SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN
FOR
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY

College Avenue Campus
New Brunswick, New Jersey

Original Date of Plan: February 2000
Date of Last Plan Amendment/P.E. Certification: June 2003; September 2004
Date of Last Plan Review: February 2018

CERTIFICATION

I hereby certify that I have examined the facility, and being familiar with the provisions of 40 CFR part 112, and have visited this facility, attest that this SPCC Plan has been prepared in accordance with good engineering practices, including consideration of applicable industry standards, and that procedures for inspection and testing have been established, and that the plan is adequate for this facility.

Engineer:	Glenn Vliet
Registration Number:	GE03398800
State:	New Jersey
Signature:	Glen Vliet
Date:	2/3/05

SPILL PREVENTION CONTROL AND COUNTERMEASURE COMPLIANCE INSPECTION PLAN REVIEW PAGE

In accordance with the amendments to the Oil Pollution Prevention Act promulgated under the authority of the Clean Water Act, effective August 16, 2002, and codified under 40 CFR 112, a review and evaluation of this Spill Prevention Control and Countermeasure (SPCC) Plan has been conducted. This plan must be reviewed and updated every five years for the date of the implementation of this plan (February 16, 2003). As a result of this review and evaluation, Rutgers, The State University of New Jersey (Rutgers) will amend the SPCC Plan within six months of the review (August 18, 2003) to include more effective prevention and control technology if: (1) such technology will significantly reduce the likelihood of a spill event from the facility, and (2) if such technology has been field-proven at the time of review. Any amendment to the SPCC Plan shall be certified by a Professional Engineer within six months after a change in the facility design, construction, operation, or maintenance occurs which materially affects the facility's potential for the discharge of oil into or upon the navigable waters of the United States or adjoining shorelines.

Review Dates	Signature
1. 1/6/2016	
2. 2/20/2018	
3.	
4.	

MANAGEMENT APPROVAL

Rutgers is committed to the prevention of discharges of oil to navigable waters and the environment, and maintains the highest standards for spill prevention control and countermeasures through regular review, updating, and implementation of this SPCC Plan for the College Avenue Campus.

Authorized Facility Representative: ANTONIO M. CALCADO

Signature:

Title: SENIOR VICE PRESIDENT INSTITUTIONAL PLANNING & OPERATIONS

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1. FACILITY OWNER AND OPERATOR

1.1. Facility Owner, Address, and Telephone

Rutgers, The State University of New Jersey
Old Queens
83 Somerset Street
New Brunswick, NJ 08901-1281

1.2. Facility Operator, Address and Telephone

Rutgers, The State University of New Jersey
Rutgers Environmental Health and Safety
Building 4086, Livingston Campus
27 Road 1
Piscataway, New Jersey 08854-8036
(732) 445-2550

2. FACILITY CONTACT(S)

Table 1. Facility Contacts

Name	Title	Telephone
Facilities, Office of Director	Facility Representative	(848) 445-2460
Utilities, Office of Director	Utilities Representative	(848) 445-0299
REHS Representative	Environmental Health and Safety Office	(848) 455-2550

3. FACILITY DESCRIPTION

3.1. Facility Operations

112.7(a)(3) Describe in your Plan the physical layout of the facility and include a facility diagram, which must mark the location and contents of each container. The facility diagram must include completely buried tanks that are otherwise exempted from the requirements of this part under 112.7(d)(4). The facility diagram must also include all transfer stations and connecting pipes.

The College Avenue campus of Rutgers University is located on the southern side of the Raritan River in New Brunswick, New Jersey (Figure No. 1). There are eight (8) aboveground storage tanks (ASTs) and three (3) underground storage tanks (USTs) at the College Avenue Campus of Rutgers where petroleum product is stored (Figures No. 2 through 6). The AST's are used to store Diesel or No. 2 fuel oil for use in emergency generators or for heating. The three USTs store No. 2 oil and Diesel for use in boilers that heat buildings and for use in an emergency generator. The

USTs at Buildings 3061 and 3082 were installed in accordance with the standards of N.J.A.C. 7:14B-4.

The USTs at the facility receive product by common carrier via tank truck. Typically, product is delivered by a 3,000-gallon or 7,000-gallon compartmentalized truck which pumps at a rate of 50 to 65 gallons per minute. Product is distributed to the boilers and the emergency generator via underground piping.

There is one (1) area where oil is stored in 55-gallon drums. Motor oil and No. 2 fuel oil are stored in drums at Buildings 3082.

There is one electrical substation at the College Avenue Campus. The substation is located on the corner of Bishop Street and George Street. The substation includes oil-filled (Envirotemp FR3 vegetable oil) transformers that contain approximately 2,700 gallons.

The buildings on the College Avenue Campus are generally open all day, year-round. Rutgers personnel from Environmental Health and Safety can be reached at all times and are available to respond to any incident regarding the product storage areas.

3.2. Facility Oil Storage

112.7(a)(3)(i) The type of oil in each container and its storage capacity

Table 2 summarizes the location, size and type of oil storage areas at the College Avenue Campus. The oil storage areas include aboveground storage tanks (ASTs), underground storage tanks (USTs), drum storage and the electrical substation for the College Avenue Campus. Although not summarized in Table 2, smaller quantities of oil are also stored in temporary portable storage tanks, in hydraulic systems for building elevators and in transformers which service buildings.

Portable storage tanks are typically emplaced for temporary use at construction areas. The tanks store diesel fuel for use in construction vehicles and equipment. The tanks range in size but are generally around 275 gallons.

