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

Busch/Livingston Campus
Piscataway, 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 20, 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: GE05398800
State: New Jersey
Signature: Glenn 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 Busch/Livingston 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
(848) 445-2550

2. FACILITY CONTACT(S)

Table 1. Facility Contacts

Name	Title	Telephone
Facilities, Office of Director	Facility Representative	(848) 445-3705
Utilities, Office of Director	Utilities Representative	(848) 445-4117
REHS Representative	Environmental Health and Safety Office	(848) 445-2550

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 Busch/Livingston Campus of Rutgers University is located in Piscataway, New Jersey on the northern side of the Raritan River (Figure No. 1). There are a total of fifty-four (54) areas on the Busch Campus and twenty-three (23) areas at the Livingston Campus of Rutgers where petroleum products are stored. Of the seventy-seven (77) areas, seven (7) are underground storage tanks (USTs), sixty-one (61) are aboveground storage tanks (ASTs), five (5) are 55-gallon drum storage areas and four (4) are areas with electrical transformers. Various types of petroleum product are stored in the tanks, including No. 2 fuel oil, diesel fuel, unleaded gasoline and waste oil. The No. 2

fuel oil and diesel fuel are stored in ASTs and USTs for use in boilers that heat buildings and fuel emergency generators, while the unleaded gasoline is stored in both ASTs and USTs to fuel trucks and equipment.

The USTs and ASTs at the facility receive product by common carrier via tank truck. Typically, product is delivered by a 3,000-gallon compartmentalized truck which pumps at a rate of 50 to 65 gallons per minute. For the 40,000-gallon USTs at Building 3540 on the Busch Campus, a 7,000-gallon tank truck is used. The No. 2 fuel oil is delivered to the UST from the tank truck solely by gravity. Product is distributed from the storage tanks to boilers, emergency generators and fuel dispensers via both underground and aboveground piping.

The buildings on the Busch/Livingston Campus are generally open all day, year-round. Rutgers personnel from Environmental Health and Safety can be reached at all times to respond to an 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.

The following table summarizes the location, size and type of oil storage areas at the Busch/Livingston Campus. The oil storage areas include ASTs, USTs, drum storage and the electrical substation for the Campuses. In addition to these areas, smaller quantities of oil are stored in temporary portable storage tanks, in hydraulic systems for building elevators and in transformers that service buildings.

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

Hydraulic oil is used in several building elevator systems. The hydraulic system that is used 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 Busch/Livingston Campus. The transformers generally store a small quantity of dielectric oil.

Table 2. Summary of Locations of Oil Storage at Busch Campus

Above Ground Storage Tanks

#	Building #	Building Name	Gallons	Contents
1	3500	Stadium East	225	Diesel
2	3500	Stadium West	225	Diesel
3	3500	Stadium South	180	Diesel
4	3519	Presidents House	450	Diesel
5	3522	Practice Bubble	600	Diesel
6	3540	Central Heat	550	Used Oil
7	3540	Central Heat	690	Diesel
8	3555	Motor Pool Service Garage	275	Used Oil
9	3556	Wright Chemistry	275	Diesel
10	3558	Engineering B-Wing	275	Diesel
11	3559	Nelson D-Wing	2x250	Diesel
12	3559	Cell Repository	1,000	Diesel
13	3559	Cell Repository	600	Diesel
14	3559	Cell Repository	1,800	Diesel
15	3573	Waksman Institute – Inside	250	Diesel
16	3573	Waksman Institute – Outside	519	Diesel
17	3594	Chemistry	1830	Diesel
18	3688	RWJMS Generator Day Tank	75	Diesel
19	3689	SPH Research	4000	Diesel
20	3691	Stage II (Staged Research)	275	Diesel
21	3697	UBHC	1,700	Diesel
22	3750	Pharmacy – Inside	250	Diesel
23	3750	Pharmacy – Outside	660	Diesel
24	3751	Administrative Services (ASB I)	2,000	Diesel
25	3752	Hill Center	1,000	Diesel
26	3757	Psychology	250	Diesel
27	3800	Marvin Apts. Lift Station	60	Diesel
28	3825	Nichol Apts. #1	430	Diesel
29	3825	Nichol Apts. #2	430	Diesel
30	3826	Nichol Converter Bldg.	275	Diesel
31	3831	Marvin Converter Bldg.	275	Diesel
32	3832	Golf Course Maintenance Shop	Split 500/500	Gasoline/Diesel
33	3862	Cancer Research	200	Diesel
34	3866	CABM Generator Day Tank	75	Diesel
35	3877	McCormick Dorms	250	Diesel
36	3881	Sonny Werblin Recreational Center	250	Diesel
37	3883	Computer Research	250	Diesel
38	3888	Soccer/Lacrosse Field	100	Diesel
39	3892	Environmental Services	225	Diesel
40	3903	Proteomics	1,000	Diesel

