Texas A&M University-Corpus Christi

Spill Prevention, Control

and

Countermeasures Plan

June 24, 2008
Spill Prevention, Control

and Countermeasures Plan

for

Texas A&M University-Corpus Christi

June 24, 2008

Prepared By: David Jensen, National Spill Control School
Texas A&M University-Corpus Christi
Roy Coons, Environmental, Health and Safety Office
Texas A&M University-Corpus Christi

Approved by: ___________________________ Date: _____________
Authorized Facility Representative
Spill Prevention, Control and Countermeasures Plan
For
Texas A&M University-Corpus Christi

Table of Contents

- SPCC Certification
- SPCC Compliance Inspection Review
- Management Approval
- Facility Owner/Operator
- Facility Contacts
- Facility Description
- Facility Storage
- Facility Distance to Navigable Waters and Adjoining Shorelines
- Spill History
- Potential Spill Predictions, Volumes, Rates and Control
- Spill Prevention Measures
  1. Drainage Control
  2. Aboveground Storage Tanks and Secondary Containment
  3. Fueling Station Transfer Operations
  4. Inspections and Record Keeping
  5. Site Safety and Security
  6. Personnel Training
  7. Spill Control Equipment and Cleanup
- Emergency Contacts
- Appendices
  Appendix A: Photographs of Fueling Station
  Appendix B: Maps and Site Diagrams
  Appendix C: Secondary Containment Calculations for Aboveground Storage Tanks
  Appendix D: Certification of the Applicability of the Substantial Harm Criteria Checklist
  Appendix E: Fueling Station Weekly Inspection Report
  Appendix F: Containment Area Drainage Discharge Report
  Appendix G: Sample Containment Volume Calculations, EPA Recommendations
  Appendix H: 40 CFR 112
  Appendix I: 49 CFR 177.834 and 177.837
In accordance with 40 CFR 112.5 (b), a review and evaluation of this Spill Prevention, Control and Countermeasures Plan (SPCC) will be conducted every three years. A registered Professional Engineer shall certify any change or amendment to the SPCC plan. This certification must be completed within six months after a change in facility design, construction, operation or maintenance occurs which affects the facility’s potential for discharge of oil into or upon the Navigable Waters of the United States or adjoining shorelines.

**Review Dates**

<table>
<thead>
<tr>
<th>Date</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. March 1, 2004</td>
<td></td>
</tr>
<tr>
<td>2. March 1, 2007</td>
<td></td>
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<tr>
<td>3. March 1, 2010</td>
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<tr>
<td>4. March 1, 2013</td>
<td></td>
</tr>
<tr>
<td>5. March 1, 2016</td>
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</table>

* SPCC plan amended and certified by a Registered Professional Engineer per 40 CFR 112.3 (d)

**Management Approval**

Texas A&M University-Corpus Christi (TAMUCC) is committed to the prevention of discharges of any nature into navigable waters or the surrounding habitat. Therefore, a regular review and update of spill prevention, control and countermeasures procedures will be held to the highest standards.
Facility Owner/Operator

Texas A&M University-Corpus Christi
6300 Ocean Drive
Corpus Christi, Texas 78412
(361) 825-5700

Facility Contacts

Director of Physical Plant
Mr. Laurence Fischbach
6300 Ocean Drive
Corpus Christi, Texas 78412
(361) 825-2422

Manager of Maintenance
Denise Hernandez
6300 Ocean Drive
Corpus Christi, Texas 78412
(361) 825-5725

University Safety Coordinator
Roy Coons
6300 Ocean Drive
Corpus Christi, Texas 78412
(361) 825-5555
(361) 825-5555

Facility Description

Texas A&M University-Corpus Christi is a public, degree-granting institution of higher education. Surrounded by the waters of Corpus Christi and Oso Bays, the University is located on Ward Island approximately ten miles southeast of downtown Corpus Christi, Texas. The University employs over 900 people including a teaching faculty of about 300. The student population increases every year and was over 8000 in 2005.

The University Motor Pool manages a fleet of approximately 10 vehicles owned by Physical Plant, University Police Department, Blutcher Institute and the Physical and Life Sciences Departments that utilize the University Fueling Station. In 2003 Enterprise-Rent-a-Car opened an office on the Campus of Texas A&M University-Corpus Christi. The University phased out all of its pool cars and contracted with Enterprise Rent-a-Car to provide transportation service for University. The Texas General Land Office, Texas Commission on Environmental Quality, Texas Parks and Wildlife, Texas Department of Health, Seafood Safety, Texas Forest Service utilize the fueling facility.
The University Fueling Station has a ConVault Fuel storage tank designed to store both gasoline and diesel for fueling of motor vehicles, boats and equipment. A 500 gallon used oil tank sits within the curbed secondary containment. The recycled used oil is handled as Universal Waste under the Resource Conservation and Recovery Act. The used oil tank sits within the curbed secondary containment system.