Hydraulic oil is used in several building elevator systems. The hydraulic system that is primarily used in low-rise buildings consists of a long piston that moves up and down within a cylinder. The car moves up when oil is pumped into the cylinder from a reservoir, raising the piston. The car is lowered when the oil returns to the reservoir. The reservoirs store approximately 70 to 80 gallons of hydraulic oil.

Small pole-mounted and pad-mounted electrical transformers are located at many of the buildings at the College Avenue Campus. The transformers generally store a small quantity of dielectric oil.

Table 2. Summary of Locations of Oil Storage

Building No.	Building Name	Volume (gallons)	Contents
Aboveground Storage Tanks			
3054	Leupp Hall	146	Diesel Fuel
3082	Central Heating Plant	250	Diesel Fuel
3154	University Center	250	Diesel Fuel
3158	Civic Square (MGSA)	500	Diesel Fuel
3162	195 College Ave (Residence)	250	No. 2 fuel oil
3197	Honors College	526	Diesel Fuel
3198	Rutgers Academic Bldg.	2000	Diesel Fuel
3199	College Avenue Apts.	317	Diesel Fuel
Underground Storage Tanks			
3061*	Hurtado Student Health Center	550	Diesel Fuel
3082*	Central Heating Plant	25,000	No. 2 fuel oil
3082*	Central Heating Plant	25,000	No. 2 fuel oil
Drums/Containers			
3082	Central Heating Plant	<550	Motor oil & No. 2 fuel oil
Oil-Filled Electrical Equipment			
Substation	Corner of George and Bishop Streets	2,700	Mineral oil
	Total Above Ground Storage	**6,939**	

*Exempt as per 40CFR 112.1 (d) (4). These locations are excluded from the combined total storage and do not require monthly facility inspections.

3.3. Drainage Pathways and Distance to Navigable Waters

Description of facility's proximity to bays, rivers, streams (perennial or intermittent), creeks, ditches, flood control channels, storm drains, and other waterways. Hydrological systems are described.

The northeastern portion of the College Avenue Campus is located approximately 500 feet from the Raritan River. Storm water catch basins are located along many of the public streets and in various areas adjacent to the buildings on the campus. These catch basins collect surface water, which is then piped to the New Brunswick storm sewer system. The New Brunswick storm sewer system discharges to the Raritan River. There are no surface water bodies located on the College Avenue Campus.

4. SPILL HISTORY

112.7(a) A facility which has experienced one or more spill events within twelve months prior to the effective date of this part should include a written description of each such spill, corrective action taken and plans for preventing recurrence.

Table No. 3 indicates that no spills have occurred at this facility.

Table 3. Spill History

Location/Date/ Time of Spill	Type & Amount Spilled	Cause	Affected Watercourses	Damages & Cost of Damages	Cleanup Cost	Corrective Action
None						

5. POTENTIAL SPILL PREDICTIONS

112.7(b) Where experience indicates a reasonable potential for equipment failure (such as loading and unloading equipment, tank overflow, rupture, or leakage, or any other equipment known to be a source of a discharge), include in your Plan a prediction of the direction, rate of flow, and total quantity of oil which could be discharged from the facility as a result of each type of major equipment failure.

Table 4 summarizes the predicted direction, rate of flow and total quantity of oil that would be discharged at storage areas where there is a reasonable potential for equipment failure.

Table 4. Summary of Potential Spill Predictions and Prevention Measures at College Avenue Campus