Table 2. Summary of Locations of Oil Storage at Busch Campus Cont'd				
Above Ground Storage Tanks Continued				
#	**Building #**	**Building Name**	**Gallons**	**Contents**
41	NA	Tunnel	550	Diesel
Oil-Filled Electrical Equipment				
42	3589	Busch Substation	18,550	Transformer Oil
Drums/Containers				
43	3540	Central Heating Plant	<550	Lubricating Oils
44	3550	Motor Pool Services Garage	<550	Lubricating Oils
45	3688	RWJMS Mechanic Shop	<220	Lubricating Oils
46	3832	Golf Course Maintenance Shop	<100	Used Oil
47	3892	Environmental Services	<550	Used Oil
Total Above Ground Storage: 41,369				
Underground Storage Tanks				
48	3540*	Central Heating Plant	40,000	#2 Fuel Oil
49	3540*	Central Heating Plant	40,000	#2 Fuel Oil
50	3540*	Central Heating Plant	40,000	#2 Fuel Oil
51	3552*	Sewage Treatment Plant	10,000	Gasoline
52	3552*	Sewage Treatment Plant	6,000	Diesel
53	3688*	RWJMS Generator	2,000	Diesel
54	3866*	CABM Generator	5,000	Diesel

*Exempt as per 40CFR 112.1 (d) (4). These locations are excluded from the combined total storage.

Table 3. Summary of Locations of Oil Storage at Livingston Campus				
Above Ground Storage Tanks				
#	**Building #**	**Building Name**	**Gallons**	**Contents**
1	3863	41 Gordon Rd	250	Diesel
2	4100	Grounds Services Garage	550	Diesel
3	4101	Utilities Shop Portable Generator	275	Diesel
4	4101	Utilities Shop Portable Generator	275	Diesel
5	4117	Facilities Maintenance	78	Diesel
6	4138	Quad 1	275	Diesel
7	4140	Quad 2	275	Diesel
8	4143	Quad 3	275	Diesel
9	4145	Beck Hall	300	Diesel
10	4146	Tillet Hall	350	Diesel
11	4152	Lynton Residence Hall Towers	275	Diesel
12	4153	Lucy Stone	275	Diesel
13	4156	RAC	250	Diesel
14	4163	Janice Levin Bldg.	250	Diesel
15	4171	Livingston Pump House	200	Diesel
16	4177	Housing Bldg A	500	Diesel
17	4178	Housing Bldg B	500	Diesel
18	4179	Housing Bldg C	500	Diesel
19	4180	Housing Bldg D/Converter	500	Diesel
20	4181	Business School	750	Diesel
Oil-Filled Electrical Equipment				
21	4114	Livingston Transformer Storage	1,000	
22	4185	Livingston Substation	4,600	
23		Road 3 Substation	360	
Total Above Ground Storage: 12,8263				

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.

3.3.1. Busch Campus

There are four unnamed tributaries which are known to discharge to the Raritan River proximate to the Busch Campus. One is located north of the Davidson Residence Halls, one is to the west/southwest of the entire campus, one is to the south and one is to the east and south. Each tributary is described further below.

The unnamed tributary north of the Davidson Residence Halls is approximately 550 feet from the Busch Campus. This tributary drains to the north into Ambrose Brook. The tributary intersects with Ambrose Brook approximately 2,000 feet downstream of Lake Nelson. Ambrose Brook flows to the northwest where it eventually discharges to the Raritan River near South Bound Brook. The closest oil storage area (Building 3552 USTs) to this unnamed tributary is located approximately 700 feet to the south.

The unnamed tributary west/southwest of the Busch Campus is approximately 400 feet from the Busch Campus. This tributary originates at a location parallel to the University Behavioral Healthcare Center. The tributary flows to the southwest for approximately 5,000 feet where it discharges to the Raritan River. There are no oil storage locations near this tributary.

Of the remaining two tributaries, one is located 1,200 feet south of William Levine Hall (Pharmacy Building). This tributary originates at an irrigation pond on the Rutgers golf course. The tributary serves as an overflow for the pond and flows to the south 3,500 feet where it discharges to the Raritan River. There are no oil storage locations near this tributary.

The other tributary to the east and south of the Busch Campus is located along the western side of Metlars Lane. This tributary originates northeast of the campus and flows to the south where it discharges to the Raritan River. The closest oil storage area (Building 3800 AST) is approximately 400 feet west of this tributary.

Storm drains are located along many of the public streets and in various areas adjacent to the buildings on the Busch Campus. These storm drains collect surface water, which is then piped to the Piscataway/Edison storm sewer system. The storm sewer system eventually discharges to the Raritan River.

Besides the small irrigation pond on the Rutgers golf course, there is only one other surface water body on the Busch Campus. A retention basin is located immediately east of the Davidson Residence Halls. The basin collects surface water from adjacent areas of the campus. The closest oil storage area (Building 3552 USTs) is located approximately 100 feet to the west.