The University has nine emergency generators with built-in fuel tanks. A common carrier delivers fuel to the generators by tanker truck via Ocean Drive as needed.

Facility Storage

<table>
<thead>
<tr>
<th>Tank</th>
<th>Volume (gallons)</th>
<th>Contents</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>AST</td>
<td>1000</td>
<td>Diesel</td>
<td>Fueling Station</td>
</tr>
<tr>
<td>AST</td>
<td>1000</td>
<td>Unleaded</td>
<td>Fueling Station</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gasoline</td>
<td></td>
</tr>
<tr>
<td>AST</td>
<td>100</td>
<td>Used Oil</td>
<td>Fueling Station</td>
</tr>
<tr>
<td>AST</td>
<td>100</td>
<td>Used Oil</td>
<td>Motor Pool</td>
</tr>
<tr>
<td>Emergency Generators (8)</td>
<td>225</td>
<td>Diesel</td>
<td>University Center</td>
</tr>
<tr>
<td></td>
<td>250</td>
<td>Diesel</td>
<td>Center For Instruction</td>
</tr>
<tr>
<td></td>
<td>225</td>
<td>Diesel</td>
<td>Science &amp; Tech</td>
</tr>
<tr>
<td></td>
<td>250</td>
<td>Diesel</td>
<td>Central Plant (2)</td>
</tr>
<tr>
<td></td>
<td>250</td>
<td>Diesel</td>
<td>NRC Bldg.</td>
</tr>
<tr>
<td></td>
<td>500</td>
<td>Diesel</td>
<td>Bay Hall</td>
</tr>
<tr>
<td></td>
<td>750</td>
<td>Diesel</td>
<td>Harte Research Cntr</td>
</tr>
<tr>
<td></td>
<td>750</td>
<td>Diesel</td>
<td>Performing Arts</td>
</tr>
</tbody>
</table>

Total: 5800 gallons

Facility Distance to Navigable Waters and Adjoining Shorelines

The Texas A&M University-Corpus Christi Fueling Station is located ¼ mile from Oso Bay. A storm drain that empties into Oso Bay is located approximately 150 feet north of the Fueling Station. The soils beneath the Fueling Station containment structure is a very fine grain unconsolidated clay that has very low porosity and permeability conditions. The Aquifer is an unconfined water table that is composed of Holocene fluvial/marine clays deposited over the Pleistocene age Beaumont Clay formation. This aquifer has poor water quality. There is no freshwater zone in the aquifer. Groundwater is discharged through evapotranspiration and underflow that seeps into Oso and Corpus Christi Bays. Hydraulic conductivity for this aquifer is about $10^6$ feet/day. Groundwater discharge is also affected by the amount of precipitation. Average rainfall for Ward Island is about 30 inches per year with extremes that can range from about 15 inches per year to 40 inches per year.
Spill History

There have been no reportable quantity spills from this facility.

Potential Spill Predictions, Volumes, Rates and Control

<table>
<thead>
<tr>
<th>Source</th>
<th>Type of Failure</th>
<th>Volume (Gal.)</th>
<th>Rate of Flow (Gal./Hr.)</th>
<th>Direction of Flow</th>
<th>Containment (Gal.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diesel</td>
<td>Rupture/leak</td>
<td>1000</td>
<td>1000</td>
<td>Within Containment</td>
<td>1496.2/double walled tank</td>
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<tr>
<td></td>
<td>Overfill</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unleaded</td>
<td>Rupture/leak</td>
<td>1000</td>
<td>1000</td>
<td>Within Containment</td>
<td>1496.2/double walled tank</td>
</tr>
<tr>
<td></td>
<td>Overfill</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Used Oil</td>
<td>Rupture/leak</td>
<td>500</td>
<td>500</td>
<td>Within Containment</td>
<td>1496.2</td>
</tr>
<tr>
<td></td>
<td>Overfill</td>
<td></td>
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</tr>
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</table>