College Avenue Campus -- Rutgers, The State University of New Jersey

Building No. Size & Contents	Type of Failure	Total Volume (gallons)	Flow Rate (gpm)	Direction of Flow	Location of Discharge	Spill Prevention Measures	Measure Adequate or Corrective Action	Notes
Aboveground Storage Tanks								
3054	Overfill	-	-	-	emergency generator enclosure	SC	Adequate	
146-G Diesel	Rupture, leakage	146	-	-	grass	tank w/ SC on skid	Adequate	
	Unloading pipe rupture	100	65	North	asphalt parking lot to catch basin	Diversion booms	Adequate	2
3082	Overfill	-	-	-	building	None	Adequate	1
250-G Diesel	Rupture, leakage	250	-	-	building	diked containment	Adequate	1
	Unloading pipe rupture	100	65	North	asphalt parking lot to catch basin	Diversion booms	Adequate	2
3154	Overfill	-	-	-	-	None	Adequate	1
250-G Diesel	Rupture, leakage	-	-	-	building	tank w/ SC on skid	Adequate	1
	Unloading pipe rupture	100	65	North	asphalt loading dock lot to catch basin	Diversion booms	Adequate	2
3158	Overfill	-	-	-	emergency generator enclosure	SC	Adequate	
500-G Diesel	Rupture, leakage	-	-	-	asphalt parking lot to catch basin	tank w/ SC on skid	Adequate	
	Unloading pipe rupture	100	65	North	asphalt parking lot to catch basin	Diversion booms	Adequate	2
3162	Overfill	-	-	-	building	None	Adequate	1
250-G #2 Fuel Oil	Rupture, leakage	-	-	-	building	None	Adequate	1
	Unloading pipe rupture	100	65	East	gravel driveway to catch basin	Diversion booms	Adequate	2
3197	Overfill	-	-	-	emergency generator enclosure	SC	Adequate	
526-G Diesel	Rupture, leakage	526	-	-	grass	tank w/ SC on skid	Adequate	
	Unloading pipe rupture	100	65	East	asphalt parking lot to catch basin	Diversion booms	Adequate	2
3198	Overfill	-	-	-	emergency generator enclosure	SC	Adequate	
2000-G Diesel	Rupture, leakage	2,000	-	-	grass	tank w/ SC on skid	Adequate	
	Unloading pipe rupture	100	65	Southeast	asphalt parking lot to catch basin	Diversion booms	Adequate	2
3199	Overfill	-	-	-	emergency generator enclosure	SC	Adequate	
317-G Diesel	Rupture, leakage	317	-	-	asphalt parking lot to catch basin	tank w/ SC on skid	Adequate	
	Unloading pipe rupture	100	65	West	asphalt parking lot to catch basin	Diversion booms	Adequate	2
Underground Storage Tanks								
3061	Overfill	OP	-	-	-	Visual/audible alarms	Adequate	
550-G #2 Fuel Oil	Leakage	CP	-	-	-	Double-walled with outer fiberglass-coated steel & interstitial monitoring	Adequate	
	Unloading pipe rupture	325	65	Northeast	ground & asphalt walkway to catch basin	Diversion booms	Adequate	2
3082	Overfill	OP	-	-	SC	Visual/audible alarms	Adequate	
25,000-G #2 Fuel Oil	Leakage	CP	-	-	-	Double-walled with outer fiberglass-coated steel & interstitial monitoring	Adequate	
	Unloading pipe rupture	325	65	North	asphalt parking lot to catch basin	Diversion booms	Adequate	2
3082	Overfill	OP	-	-	-	Visual/audible alarms	Adequate	
25,000-G #2 Fuel Oil	Leakage	CP	-	-	-	Double-walled with outer fiberglass-coated steel & interstitial monitoring	Adequate	
	Unloading pipe rupture	325	65	North	asphalt parking lot to catch basin	Diversion booms	Adequate	2
Drums/Containers								
3082 <10 55-G Drums	Drum rupture	55	55	In building	Secondary containment pallet or in building	Secondary containment pallet or onto impervious building floor	Adequate	
Oil-Filled Electrical Equipment								
Substation 2,700-G Electrical Transformers	Leakage	<500	-	-	Gravel and soil surrounding substation	Frequent visual inspections; loss of oil will result in transformer failure and loss of power prompting immediate response	Adequate	4

Abbreviations:

OP Tank is equipped with overfill protection.
CP Tank is equipped with corrosion protection.
SC Tank is equipped with secondary containment.
- Not applicable.
AST Aboveground Storage Tank.
UST Underground Storage Tank.
gpm gallons per minute

Notes:

1 This AST is stored within the building; hence, secondary containment is provided by the building.
2 The volume of the worst-case overfill was estimated by calculating the estimated delivery flow rate (a maximum of 65 gallons per minute) by the maximum time in which it would take the delivery person to notice the overfill (assumed to be 5 minutes).
3 Although corrosion of the UST system is a probable type of failure, an estimate of the volume, rate of discharge and direction of flow is not provided because all of the USTs will either be removed or upgraded to the requirements of N.J.A.C. 7:14B.
4 Substation is inspected frequently and a loss of oil from a transformer would eventually result in failure of transfomer prompting an immediate response by Rutgers personnel.

6. PREVENTION MEASURES PROVIDED

6.1. Summary of Spill Prevention and Control Measures

> *112.7(c) Provide appropriate containment and/or diversionary structures or equipment to prevent a discharge as described in 112.1(b). The entire containment system, including walls and floor, must be capable of containing oil and must be constructed so that any discharge from a primary containment system, such as a tank or pipe, will not escape the containment system before clean up occurs. At a minimum, you must use one of the following prevention systems or its equivalent: (1) for onshore facilities: (i) Dikes, berms or retaining walls sufficiently impervious to contain oil; (ii) Curbing; (iii) Culverting, gutters or other drainage systems; (iv) Weirs, booms or other barriers; (v) Spill diversion ponds; (vi) Retention ponds, or; (vii) Sorbent materials. (2) Offshore facilities: (i) Curbing, drip pans, or; (ii) Sumps and collection systems.*

Table 4 summarizes the spill prevention and control measures in-place to minimize the potential for equipment failure at the AST, USTs, drum storage and electrical substation. The spill prevention and control measures for the portable storage tanks, elevators and building transformers are summarized below.

When a portable storage tank is used (see Section 3.2), it is positioned to (a) prevent any spilled oil from reaching navigable waters and (b) protect the tank from periodic flooding or washout. A secondary means of containment is provided for the largest single compartment or tank. The type of secondary containment is based on the area where the portable storage tank is positioned.

There are no specific secondary containment measures for the hydraulic oil in elevator systems at the College Avenue Campus. Instead, Rutgers conducts monthly inspections of the hydraulic reservoirs for the elevators. In the event of a loss of hydraulic oil from the reservoir, the loss is reported to the Director of Facility Maintenance Services. A work order is written and the cause of loss is evaluated and repaired. Despite the absence of specific secondary containment, there is a low potential for a discharge from a hydraulic reservoir to affect any navigable waterway at the College Avenue Campus.

There are no specific secondary containment measures for pole- and pad-mounted transformers that service buildings at the College Avenue Campus. Rutgers personnel at a monthly and, in some instances, a quarterly interval, inspect transformers. Additionally, in the event of a loss of dielectric oil from a transformer, the transformer would overheat and cease to function. As such, Rutgers personnel would immediately respond to repair the transformer and address any loss of oil.

6.2. Facility Drainage

6.2.1. Drainage from diked storage areas

> *112.8(b) (1) Facility drainage. Restrain drainage from diked storage areas by valves to prevent discharge into the drainage system or facility treatment system, except where*

facility systems are designed to control such discharge. You may empty diked areas by pumps or ejectors; however, you must manually activate these pumps or ejectors and must inspect the condition of the accumulation before starting, to ensure no oil will be discharged.