3.3.2. Livingston Campus

There is one unnamed tributary which discharges to the Raritan River proximate to the Livingston Campus. The unnamed tributary is located approximately 400 feet southwest of Building 4111. This tributary flows to the south into a natural but unnamed lake in Johnson Park. The lake also contains an outfall to the Raritan River. The closest oil storage area (Building 4117 AST) is located approximately 1,500 feet to the northeast.

Storm drains are located along many of the streets and in various areas adjacent to the buildings on the Livingston Campus. These storm drains collect surface water, which is then piped to the Piscataway/Edison storm sewer system.

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. 4 indicates that no spills have occurred on this campus.

Table 4. 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.

Tables 5 and 6 summarize 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, at the Busch and Livingston Campuses, respectively.

In summary, the only oil storage areas where there is a potential for a discharge to a navigable waterway are at tank truck unloading areas located near storm water catch basins. There is little to no potential for a discharge to a navigable waterway at other oil storage areas, because there are no ASTs without overfill protection and secondary containment located adjacent to a surface water body or storm water catch basin on either campus; and all the USTs are equipped with overfill protection, leak detection and corrosion protection in accordance with N.J.A.C. 7:14B-4.

Table 5. Summary of Potential Spill Predictions and Prevention Measures at Busch Campus

Busch 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	Prevention Measure Adequate or Corrective Action	Notes
Aboveground Storage Tanks								
3500 Stadium	Overfill	180	65	-	-	Gauge	Adequate	1,3
180 G - Diesel	Rupture, Leakage	180	-	-	-	tank w/ SC on skid	Adequate	
	Unloading pipe rupture	325	65	South	asphalt driveway	None	Adequate	1
3500 Stadium	Overfill	225	65	-	-	Gauge	Adequate	1,3
225 G - Diesel	Rupture, Leakage	225	-	-	-	tank w/ SC on skid	Adequate	
	Unloading pipe rupture	325	65	South	asphalt driveway	None	Adequate	1
3500 Stadium	Overfill	225	65	-	-	Gauge	Adequate	1,3
225 G - Diesel	Rupture, Leakage	225	-	-	-	tank w/ SC on skid	Adequate	
	Unloading pipe rupture	325	65	South	asphalt driveway	None	Adequate	1
3519 Presidents House	Overfill	450	65	South	gravel	Portable overfill signal,	Adequate	1, 3
	Rupture, leakage	450	-	South	gravel	Tank w/ SC on skid	Adequate	
450-G Diesel Fuel	Unloading pipe rupture	325	65	South	gravel	None	Adequate	1
3522 Bubble	Overfill	600	65	-	asphalt driveway	Gauge	Adequate	
600-G Diesel	Rupture, Leakage	600	-	-	Gravel/Grass	tank w/ SC on skid	Adequate	
	Unloading pipe rupture	325	65	South	asphalt driveway	None	Adequate	1
3540 CHP	Overfill	OP	-	-	-	Audible alarm	Adequate	
550 G	Rupture, leakage	SC	-	-	-	None	Adequate	
Used Oil	Unloading pipe rupture	NA	N/A	South	asphalt driveway	None	Adequate	1
3540 CHP	Overfill	690	65	-	-	Portable overfill signal	Adequate	1, 3
	Rupture, Leakage	690	-	-	-	None	Adequate	
690 G - Diesel	Unloading pipe rupture	325	65	South	gravel	None	Adequate	1
3555 Garage	Overfill	OP	-	-	-	None	Adequate	
