**Available Containment Height:** Height of wall – Freeboard for storm water = 2 inches

**Available Capacity:** (Total Area 14,625 in²) x 2 in = 29,250 in³ = 126 gallons

**Displaced Capacity:** negligible

**Available Containment Volume:** 126 gallons

The available containment volume (126 gallons) is greater than the required containment volume (110 gallons).
APPENDIX D

SPCC Monthly Inspection Form

* Inspections are documented using an intranet form, which includes, but is not limited to, the required information in this example form.
UCI Monthly SPCC Inspection Form (Example*)

GENERAL FACILITY INSPECTIONS:
1. Security devices in place and operable?
2. Safety and emergency equipment in adequate supply, accessible locations, and good working condition?
3. Surface water free of oil sheen and waste presence?
4. Surface water free of odors?
5. Notifications or liquid level alarms since last inspection?

TANKS, PIPING, AND CONTAINMENT STRUCTURES:
6. Locks on tanks and pumps?
7. Adequate supply of absorbent?
8. Containment of structures of adequate capacity and in good condition?
9. Tank auxiliary equipment (valves, piping, and pumps) free of deterioration and in good working condition?
10. Site free from evidence of leaks or spills?
11. Tank and piping free of corrosion and deterioration?
12. Tank foundation free of deterioration?
13. Visual and audible overfill gages and alarms?

Monthly SPCC Inspection Log

Inspector’s Name:     Date:
Inspector’s Signature:

<table>
<thead>
<tr>
<th>Location</th>
<th>Deficiencies</th>
<th>Corrective Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anteatery (Food Oil Tank)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARC (Portable Fuel Tank)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brandywine (Food Oil Tank)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Plant (Oil Drums)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Plant (Portable Fuel Tank)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EHS (Oil Drums)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engineering Lab Facility (Tanks And Drums)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>North Campus Fleet Services Garage (Oil Tank And Drums)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>North Campus Facilities Fueling (Tanks)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student Center (Food Oil Tank)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Inspections are documented using an intranet form, which includes, but is not limited to, the required information in this example form.*
APPENDIX E

Annual Tank Alarm Testing

*Inspections are documented using an intranet form, which includes, but is not limited to, the required information in this example form.*
UCI Monthly SPCC Inspection Form (Example*)

UCI Annual Tank Alarm Testing (Example*)

Overfill alarms will be tested annually for proper operation. Testing may include immersion or exposure to sensors in diesel fuel or pressing of specific test buttons on the unit.

The alarm is considered to pass when the visual alarm is visible in the form of lights or other notification or audible alarm sounds. If testing of the alarm does not cause any of these events to happen, the alarm is considered to fail and additional actions should be taken (investigation, repair, replacement, etc.) as needed.

<table>
<thead>
<tr>
<th>Location</th>
<th>Testing Performed</th>
<th>Test Results (Pass/Fail)*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*If an alarm failed testing, follow-up actions taken:

______________________________________________________________________________________
______________________________________________________________________________________
______________________________________________________________________________________
______________________________________________________________________________________

Inspector’s Name:     Date:

Inspector’s Signature:

* Inspections are documented using an intranet form, which includes, but is not limited to, the required information in this example form.
APPENDIX F

Tank Integrity Testing Records

*Inspections are documented using an intranet form, which includes, but is not limited to, the required information in this example form.*