Since the facility is a college campus and the oil storage areas are generally comprised of individual tanks at various buildings across the campus, overall facility drainage is not controlled. Instead, drainage is controlled at specific oil storage areas, where necessary to minimize the potential for a discharge to navigable water.

6.2.2. Valves used on diked area storage

112.8(b) (2) Use valves of manual, open-and-closed design, for the drainage of diked areas. You may not use flapper-type drain valves to drain diked areas. If your facility drainage drains directly into a watercourse and not into an on-site wastewater treatment plant, you must inspect and may drain uncontaminated retained stormwater, as provided in paragraphs (c) (3)(ii), (iii), and (iv) of this section

This section is not applicable to this facility since there are no diked storage areas.

6.2.3. Drainage systems from undiked areas

112.8(b)(3) Design facility drainage systems from undiked areas with a potential for a discharge such as where piping is located outside containment walls or where tank truck discharges may occur outside the loading area) to flow into ponds, lagoons or catchment basins, designed to retain oil or return it to the facility. You must not locate catchment basins in areas subject to periodic flooding.

All storage areas and tank truck unloading areas are undiked. To minimize the potential for a discharge, prevention measures are utilized at these locations during unloading. Specifically, diversion booms are placed around the tank truck during unloading. The diversion booms are designed to contain and/or divert a discharge from storm water catch basins.

6.2.4. Final discharge of drainage

112.8(b) (4) If facility drainage is not engineered as in paragraph (b)(3), of this section, equip the final discharge of all ditches inside the facility a diversion system that would, in the event of an uncontrolled discharge, retain oil in the facility.

This section is not applicable to this facility because all storm water catch basins in the vicinity of storage areas are protected during tank truck unloading. A discharge from a tank truck would be prevented from reaching the catch basins by the diversion booms. If petroleum were to enter the catch basin, the emergency contacts listed in Section 6.10 should be immediately contacted.

6.2.5. Facility Drainage Systems and Equipment

> *112.8(b)(5) Where drainage waters are treated in more than one treatment unit and such treatment is continuous, and pump transfer is needed, provide two ''lift'' pumps and permanently install at least one of these pumps. Whatever techniques are used, you must engineer facility drainage systems to prevent a discharge as described in paragraph 112.1(b) in case there is an equipment failure or human error at the facility.*

This section is not applicable to this facility since there are no facility drainage treatment systems.

6.3. Bulk Storage Tanks and Secondary Containment

6.3.1. Tank compatibility with its contents

> *112.8(c) (1) Bulk storage containers. Not use a container for the storage of oil unless its material and construction are compatible with the material stored and conditions of storage such as pressure and temperature.*

The material and construction of all tanks is compatible with both the type of oil stored and the conditions of oil storage as summarized in Table 5 below.

Table 5. Summary of Tank Compatibility with Contents

Building No. Size	Construction	Date Installed	Contents	Contents Compatible
3054 146-G	Double-Walled Steel	2015	Diesel Fuel	Yes
3082 250-G	Steel	2000	Diesel Fuel	Yes
3154 250-G	Double-Walled Steel	2000	Diesel Fuel	Yes
3158 500-G	Double-Walled Steel	1995	Diesel Fuel	Yes
3162 250-G	Steel	1998	No. 2 fuel oil	Yes
3197 526-G	Double-Walled Steel	2016	Diesel Fuel	Yes
3198 2000-G	Double-Walled Steel	2016	Diesel Fuel	Yes
3199 250-G	Double-Walled Steel	2016	Diesel Fuel	Yes
3061 550-G	Double-Walled – Inner Steel & Fiberglass-Coated Outer Steel	1999	No. 2 fuel oil	Yes
3082 (2) 25,000-No. 2	Double-Walled – Inner Steel & Fiberglass-Coated Outer Steel	1999	No. 2 fuel oil	Yes

6.3.2. Diked area construction and containment volume for storage tanks

> *112.8(c)(2) Construct all bulk storage tank installations so that you provide a secondary means of containment for the entire contents of the largest single tank plus sufficient freeboard to allow for precipitation. You must ensure diked areas are sufficiently impervious to contain discharges oil. Dikes, containment curbs, and pits are commonly employed for this purpose. You may use an alternative system consisting of a drainage trench enclosure that must be arranged so that a discharge will be safely confined in an in facility catchment basin or holding pond.*

The 250-gallon tank for the emergency generator inside the Central Heating Plant has a diked containment.

6.3.3. Diked area, inspection and drainage of rainwater

112.8(c)(3) Not allow drainage of uncontaminated rainwater from the diked area into a storm drain or discharge of an effluent into an open water course, lake, or pond, or bypassing the treatment facility system unless you:
(i) Normally keep the bypass valve sealed closed.
(ii) Inspect the retained rainwater to ensure its presence will not cause a discharge as described in paragraph 112.1(b).
(iii) Open the bypass valve and reseal it following drainage under responsible supervision.
(iv) Keep adequate records of such events, for example, any records required under permits issued in accordance with paragraph 122.41(j)(2) and 122.41(m)(3) of this chapter.

This section is not applicable to the facility since the AST's at the facility are totally enclosed within the emergency generator system or located inside the building.

6.3.4. Corrosion protection of buried metallic storage tanks

112.8(c)(4) Protect any completely buried metallic storage tanks installed after January 10, 1974 from corrosion by coatings or cathodic protection compatible with local soil conditions. You must regularly leak test such completely buried metallic storage tanks.