275 G	Rupture, leakage	SC	-	-	building	None	Adequate	
Used Oil	Unloading pipe rupture	NA	N/A	South	asphalt driveway	None	Adequate	1
3556 Wright Chemistry	Overfill	275	65	-	-	Audible alarm	Adequate	1,3
275 G - Diesel	Rupture, Leakage	275	-	-	-	tank w/ SC on skid	Adequate	
	Unloading pipe rupture	325	65	North	grass	None	Adequate	1
3558 Engineering B-	Overfill	275	65	-	grass	Gauge	Adequate	
275G - Diesel	Rupture, Leakage	275	-	-	building	Building containment	Adequate	
	Unloading pipe rupture	325	65	-	grass	None	Adequate	1
3559 Nelson D-Wing	Overfill	225	65	-	-	Portable overfill signal	Adequate	1,3
2 x 250G - Diesel	Rupture, Leakage	225	-	-	-	tank w/SC	Adequate	
	Unloading pipe rupture	325	65	-		None	Adequate	1
3559 Cell Repository	Overfill	1,000	65	-	-	Audible alarm	Adequate	1
	Rupture, Leakage	1,000	-	-	-	tank w/ SC on skid	Adequate	
1000 G - Diesel	Unloading pipe rupture	325	65	South	asphalt driveway	None	Adequate	1
3559 Cell Repository	Overfill	600	65	-	0	Audible alarm	Adequate	1
	Rupture, Leakage	600	-	-	-	tank w/ SC on skid	Adequate	
600 G - Diesel	Unloading pipe rupture	325	65	South	asphalt driveway	None	Adequate	1
3559 Cell Repository	Overfill	1,800	65	-	-	Audible alarm	Adequate	1
	Rupture, Leakage	1,800	-	-	-	tank w/ SC on skid	Adequate	
1800 G - Diesel	Unloading pipe rupture	325	65	South	asphalt driveway	None	Adequate	1
3573 Waksman Inside EG	Overfill	250	65	-	asphalt driveway	Gauge	Adequate	1,3
	Rupture, Leakage	250	-	-	building	tank w/SC	Adequate	
250G - Diesel	Unloading pipe rupture	325	65	-	asphalt driveway	None	Adequate	1
3573 Waksman Outside EG	Overfill	519	65	-	grass	Audible alarm	Adequate	1
	Rupture, Leakage	519	-	-	grass	tank w/ SC on skid	Adequate	
519 G - Diesel	Unloading pipe rupture	325	65	East	asphalt driveway	None	Adequate	1
3594 Chemistry	Overfill	1,830	65	West	grass	Audible alarm	Adequate	1
	Rupture, Leakage	1,830	-	North	grass/driveway	tank w/ SC on skid	Adequate	
1830 G - Diesel	Unloading pipe rupture	325	65	West	asphalt driveway	None	Adequate	1
3688 RWJMS	Overfill	NA		-	NA	NA	Adequate	
75-G Diesel Day	Rupture, Leakage	75	-	-	building	Building containment	Adequate	
Tank	Unloading pipe rupture	NA			building	None	Adequate	
3689 SPH Research	Overfill	1,000	65	South	asphalt driveway	Audible alarm	Adequate	1
	Rupture, leakage	1,000	-	-	asphalt driveway	tank w/ SC on skid	Adequate	
4000G - Diesel	Unloading pipe rupture	325	65	-	asphalt driveway	None	Adequate	1
3691 Staged Research	Overfill	600	65	-	asphalt driveway	Gauge	Adequate	1
	Rupture, Leakage	600	-	-	Gravel/Grass	tank w/ SC on skid	Adequate	
275-G Diesel	Unloading pipe rupture	325	65	West	Gravel/Grass	None	Adequate	1
3697 UBHC	Overfill	1,700	65	-	asphalt driveway	Gauge	Adequate	1
	Rupture, Leakage	1,700	-	-	building	tank on skid w/SC	Adequate	
1700G - Diesel	Unloading pipe rupture	325	65	-	asphalt driveway	None	Adequate	1
3750 Pharmacy Inside EG	Overfill	250	65	-	asphalt driveway	Gauge	Adequate	1,3
	Rupture, Leakage	250	-	-	building	tank w/ SC on skid	Adequate	
250G - Diesel	Unloading pipe rupture	325	65	-	asphalt driveway	None	Adequate	1
3750 Pharmacy Outside EG	Overfill	660	65	South	grass	Gauge	Adequate	
	Rupture, Leakage	660	-	-	grass	tank w/ SC on skid	Adequate	
660G - Diesel	Unloading pipe rupture	325	65	-	asphalt driveway	None	Adequate	1