Other Oil Product Storage

<table>
<thead>
<tr>
<th>Source</th>
<th>Type of Failure</th>
<th>Volume (Gal.)</th>
<th>Rate of Flow (Gal./Hr.)</th>
<th>Direction of Flow</th>
<th>Containment (Gal.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Generator (9)</td>
<td>Rupture/leak</td>
<td>volume listed in facility storage chart</td>
<td>Parking Lot *</td>
<td>Spill kit, Containment Dike * double walled</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Overfill</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drums/Containers (2)</td>
<td>Rupture/leak</td>
<td>55</td>
<td>55</td>
<td>Within Building</td>
<td>Spill kit, Spill Pallet *</td>
</tr>
<tr>
<td></td>
<td>Overfill</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drums/Containers</td>
<td>Rupture/leak</td>
<td>55</td>
<td>55</td>
<td>Within Portable Building</td>
<td>Spill kit, Spill Pallet *</td>
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<tr>
<td></td>
<td>Overfill</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drums/Containers</td>
<td>Rupture/leak</td>
<td>55</td>
<td>55</td>
<td>Spill Pallet</td>
<td>55</td>
</tr>
<tr>
<td></td>
<td>Overfill</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
* Need to be installed.

Spill Prevention Measures

Drainage Control:
  a. The ConVault tank is a double walled tank.
  b. Tanks are located within a diked, concrete secondary containment structure.
  c. The secondary containment structure is equipped with a normally closed and locked manual gate valve.
d. Rainwater that collects in the secondary containment structure evaporates or is drained through a manual gate valve after a careful examination of the area for oil has been conducted and documented. No oil or oily rainwater is to be released to the environment.

Aboveground Storage Tanks and Secondary Containment:

a. The ConVault tank is UL2085 listed for protected aboveground storage for both combustible liquids and flammable liquids, and are designed with protection for both the primary tank and secondary containment. This makes them fire resistant, impact resistant, and bulletproof. As such they are used widely across the United States and around the world, especially in environmentally sensitive areas or areas with the possibility of terrorist attack. In addition to the double wall design, the ConVault tank is located inside a secondary containment system.

b. A constructed steel cradle with 4-inch legs elevates the “Used Oil” tank above the floor of the containment structure. The support cradle allows for visual inspection capabilities under and around the tank.

c. Tanks are situated within a 16 x 25 x 0.5 foot concrete secondary containment structure. Secondary containment has the capacity to hold the entire contents of the “Used Oil” tank and has sufficient freeboard to allow for precipitation. Appendix C provides the secondary containment calculations for the Fueling Station.

d. Rainwater that collects in the secondary containment structure is drained through a manual gate valve after a careful examination of the area for oil has been conducted and documented. A threaded plug must be removed from the gate valve before drainage can occur. Appendix F provides a containment area drainage discharge report form to be completed by the Inspector each time accumulated precipitation is drained from the structure. If an oil sheen is detected, the Inspector will consult with the University Environmental, Health and Safety Department and the National Spill Control School to determine the best method to remove the oil. No oil or oily rainwater is to be released to the environment as per 40 CFR 110.

e. Aboveground storage tanks are painted to inhibit the effects of corrosion.

f. The secondary containment structure and aboveground storage tanks are inspected at least weekly for signs of deterioration or leakage. Appendix E provides the fueling station weekly inspection report form for the Inspector to document these inspections.

g. Every ten years, or more frequently if necessary as indicated by weekly inspection results, the tanks will be drained, cleaned, inspected, repaired as needed and painted. Prior to placing the AST’s back into service, the tanks will be pressure tested for integrity according to standard industry practice recommended by the manufacturer.

h. The aboveground storage tanks are equipped with visual “sight glass” gauges. Filling procedures call for tanks to be filled to a safe fill height to prevent overfills. The designated safe fill height is 95% of the tank capacity.
Other oil product storage containers are located within buildings and/or on spill pallets. All areas where oil products are stored have ready access to spill cleanup equipment and materials.

Fueling Station Transfer Operations:

a. All tank piping, valves, piping supports and other ancillary items are above ground within the secondary containment structure. All tank piping and associated equipment are inspected during the weekly inspections and documented on the report form in Appendix E.

b. Storage tanks, associated piping and the secondary containment structure are protected from vehicular traffic by steel barrier poles.

c. The University requires all motor carriers who transport fuel on to the campus to comply with the DOT regulations in 49 CFR 177. All fuel transfer operations must be attended at all times by a “qualified person”. All fuel transfer operations will strictly adhere to Motor Pool’s Standard Operating Procedures and the requirements in 49 CFR 177.834 and 177.837. A copy of these regulations is provided in Appendix I.

d. A representative of the University Motor Pool will be present during the delivery of fuel to the aboveground storage tanks at the Fueling Station.

Inspections and Record Keeping:

a. Fueling Station inspections are conducted on a monthly basis. Inspections are documented and records are maintained at the Motor Pool for a minimum of three years.

b. Drainage discharge, training, tank integrity testing and other related records are maintained at the Motor Pool for a minimum of three years.