The 550-gallon, No. 2 fuel oil, UST at Building 3061 and the two (2)- 25,000-gallon USTs at Building 3082 are double-walled, consisting of an inner steel tank surrounded by a fiberglass-coated outer steel tank with an interstitial monitoring and alarm system. The tanks were designed and installed in compliance with the standards in N.J.A.C. 7:14B-4.

6.3.5. Corrosion protection of partially buried metallic tanks

112.8(c)(5) Not use partially buried metallic tanks for the storage of oil, unless you protect the buried section of the tank from corrosion. You must protect the partially buried and bunkered tanks from corrosion by coatings or cathodic protection compatible with local soil conditions

This section is not applicable to the facility since there are no partially buried tanks.

6.3.6. Aboveground tank periodic integrity testing

112.8(c)(6) Test each aboveground container for integrity on a regular schedule, and whenever you make material repair. The frequency of and type of testing must take into account container size and design (such as floating roof, skid mounted, elevated, or partially buried). You must combine visual inspection with another testing technique such as hydrostatic testing, radiographic testing, ultrasonic testing, acoustical emissions testing, or another system of non-destructive shell testing. You must keep comparison records and you must also inspect the container's supports and foundations. In addition, you must frequently inspect the outside of the container for signs of deterioration,

discharges, or accumulation of oil inside diked areas. Records of inspections and test kept under usual and customary business practices will suffice for purposes of this paragraph

Since the AST's at the facility are stored inside the building or inside the housing of the emergency generators, corrosion and/or other deterioration due to weather conditions is not predicted. As such, periodic integrity testing, other than typical visual inspection, is not performed.

6.3.7. Control of leakage through internal heating coils

112.87(c)(7) Control leakage through defective internal heating coils by monitoring the steam return and exhaust lines for contamination from internal heating coils that discharge into an open watercourse, or pass the steam return or exhaust lines through a settling tank, skimmer, or other separation or retention system.

This section is not applicable to the facility since none of the USTs are equipped with internal heating coils.

6.3.8. Tank installation fail-safe engineered

112.8(c)(8) Engineer or update each container installation in accordance with good engineering practice to avoid discharges. You must provide at least one of the following devices:
(i) High liquid level alarms with an audible or visual signal at a constantly attended operation or surveillance station. In smaller facilities an audible air vent may suffice.
(ii) High liquid level pump cutoff devices set to stop flow at a predetermined container content level.
(iii) Direct audible or code signal communication between the tank gauger and the pumping station.
(iv) A fast response system for determining the liquid level of each bulk storage container such as digital computers, telepulse, or direct vision gauges. If you use this alternative, a person must be present to monitor gauges and the overall filling of bulk storage containers.
(v) You must regularly test liquid level sensing devices to ensure proper operation.

Fail-safe engineering systems are equipped at all oil storage tanks. The UST at Building 3061 and 3082 are equipped with both visual and audible alarms for overfill protection. The visual and audible alarms are installed such that the tank truck operator can respond quickly in the event that an alarm is triggered. The high-level alarm is activated when product reaches 95% of the storage capacity of the UST.

Fail-safe engineering system are not planned to be installed at the ASTs located at Buildings 3082, 3158, 3162, 3154, 3054, 3197, 3198 and 3199.

6.3.9. Observation of disposal facilities for effluent discharge

112.8(c)(9) Observe effluent treatment facilities frequently enough to detect possible system upsets that could cause a discharge as described in paragraph 112.1(b).

This section is not applicable to the facility since there are no disposal facilities.

6.3.10. Visible oil leak corrections from tank seams and gaskets

> *112.8(c)(10) Promptly correct visible oil leaks which result in a loss of oil from the container, including but not limited to seams, gaskets, piping, pumps, valves, and bolts. You must promptly remove any accumulations of oil in diked areas.*

Visible oil leaks are reported to the Director of Facility Maintenance Services (see Section 2). Subsequent to reporting, a work order is written and the tank is repaired prior to being reused.

6.3.11. Appropriate position of mobile or portable oil storage tanks

> *112.8(c)(11) Position or locate mobile or portable oil storage containers to prevent a discharge as describe in paragraph 112.1(b). You must furnish secondary means of containment, such as dikes or catchment basins, sufficient to contain the capacity of the largest single compartment or container with sufficient freeboard to contain precipitation.*

When a portable storage tank is used (see Section 3.2), it is positioned to (a) prevent any spilled oil from reaching navigable waters and (b) protect the tank from periodic flooding or washout. A secondary means of containment is provided for the largest single compartment or tank. The type of secondary containment is based on the area where the portable storage tank is positioned.

6.4. Bulk Storage Tank Piping

6.4.1. Underground piping

> *112.8(d)(1) Provide buried piping that is installed after August 16, 2002 with a protective wrapping and coating. You must also cathodically protect such buried piping installations or otherwise satisfy the corrosion protection standards for piping in part 280 of this chapter or a state program approved under part 281 of this chapter. If a section of buried line is exposed for any reason, it should be carefully inspected for deterioration. If you find corrosion damage, you must undertake, additional examination and corrective action as indicated by the magnitude of the damage.*

Underground piping associated with the USTs at Buildings 3061 and 3082 are double-walled, fiberglass-coated outer steel and equipped with an interstitial monitoring and alarm system.

6.4.2. Provisions for piping not in service

112.8(d)(2) Cap or blank flange the terminal connection at the transfer point and mark it as to origin when piping is not in service for an extended period of time.