Table 5. Summary of Potential Spill Predictions and Prevention Measures at Busch Campus
Busch 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	Prevention Measure Adequate or Corrective Action	Notes
3751 ASB	Overfill	2,000	65	South	asphalt driveway	Portable overfill signal, metered delivery	Adequate	1, 3
2000G - D	Rupture, leakage	2,000	-	South	asphalt driveway	None	Adequate	
	Unloading pipe rupture	325	65	South	asphalt driveway	None	Adequate	1
3752 Hill Center	Overfill	1,000	65	Southeast	Gravel/ Grass	Gauge	Adequate	1
1000G - Diesel	Rupture, leakage	1,000	-	-	Gravel/ Grass	tank w/ SC on skid	Adequate	
	Unloading pipe rupture	325	65	-	Gravel/ Grass	None	Adequate	1,3
3757 Psychology	Overfill	250	65	-	asphalt driveway	Gauge	Adequate	1,3
250G - Diesel	Rupture, Leakage	250	-	-	building	Building containment	Adequate	
	Unloading pipe rupture	325	65	-	asphalt driveway	None	Adequate	1
3800 Marvin Lift	Overfill	60	65	North	gravel	guage	Adequate	1, 3
60G - D	Rupture, leakage	60	-	North	building	tank w/ SC on skid	Adequate	
	Unloading pipe rupture	325	65	South	asphalt driveway	None	Adequate	1
3825 Nichols Apt. EG #1	Overfill	430	65	South	Gravel/ Grass	Gauge	Adequate	1
	Rupture, leakage	430	-	-	Gravel/ Grass	tank w/ SC on skid	Adequate	
430G - Diesel	Unloading pipe rupture	325	65	-	Gravel/ Grass	None	Adequate	1
3825 Nichols Apt. EG #1	Overfill	430	65	South	Gravel/ Grass	Gauge	Adequate	1
	Rupture, leakage	430	-	-	Gravel/ Grass	tank w/ SC on skid	Adequate	
430G - Diesel	Unloading pipe rupture	325	65	-	Gravel/ Grass	None	Adequate	1
3826 Nichol Conv.	Overfill	275	65	-	gravel	Gauge	Adequate	
200G - Diesel	Rupture, Leakage	275	-	-	asphalt driveway	tank w/SC	Adequate	
	Unloading pipe rupture	325	65	-		None	Adequate	1
3831 Marvin Conv.	Overfill	275	65	-	-	Gauge	Adequate	
200G - Diesel	Rupture, Leakage	275	-	-	-	Building containment	Adequate	
	Unloading pipe rupture	325	65	-		None	Adequate	1
3832 Golf	Overfill	OP	-	-	-	Audible alarm	Adequate	1, 2, 3
500-G Unleaded Gasoline	Rupture, leakage	SC	-	-	-	Containment vault w/ capacity of 1,100 Gallons	Adequate	
500-G Diesel Oil	Unloading pipe rupture	325	65	South	grass	None	Adequate	1
3862 Cancer Research	Overfill	200	65	-	asphalt driveway	Gauge	Adequate	1,3
	Rupture, Leakage	200	-	-	Grass/Gravel	tank w/ SC on skid	Adequate	
200G - Diesel	Unloading pipe rupture	325	65	-		None	Adequate	1
3866 CABM Day Tank	Overfill	NA	NA		NA	NA	Adequate	
	Rupture, leakage	75	-	-	building	building containment	Adequate	
75G - Diesel	Unloading pipe rupture	NA	NA	-	building	None	Adequate	
3877 McCormick	Overfill	250	65	-	asphalt driveway	Gauge	Adequate	1,3
250G - Diesel	Rupture, Leakage	250	-	-	building	tank w/ SC on skid	Adequate	
	Unloading pipe rupture	325	65	-	asphalt driveway	None	Adequate	1
3881 Sonny Werblin	Overfill	250	65	-	asphalt driveway	Gauge	Adequate	1,3
	Rupture, Leakage	250	-	-	building	Building containment	Adequate	
250G - Diesel	Unloading pipe rupture	325	65	-	asphalt driveway	None	Adequate	1
3883 Computer Research	Overfill	250	65	-	asphalt driveway	Gauge	Adequate	1,3
	Rupture, Leakage	250	-	-	building	tank w/ SC	Adequate	
250G - Diesel	Unloading pipe rupture	325	65	-	asphalt driveway	None	Adequate	1
3888 Soccer Field	Overfill	100	65	-	gravel	Gauge	Adequate	1,3
	Rupture, Leakage	100	-	-	gravel	tank w/ SC on skid	Adequate	
100G - Diesel	Unloading pipe rupture	325	65	-	gravel	None	Adequate	1
3892 ESB	Overfill	225	65	-	building	Gauge	Adequate	1,3
75-G Diesel	Rupture, Leakage	225	-	-	building	tank w/ SC on skid	Adequate	
	Unloading pipe rupture	325	65	South	asphalt driveway	None	Adequate	1
3903 Proteomics	Overfill	1,000	65	South	asphalt driveway	Audible alarm	Adequate	1
1000G - Diesel	Rupture, leakage	1,000	-	-	asphalt driveway	tank contained w/ SC on	Adequate	
	Unloading pipe rupture	325	65	-	asphalt driveway	None	Adequate	1
Underground Storage Tanks								
3540 CHP	Overfill	OP	-	-	-	Visual/audible alarms	Adequate	
(3) 40,000-G No. 2	Leakage	CP	-	-	-	Double-walled with outer fiberglass-coated steel and interstitial monitoring	Adequate	
	Unloading pipe failure	750	150	East	catch basin in Davidson Road	Catch basin cover	Adequate	1, 5
3552 Sewer Plant	Overfill	OP	-	-	-	Visual/audible alarms	Adequate	
10,000-G Unleaded Gasoline & 6,000-G Diesel	Leakage	CP	-	-	-	Double-walled with outer fiberglass-coated steel and interstitial monitoring	Adequate	
	Unloading pipe failure	325	65	West	catch basin in grass	Diversion booms & catch basin cover	Adequate	1
3688 RWJMS	Overfill	OP	-	-	-	Visual/audible alarms	Adequate	
2,000-G Diesel	Leakage	CP	-	-	-	Double-walled with outer fiberglass-coated steel and interstitial monitoring	Adequate	
	Unloading pipe failure	750	150	East	asphalt driveway	Diversion booms	Adequate	1, 5
3866 CABM	Overfill	OP	-	-	-	Visual/audible alarms	Adequate	
5,000-G Diesel	Leakage	CP	-	-	-	Double-walled with outer fiberglass-coated steel and interstitial monitoring	Adequate	
	Unloading pipe failure	325	65	West	asphalt driveway	Diversion booms	Adequate	1