Site Safety and Security:

a. The Fueling Station is located within a gated fenced compound. The gates are routinely closed and locked at 6:00 p.m. each weekday and remain closed and locked on weekends. After hours authorized personnel gain access with a card key to the gate.

b. The University Police routinely patrol the entire campus 24 hours a day, seven days a week.

c. Tank fill pipe caps are locked closed except during delivery of fuel to the tank.

d. Secondary containment structure drainage valve is locked closed except when accumulated precipitation is released by an authorized facility representative.

e. Lights illuminate the entire Fueling Station area including secondary containment. The lighting is sufficient to detect spills during the night and to prevent vandalism.

f. Each tank is labeled with NFPA 704 Hazard Diamond warning signs.

g. Aboveground storage tanks are properly bonded and grounded.

Personnel Training:
a. All Maintenance Department personnel will be trained on the contents and use of the Texas A&M University-Corpus Christi’s SPCC Plan.

b. Motor Pool employees will be trained in spill prevention procedures and in the use of spill cleanup equipment and materials. Refresher training will be provided annually or more frequently if needed.

c. All University employees who utilize the Fueling Station will be provided information on the proper use of the fueling equipment and spill prevention procedures.

d. Mr. George Pena is the designated person responsible for Spill Prevention regarding Texas A&M University-Corpus Christi fueling operations.

Spill Control Equipment and Cleanup:

a. Spill control equipment on site includes absorbent pads and sorbent socks, granular sorbent, empty drums, brooms and shovels. Spill cleanup materials are located in the Motor Pool and at the National Spill Control School.

b. The National Spill Control School staff and the University Safety Coordinator are trained in emergency response techniques.

**Emergency Contacts**

<table>
<thead>
<tr>
<th>Service</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Police</td>
<td>(361) 825-4444</td>
</tr>
<tr>
<td>University Health and Safety Office</td>
<td>(361) 825-5555</td>
</tr>
<tr>
<td>National Spill Control School</td>
<td>(361) 825-3333</td>
</tr>
<tr>
<td>Local Police, Fire and Ambulance</td>
<td>911</td>
</tr>
<tr>
<td>Bay Area Medical Center</td>
<td>(361) 761-1200</td>
</tr>
<tr>
<td>Poison Control Center</td>
<td>1 800 764-7661</td>
</tr>
<tr>
<td>National Response Center</td>
<td>1 800 424-8802</td>
</tr>
<tr>
<td>Texas Emergency Response Center</td>
<td>1 800 832-8224</td>
</tr>
<tr>
<td>United States Coast Guard MSO-Corpus Christi</td>
<td>(361) 888-3162</td>
</tr>
<tr>
<td>Environmental Protection Agency Region VI</td>
<td>(214) 665-2200</td>
</tr>
<tr>
<td>Texas General Land Office Region 3</td>
<td>(361) 825-3300</td>
</tr>
<tr>
<td>Texas Commission on Environmental Quality</td>
<td></td>
</tr>
<tr>
<td>Region 14</td>
<td>(361) 825-3100</td>
</tr>
<tr>
<td>Safety-Kleen Corporation</td>
<td>(361) 854-9471</td>
</tr>
</tbody>
</table>
APPENDIX A

Photographs of Fueling Station
APPENDIX B

Maps and Site Diagrams
APPENDIX C

Secondary Containment Calculations for Aboveground Storage Tanks
APPENDIX D

Certification of the Applicability of the Substantial Harm Criteria Checklist
APPENDIX E

Fueling Station Weekly Inspection Report
APPENDIX F

Containment Area Drainage Discharge Report
APPENDIX G

Sample Containment Volume Calculations
EPA Recommendations
APPENDIX H

40 CFR 112
APPENDIX I

49 CFR 177.834 and 177.837
Secondary Containment Calculations for Aboveground Storage Tanks

1. Minimum containment volume = (Volume of the single largest tank + 10% to allow for precipitation) x 0.1337 cubic feet/gallon (conversion factor).

   \[(1000 \text{ gallons} + 100 \text{ gallons}) \times 0.1337 \text{ cubic feet/gallon} = 147.07 \text{ cubic feet}\]

2. Total Diked Area = Width x Length of Containment Structure.

   \[16 \text{ feet} \times 25 \text{ feet} = 400 \text{ square feet}\]

3. Available Containment Structure Volume = Total Diked Area x Dike Height

   \[400 \text{ square feet} \times 0.5 \text{ feet} = 200 \text{ cubic feet}\]