When the aboveground piping at the ASTs is not in use, the terminal connection at the transfer point, where applicable, is capped. All aboveground piping is labeled with product content, origin and direction of flow.

6.4.3. Aboveground piping support

> *112.8(d)(3) properly design pipe supports to minimize abrasion and corrosion and allow for expansion and contraction.*

All AST piping at the facility is located inside the building or inside the housing of the emergency generators and is properly supported to minimize abrasion and corrosion.

6.4.4. Aboveground valve and pipeline examination

> *112.8(d)(4) Regularly inspect all aboveground valves, piping and appurtenances. During the inspection you must assess the general conditions of items, such as flange joints, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces. You must conduct integrity and leak testing of buried metal piping at the time of installation, construction, relocation, or replacement.*

Aboveground piping and valves are inspected at the time facility inspections are conducted on a monthly basis.

6.4.5. Aboveground piping protection from vehicular traffic

> *112.8(b)(5) Warn all vehicles entering the facility to be sure that no vehicle will endanger aboveground piping or other oil transfer operations.*

This section is not applicable to the facility since there is no aboveground piping, which is located outside the building or the housing of the emergency generators.

6.5. Facility Truck Unloading

6.5.1. Unloading procedures meet DOT regulations

Rutgers requires all drivers to comply with DOT regulations in 49 CFR part 177 and a facility standard operating procedure (see Attachment C).

6.5.2. Secondary containment for tank trucks

> *112.7(h)(1) Facility tank car and tank truck loading/unloading rack (excluding offshore facilities). Where loading/unloading area drainage does not flow into a catchment basin or treatment facility designed to handle discharges, use a quick drainage system for tank truck loading and unloading areas. You must design a containment system to hold at least the maximum capacity of any single compartment of a tank car or tank truck loaded or unloaded at the facility.*

All tank truck unloading areas associated with the oil storage areas are undiked. However, there are a few undiked areas where there is a reasonable potential for a discharge to either reach a storm water catch basin or surface water body (as noted in Table 4). There is a potential for a discharge to reach a catch basin at Buildings 3061, 3082, 3158, 3162, 3154, 3054, 3197, 3198 and 3199.

To minimize the potential for a discharge at these unloading areas, spill prevention measures are implemented during unloading. The tank truck unloading area at Building 3061 consists of an asphalt parking lot with some perimeter concrete curbing. The parking lot is sloped toward concrete stairs that lead down to a storm water catch basin. During unloading, a diversion boom is emplaced to prevent a discharge of oil from entering the catch basin.

The tank truck unloading area for the one 250-gallon AST and the two (2)- 25,000-gallon USTs at Building 3082 consists of an asphalt parking lot with perimeter concrete curbing. The parking lot is sloped toward a storm water catch basin located to the north of the USTs. During unloading, a diversion boom is emplaced to prevent a discharge of oil from entering the catch basin.

The tank truck unloading area for Buildings 3158, 3054, 3197, 3198 and 3199 consist of asphalt parking lots. These parking lots contain storm water catch basins located near the building. During unloading, a diversion boom is emplaced to prevent a discharge of oil from entering the catch basins.

The tank truck unloading areas for the 250-gallon AST at Building 3162 consist of gravel parking lot. During unloading, a diversion boom is emplaced to prevent a discharge of oil from entering the catch basins.

The tank truck unloading areas for the 250-gallon AST at Building 3154 consist of an inside loading dock. During unloading, a diversion boom is emplaced to prevent a discharge of oil from entering the catch basins.

6.5.3. Warning or barrier system for vehicles

> *112.7(h)(2) Provide an interlocked warning light or physical barrier system, warning signs, wheel chocks, or vehicle break interlock system in loading/unloading areas to prevent vehicles from departing before complete disconnection of flexible or fixed transfer lines.*

Warning signs are posted at all the unloading for the UST and AST locations to prevent vehicular departure before disconnecting flexible or fixed transfer lines.

6.5.4. Vehicles examined for lowermost drainage outlets before leaving

> *112.7(h)(3) Prior to filling and departure of any tank car or tank truck closely inspect for discharges the lowermost drain and all outlets of such vehicles, if necessary, ensure that they are tightened, adjusted, or replaced to prevent liquid discharge while in transit.*

Warning signs are posted in the unloading areas for the USTs at Building 3061 and 3082 to remind drivers to examine drain outlets prior to departure.

6.6. Inspections and Record Keeping

> *112.7(e) Conduct inspections and test required of this part in accordance with written procedures that you or the certifying engineer develop for the facility. You must keep these written procedures and a record of the inspections and tests, signed by the appropriate supervisor or inspector, with the SPCC Plan for a period of three years. Records of inspections and tests kept under usual and customary business practices will suffice for purposes of this paragraph.*

Facility inspection procedures:

Formal facility inspections are conducted monthly and records of these inspections are documented and signed by the inspector. During the monthly inspection, all unloading areas, containment structures, valves, pipelines, and other equipment are inspected. The checklist used for these inspections can be found in Attachment B.

Length of time records kept:

Inspection, training, and tank integrity testing records are retained for at least three years.

6.7. Site Security

6.7.1. Fencing

> *112.7(g)(1) Fully fence each facility handling, processing, and storing oil and lock and/or guard entrance gates the facility is not in production or is unattended.*

Fencing is not provided around all of the oil storage areas since the facility is a college and access to many of the areas in which the USTs are located cannot be restricted. Despite the lack of fencing, there is a low probability that a discharge could occur as a result of unauthorized access to a UST area.