Table 5. Summary of Potential Spill Predictions and Prevention Measures at Busch Campus
Busch 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	Prevention Measure Adequate or Corrective Action	Notes
Oil-Filled Electrical Equipment								
Busch Substation 18,550-G Electrical Transformer	Overfill	-	-	-	-	-	-	
	Leakage	SC	-	-	-	Concrete containment and curbing	Adequate	
	Unloading pipe failure	-	-	-	-	-	-	
Drums/Containers								
3540 CHP <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	
3555 Busch Garage <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	
3688 RWJMS mechanic shop <4 55-G Drums	Drum rupture	55	55	In building	Secondary containment pallet or in building	Secondary containment pallet or onto impervious building floor	Adequate	
3832 Golf Course <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	
3892 ESB <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	

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 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).
2 Volume equals the difference of 325 gallons (5 minutes x 65 gpm) and 300 gallons (secondary containment volume).
3 The delivery tanker truck uses a portable overfill signal which consists of a pipe fitted with a whistle. The whistle is activated as air is displaced from the AST during filling. When product reaches the bottom of the whistle, it no longer whistles and notifies the delivery person that the AST is nearly full. Additionally, for ASTs and USTs of less than 500 gallons, the common carrier uses a metered delivery system. The delivery person programs the number of gallons to be pumped into the tank. When it reaches that quantity, it automatically shuts off.
4 The 40,000-gallon USTs are typically filled by a tank trailer with a capacity of 7,000 gallons. Product is delivered under gravity drainage in a 3" to 4"-diameter hose. The rate of delivery is estimated to be 150 gpm.

Table 6. Summary of Potential Spill Predictions and Prevention Measures at Livingston Campus