4. The available containment structure volume of 200 cubic feet (1496.2 gallons) is greater than the required minimum containment volume of 147.07 cubic feet (1100.2 gallons).
Certification of the Applicability
Of the Substantial Harm Criteria Checklist

Facility Name: Texas A&M University-Corpus Christi
Facility Address: 6300 Ocean Drive
Corpus Christi, Texas 78412

1. Does the facility transfer oil over water to or from vessels and does the facility have total oil storage greater than or equal to 42,000 gallons? No X, Yes _

2. Does the facility have total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest tank plus sufficient freeboard to allow for precipitation within the containment structure? No X, Yes _

3. Does the facility have total oil storage capacity greater than or equal to 1 million gallons and is it located at a distance (as calculated using the formula in Attachment C-III, Appendix C, 40 CFR 112 or comparable formula) such that a discharge from the facility could cause injury to fish, wildlife and sensitive environments? No X, Yes _

4. Does the facility have total oil storage capacity greater than or equal to 1 million gallons and is it located at a distance (as calculated using the formula in Attachment C-III, Appendix C, 40 CFR 112 or comparable formula) such that a discharge from the facility would shut down a public water intake? No X, Yes _

5. Does the facility have total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable spill in an amount greater than or equal to 10,000 gallons within the last 5 years? No X, Yes _

As evidenced by the criteria above, the oil products storage at Texas A&M University-Corpus Christi does not qualify as a “substantial harm” facility and therefore does not require a facility response plan as described in 40 CFR 112.20.

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.

______________________________________________________________
Authorized Facility Representative                  Signature
Title ___________________________________ Date ___________________________

Fueling Station monthly Inspection Report

Date: __________ Inspector: ______________________ Facility Supervisor:______________________

Diesel Tank: ______ Capacity: ___________ Liquid Level: _________
Unleaded Tank: ______ Capacity: ___________ Liquid Level: _________
Used Oil Tank: ______ Capacity: ___________ Liquid Level: _________
Propane Tank: ______ Capacity: ___________ Liquid Level: _________

1. Drainage:
   a. Any noticeable sheen on runoff? _____
   b. Standing water in containment area? _____
   c. Visible oil sheen in containment area? _____
   d. Containment area free of trash and debris? _____
   e. Containment area drainage valves are closed and locked? _____

2. Aboveground Storage Tanks (AST):
   a. Tanks checked for signs of leakage? _____
   b. Tanks checked for corrosion? _____
   c. Tanks properly labeled? _____
   d. Bolts, rivets or seams are not damaged? _____
   e. Tank supports/foundations are intact? _____
   f. Liquid level gauges are operating properly? _____
   g. Vents are not obstructed? _____
   h. Valves, flanges and gaskets are free from leaks? _____
   i. Containment walls are intact? _____
   j. Signs/barriers to protect tanks from vehicles are in place? _____

3. Hoses and Piping:
   a. Dispenser hoses free of cracks or abrasions that might cause leakage? _____
   b. Dispenser nozzles operating properly? _____
   c. Piping checked for signs of leakage? _____
   d. Piping checked for corrosion? _____
   e. Valves, flanges or other fittings are free from leaks? _____
   f. Signs/barriers in place to protect pipelines from vehicles are in place? _____

4. Security:
   a. Area fence and gates are intact? _____
   b. Gates have locks? _____
   c. Fill pipes on ASTs are locked except during fuel delivery? _____
   d. Starter controls for dispenser pumps are locked when not in use? _____
   e. Area lighting is working properly? _____

5. Training:
   a. All fueling station users are trained in operations of fueling equipment? _____
   b. Spill prevention information provided to all fueling station users? _____
   c. Training records are maintained at Motor Pool? _____

6. Safety:
   a. Tanks labeled with appropriate hazard warnings? _____
   b. Spill and overfill cleanup materials are available? _____
   c. Fire extinguisher is operational and readily accessible? _____
   d. Tanks and piping are properly bonded/grounded? _____

7. Record Keeping:
   a. A copy of the SPCC Plan will be available for review at Motor Pool, Physical Plant and the University Environmental Health and Safety Office.
b. All weekly inspection, containment drainage, fuel delivery, training and fueling station/motor pool related maintenance records are maintained at Motor Pool.

8. Remarks or Recommendations: (Continue on another sheet if necessary)

**Containment Area Drainage Discharge Report**

Drain valve opened in Containment Area

Date  Time

Drain valve closed in Containment Area

Date  Time

Appearance of water at time of release:
(Nota: Remove any oil sheen prior to release from the Containment Area)

Inspector: _________________________
Facility Supervisor: __________________________  Date: _________________