6.7.2. Flow valves locked

> *112.7(g)(2) Security. Ensure the master flow and drain valves and any other valves permitting direct outward flow of the container's contents to the surface have adequate securely measures so that they remain in the closed position when in non-operating or nonstandby status.*

This section is not applicable.

6.7.3. Starter controls locked

> *112.7(g)(3) Lock the starter control on each oil pump in the 'off' position and locate it at a site accessible only to authorized personnel when the pumps are in a non-operating or non-standby status.*

Starter controls for pumps associated with boilers and the emergency generator are located in areas accessible only to authorized Rutgers personnel.

6.7.4. Fill piping connections securely capped

> *112.7(g)(4) Securely cap or blank flange the loading/unloading connections of oil pipelines or facility piping when not in service or standby service.*

All fill piping connections are securely capped when they are not in use and blank-flanged when they are in standby service for an extended time.

6.7.5. Lighting adequate to detect spills

> *112.7(g)(5) Provide facility lighting commensurate with the type and location of the facility that will assist in the:*
> *(i) Discovery of discharges occurring during hours of darkness, both by operating personnel, if present, and by nonoperating personnel (the general public, local police, etc.) and*
> *(ii) Prevention of spills occurring through acts of vandalism.*

Lights illuminate the oil storage areas. Lights are automatically turned on. Lighting is adequate to detect spills during nighttime hours and to deter vandalism.

6.8. Personnel Training and Spill Prevention Procedures

6.8.1. Personnel instructions

> *112.7(f)(1) Personnel, training and discharge prevention procedures. At a minimum, train your oil handling personnel in the operation and maintenance of equipment to prevent the discharges; discharge procedure protocols; applicable pollution control laws, rules and regulations; general facility operations; and, the contents of the SPCC Plan.*

Any personnel responsible for implementing the provisions of this SPCC Plan are required to have spill prevention training that includes a complete review of Rutgers' SPCC Plan. Rutgers conducts training to ensure that these personnel are familiar with the SPCC Plan and the measures to be implemented in the event of a discharge.

6.8.2. Designated person accountable for spill prevention

> *112.7(f)(2) Designate a person at each applicable facility who is accountable for oil spill prevention and who reports to facility management.*

The Facilities Maintenance Services (FMS) Campus Director and the Utilities Director are the designated persons accountable for spill prevention at Rutgers – College Avenue Campus.

6.8.3. Spill prevention briefings

> *112.7(f)(3) Schedule and conduct discharge prevention briefings for your oil-handling personnel at least once a year to assure adequate understanding of the SPCC Plan for that facility. Such briefings must highlight and describe known discharges in paragraph 112.1(b) or failures, malfunctioning components, and recently developed precautionary measures.*

During annual safety briefings, spill prevention is discussed. Any incidents are discussed in these briefings in order to prevent them from recurring. Employee feedback and recommendations are encouraged in spill prevention and operation.

6.9. Spill Control Equipment

Spill control equipment on site includes absorbent pads and booms; granular absorbent, empty drums, brooms, and shovels. Spill equipment is stored in facility/housing maintenance areas.

6.10. Emergency Contacts

> *Part 110-Discharge of Oil: 110.10 Notice. Any person in charge of a vessel or of an onshore or offshore facility shall, as soon as he or she has knowledge of any discharge of oil from such vessel or facility in violation of §110.6, immediately notify the National Response Center (NRC) (800-424-8802); in the Washington, DC metropolitan area, 426-2675). If direct reporting to the NRC is not practicable, reports may be made to the Coast Guard or EPA predesignated On-Scene Coordinator (OSC) for the geographic area where the discharge occurs. All such reports shall be promptly relayed to the NRC. If it is not possible to notify the NRC or the predesignated OCS immediately, reports may be made immediately to the nearest Coast Guard unit, provided that the person in charge of the vessel or onshore or offshore facility notifies the NRC as soon as possible. The reports shall be made in accordance with such procedures as the Secretary of Transportation may prescribe. The procedures for such notice are set forth in U.S. Coast Guard regulations, 33 CFR part 153, subpart B and in the National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR part 300, subpart E. (Approved by the Office of Management and Budget under the control number 2050-0046).*

In the event of discharge, the person who is at the scene shall first contact the Rutgers Police. The Rutgers Police shall then contact REHS and Emergency Personnel, as necessary. Table No. 6 is a listing of the emergency contacts.

Table 6. Emergency Contacts

Name/Organization	Phone Number
Rutgers Police	**(732) 932-7211**
Federal National Response Center	(800) 424-8802
NJDEP Spill Hotline	(877) WARN DEP
New Brunswick Health Department	(732) 745-5021
New Brunswick Fire/Police Department	9-1-1

ATTACHMENT A

Certification of the Applicability of the Substantial Harm Criteria (40 CFR 112.20)

Certification of the Applicability of the Substantial Harm Criteria (40 CFR 112.20)

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

   Yes ___ No X

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

   Yes ___ No X

3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments?

   Yes ___ No X

4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance such that a discharge from the facility would shut down a public water intake?

   Yes ___ No X

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

   Yes ___ No X

Certification

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.

Signature: _____
Name: Antonio M. Calcado
Title: Senior Vice President Institutional Planning & Operations
Date: 1/8/16

ATTACHMENT B

Monthly Facility Inspection Checklist

MONTHLY FACILITY INSPECTION CHECKLIST

Location: Example - Generator Diesel AST (500 g)
Date:
Inspector:

ALL QUESTIONS ARE TO BE ANSWERED
X = Satisfactory, N/A = Not Applicable, O = Repair or Adjustment Required
Explain All "O" Answers in Comments / Remarks / Recommendations

Drainage (Out of Doors Areas)

X	N/A	O	
			Any noticeable oil sheen on runoff.
			Containment area drainage valves are closed and locked.
			Oil / Water separator systems working properly.
			Effluent from oil / water separator inspected.
			No visible oil sheen in containment area.
			No standing water in containment area.
			Valves, flanges, and gaskets are free from leaks.
			Containment walls are intact.