Livingston 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	Prevention Measure Adequate or Corrective Action	Notes
Aboveground Storage Tanks								
3863 41Gordon Road	Overfill	250	65	Southeast	asphalt parking lot	Gauge	Adequate	1,3
	Rupture, leakage	250	-	-	Building	None	Adequate	
250G - Diesel	Unloading pipe rupture	325	65	-	asphalt parking lot	None	Adequate	1
4100 Service Garage	Overfill	SC	-	-	Secondary containment	Metered delivery, secondary containment	Adequate	1, 2, 4
	Rupture, leakage	SC	-	-	-	Containment dike w/ capacity of 605 Gallons	Adequate	
550-G Diesel	Unloading pipe rupture	325	65	Southwest	Asphalt parking lot	None	None	1
4101 Portable 2x275-G No.2	Overfill	325	65	Southeast	asphalt parking lot	Portable overfill signal, metered delivery	Adequate	1, 3
	Rupture, leakage	275	-	Southeast	asphalt parking lot	None	Adequate	
	Unloading pipe rupture	325	65	Southeast	asphalt parking lot	None	Adequate	1
4117 Facilities Maintenance	Overfill	78	65	Southeast	asphalt parking lot	Gauge	Adequate	
78 G - Diesel	Rupture, leakage	78	-	-	Building	Building Containment	Adequate	
	Unloading pipe rupture	325	65	-	None	None	Adequate	1
4138 Quads	Overfill	275	65	-		Gauge	Adequate	1,3
200G Diesel	Rupture, leakage	275	-	-	grass/gravel	tank w/ SC on skid	Adequate	
	Unloading pipe rupture	325	65	-	None	None	Adequate	1
4140 Quads	Overfill	200	65	-	grass/gravel	Gauge	Adequate	1,3
200G Diesel	Rupture, leakage	200	-	-	-	tank w/ SC on skid	Adequate	
	Unloading pipe rupture	325	65	-	None	None	Adequate	1
4143 Quads	Overfill	200	65	-	grass/gravel	Gauge	Adequate	1,3
200G Diesel	Rupture, leakage	200	-	-	grass/gravel	tank w/ SC on skid	Adequate	
	Unloading pipe rupture	325	65	-	None	None	Adequate	1
4145 Beck Hall	Overfill	300	65	-	-	Gauge	Adequate	
300G - Diesel	Rupture, leakage	300	-	-	Building	Building Containment	Adequate	
	Unloading pipe rupture	325	65	-	None	None	Adequate	1
4146 Tillet Hall	Overfill	250	65	-	asphalt parking lot	Gauge	Adequate	1,3
250G - Diesel	Rupture, leakage	250	-	-	asphalt parking lot	tank w/ SC on skid	Adequate	
	Unloading pipe rupture	325	65	-	asphalt parking lot	None	Adequate	1
4152 Lynton Residence Towers	Overfill	275	65	-	Building	Gauge	Adequate	1,3
	Rupture, leakage	275	-	-	Building	Building Containment	Adequate	
275G - Diesel	Unloading pipe rupture	325	65	-	None	None	Adequate	1
4153 Lucy Stone	Overfill	275	65	-	-	Gauge	Adequate	1,3
250G - Diesel	Rupture, leakage	275	-	-	Building	tank w/ SC on skid	Adequate	
	Unloading pipe rupture	325	65	-	None	None	Adequate	1
4156 RAC	Overfill	250	65	-	Asphalt	Gauge	Adequate	1,3
250G - Diesel	Rupture, leakage	250	-	-	Building	SC	Adequate	
	Unloading pipe rupture	325	65	-	None	None	Adequate	1
4163 Janice Levin	Overfill	250	65	Southeast	asphalt parking lot	Gauge	Adequate	1,3
250G - Diesel	Rupture, leakage	250	-	-	Building	tank w/ SC on skid	Adequate	
	Unloading pipe rupture	325	65	-	asphalt parking lot	None	Adequate	1
4171 Pump House	Overfill	225	65	-	-	Gauge	Adequate	
200G - Diesel	Rupture, leakage	225	-	-	Building	tank w/ SC on skid	Adequate	
	Unloading pipe rupture	325	65	-	None	None	Adequate	1
4177 Housing A	Overfill	500	65	Southeast	asphalt parking lot	Gauge	Adequate	
500 G - Diesel	Rupture, leakage	500	-	-	asphalt parking lot	tank w/ SC on skid	Adequate	
	Unloading pipe rupture	325	65	-	None	None	Adequate	1
4178 Housing B	Overfill	500	65	Southeast	asphalt parking lot	Gauge	Adequate	
500 G - Diesel	Rupture, leakage	500	-	-	asphalt parking lot	tank w/ SC on skid	Adequate	
	Unloading pipe rupture	325	65	-	None	None	Adequate	1
4179 Housing C	Overfill	500	65	Southeast	asphalt parking lot	Gauge	Adequate	
500 G - Diesel	Rupture, leakage	500	-	-	asphalt parking lot	tank w/ SC on skid	Adequate	
	Unloading pipe rupture	325	65	-	None	None	Adequate	1
4180 Housing Converter Bldg	Overfill	500	65	Southeast	asphalt parking lot	Gauge	Adequate	
	Rupture, leakage	500	-	-	asphalt parking lot	tank w/ SC on skid	Adequate	
500 G - Diesel	Unloading pipe rupture	325	65	-	None	None	Adequate	1
4181 Business School	Overfill	500	65	East	concrete	Gauge	Adequate	
	Rupture, leakage	500	-	-	asphalt parking lot	tank w/ SC on skid	Adequate	
750 G - Diesel	Unloading pipe rupture	325	65	-	None	None	Adequate	1

Table 6. Summary of Potential Spill Predictions and Prevention Measures at Livingston Campus

Livingston 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	Prevention Measure Adequate or Corrective Action	Notes
Oil-Filled Electrical Equipment								
Road 3 Substation	Overfill	-	-	-	-	-	-	
360-G Electrical Transformer	Leakage	SC	-	Southwest	Grass	Concrete pad	None	
4114 Transformer Storage	Overfill	-	-	-	-	-	-	
1,000-G Electrical Transformer	Leakage	SC	-	-	-	Concrete floor with absorbent boom	Adequate	
Livingston Substation	Overfill	-	-	-	-	-	-	
	Leakage	SC	-	Southwest	Grass	Concrete pad	None	
4,600-G Electrical Transformer								

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 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).
2 Secondary containment volume can hold 325 gallons (5 minutes x 65 gpm).
3 The delivery tanker truck uses a portable overfill alarm which consists of a pipe fitted with a whistle. The whistle is activated as air is displaced from the AST during filling. When product reaches the bottom of the whistle, it no longer whistles and notifies the delivery person that the AST is nearly full. Additionally, for ASTs and USTs of less than 500 gallons, the common carrier uses a metered delivery system. The delivery person programs the number of gallons to be pumped into the tank. When it reaches that quantity, it automatically shuts off.
4 A portable overfill alarm is generally not used, because the 550-gallon diesel AST is covered by a vent restricting access to install the pipe. Instead, delivery is metered such that only the pre-programmed quantity is pumped. The combination of the metered delivery, secondary containment and lack of waterways with catch basins proximate to the tank supports the conclusion that prevention measures are adequate.