AST's

X	N/A	O	
			Tank surfaces checked for signs of leakage.
			Tank condition good (no rusting, corrosion, pitting)
			Bolts, rivets or seams are not damaged.
			Tank foundations intact.
			Level gauges and alarms working properly.
			Vents are not obstructed.
			Containers properly labeled.
			Containment free of liquid (i.e. rain/product)

Pipelines

X	N/A	O	
			No signs of corrosion damage to pipelines or supports.
			Buried pipelines are not exposed.
			Out-of service pipes capped.
			Signs / barriers to protect pipelines from vehicles are in place.
			No leaks at valves, flanges or other fittings.
			Containment curbing or trenches are intact.
			Connections are capped or blank-flanged.

Truck Loading / Unloading Area

X	N/A	O	
			Warning signs posted.
			No standing water in rack area.
			No leaks in hoses.
			Drip pans not overflowing
			Catch basins free of contamination.

Security

X	N/A	O	
			Fence and gates intact.
			Gates locked and secure.
			Entrance door secure.
			AST's locked when not in use.
			Starter controls for pumps locked when not in use.
			Lighting is working properly.

Drums/Containers & Oil Filled Equipment

X	N/A	O	
			Containers condition good (i.e. no bulging, no leaks)
			Containers properly labeled/identified (product or waste)
			Containers properly closed
			Proper containment
			Containment free of liquid (i.e. rain/product)
			Transformers in good condition

UST's

X	N/A	O	
			Are sumps free of product/water/debris
			Are manways free of product/water/debris
			Are fill ports marked
			Have any alarms sounded in the last month
			Level gauges and alarms working properly.
			Vents are not obstructed.

Spill Kit Supplies

X	N/A	O	
			Spill Kit on site / available

Comments / Remarks / Recommendations

ATTACHMENT C
Standard Operating Procedure - Tank Truck Unloading

STANDARD OPERATING PROCEDURE – TANKER TRUCK UNLOADING

This standard operating procedure (SOP) is for the unloading of petroleum products only at Rutgers University. The SOP is intended to be used for unloading from tanker trucks into above ground or underground storage tanks.

PRIOR TO UNLOADING

1. Ensure that tanker truck is positioned in approved location for unloading.

2. Make sure that parking brakes on tanker trucks are engaged. Secure the loading/unloading vehicle prior to transfer operations with physical barriers such as wheel chocks and interlocks, to safeguard against accidental movement and rupture of transfer lines.

3. If applicable to the storage location, verify that containment structures are intact and spill control equipment is readily available.

4. Inspect condition of all storage tank flanges, joints, connections, and outlets. Tighten, adjust, or replace as necessary prior to unloading.

5. Properly lock in the closed position all drainage valves in the secondary containment structure.

6. Closely examine the lowermost drain and all outlets of the tanker truck for leakage or defects. If necessary, properly tighten, adjust, or replace to prevent liquid leakage while in transit.

7. Establish adequate bonding/grounding of the tanker truck and receiving container before connecting to the fuel transfer point.

8. Keep hose ends tightly capped while moving hoses into position.

9. Position transfer hoses inside containment structures.

10. Check the pumping circuit and verify the proper alignment of valves.

11. Gauge storage tank to determine volume required.

12. The transfer of Class 3 (flammable liquids) materials, shut off motors of the tank truck when making and breaking hose connections. If unloading is done without requiring the use of the motor of the tank truck to operate pumps, keep the motor shut off throughout unloading.

DURING UNLOADING

1. The driver, operator and/or attendant of a tanker truck should remain in the immediate area but outside the vehicle during unloading.

2. When unloading, keep the internal and external valves on the receiving tank open.

3. Make sure that communication is maintained between the pumping and receiving operators at all times.

4. Periodically inspect the condition of the alligator clips, especially the joint between the bonding wire and the clip, to ensure effective bonding circuits.

5. Monitor all hose couplings during unloading.

6. Monitor the liquid level in the receiving tank during unloading to prevent overflow.

7. Monitor flow meters to determine rate of flow during unloading>

8. Reduce flow rate while topping off the tank to provide sufficient reaction time for pump shutdown without overflow of the receiving tank.

9. Never completely fill the receiving tank; provide a minimum of 1 percent ullage to prevent leakage due to thermal expansion.

SUBSEQUENT TO UNLOADING

1. Make sure all material has been transferred to tank prior to disconnecting any transfer hoses.

2. Close all tank valves and tanker truck internal, external, and dome-cover valves before disconnecting.

3. Secure all hatches.

4. Disconnect grounding/bonding wires.

5. Prior to vehicle departure, make sure that all connections, fill lines, and grounding/bonding wires are disconnected.

6. Use a drip pan when breaking a connection.

7. Make sure that the hoses are drained, vented, or blown down, to remove the remaining oil before moving them away from their connections.

8. Cap the end of the hose or other connecting devices before moving them, to prevent uncontrolled oil leakage.

9. Disconnect, drain, and support out-of-service or standby hoses, to avoid crushing or excessive strain.

10. Cap associated hose risers.

11. Close all hose riser valves not in use.

12. Remove wheel chocks.