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.*

Tables 5 and 6 summarize the spill prevention and control measures that are in-place to minimize the potential for equipment failure at the Busch and Livingston Campuses, respectively. As discussed in Section 5, the only oil storage areas where there is a potential for a discharge to a navigable waterway are at tank truck unloading areas located near storm water catch basins.

As such, the prevention measures provided at the facility focus on these specific storage areas. At tank truck unloading areas located adjacent to storm water catch basins, diversion booms are emplaced prior to unloading. Additionally, specific procedures and warning signs have been implemented to minimize the potential for an equipment failure or human error resulting in a discharge.

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 Busch and Livingston Campuses. Instead, Rutgers conducts monthly inspections of the hydraulic reservoirs. There is a low potential for a discharge from a hydraulic reservoir to affect a navigable waterway at either the Busch or Livingston Campus.

There are no specific secondary containment measures for transformers that service buildings at the Campuses. Rutgers personnel on a monthly and, in some instances, a quarterly frequency, inspect transformers. Additionally, in the event of a discharge of oil from a transformer, the transformer would cease function and the building would lose power. This would prompt immediate response from Rutgers personnel.

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.

The only AST with diked secondary containment is: the 550-gallon diesel fuel AST at Building 4100 on Livingston Campus.

Precipitation is prevented from accumulating in the secondary containment dike at Building 4100 by a roofed structure. A wood structure with walls and a roof are constructed around the 550-gallon AST and dike. Therefore, provisions for draining the secondary containment dike are not provided, nor necessary.

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 areas with manually operated ball valves.

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 tank truck unloading areas are undiked. There are no specific drainage systems for undiked areas at either the Busch or Livingston Campuses designed to retain oil in the event of a discharge from either an AST or during tanker truck unloading. However, there are only a few storage

locations where there is a reasonable potential for a discharge to enter either a storm water catch basin or a surface water body.

Specifically, storm water catch basins are located near the truck unloading areas at Buildings 3540, 3500, 3552, 3559, 3757 and 3903. In other areas, a discharge from an AST or during truck unloading would either flow to the ground or laterally spread across paved areas. Under this scenario, the discharge could be cleaned prior to affecting any navigable waterway or any route to a navigable waterway.

To minimize the potential for a discharge to either the storm water catch basins, prevention measures are utilized at these locations during unloading. A diversion boom is placed around the catch basin or around the tanker truck prior to unloading.

At the tank truck unloading area for Building 3552 and 3540, a diversion boom is placed around the tank truck. The placement of the diversion boom is designed to prevent a discharge from migrating off the asphalt driveway.

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.*

Rutgers does not control the final discharge of storm water from the facility. Therefore, spill prevention measures focus on areas where there is a potential for a discharge from an oil storage area reaching a storm water catch basin. Specifically, as discussed in Section 6.2.3, Rutgers utilizes diversion booms to minimize the potential for a discharge entering a catch basin. If petroleum were ever 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 USTs is compatible with both the type of oil stored and the conditions of oil storage as summarized in Tables 7 and 8 below.

Table 7. Summary of AST/UST Compatibility with Contents for Busch Campus				
Building No. Size & Type	**Construction**	**Date Installed**	**Contents**	**Contents Compatible**
3500 (2) 225-G AST	Double-Walled Steel Tank on Skid	1995	Diesel	Yes
3500 180-G AST	Double-Walled Steel Tank on Skid	2013	Diesel	Yes
3519 450-G AST	Double-Walled Steel Tank on Skid	2016	Diesel	Yes
3522 600-G AST	Double-walled Steel Tank on Skid	2004	Diesel	Yes
3540 (3) 40,000-G USTs	Double-walled -- inner steel & fiberglass-coated outer steel	1998	No. 2 fuel oil	Yes
3540 550-G AST	Steel Tank w/ Steel containment	2012	Waste oil	Yes
3540 690-G AST	Double-walled Steel Tank on Skid	2007	Diesel	Yes
3552 (2) 10,000-G & 6,000-G USTs	Double-walled -- inner steel & fiberglass-coated outer steel	1999	Unleaded gasoline & diesel fuel	Yes
3555 275-G AST	Steel Tank/ Steel Containment	1999	Used Oil	Yes
3556 275-G AST	Double-Walled Steel Tank on Skid	2013	Diesel	Yes
3558 275-G AST	Steel Tank w/ Steel containment in Mech. Room	2011	Diesel	Yes
3559 1800-G AST	Double-Walled Steel Tank on Skid	2013	Diesel	Yes
3559 1000-G AST	Double-Walled Steel Tank on Skid in Mech. Room	2005	Diesel	Yes

Table 7. Summary of AST/UST Compatibility with Contents for Busch Campus				
Building No. Size & Type	**Construction**	**Date Installed**	**Contents**	**Contents Compatible**
3559 600-G AST	Double-Walled Steel Tank on Skid	2011	Diesel	Yes
3559 (2) 250-G AST	Steel Tank on Skid in Mech. Room	1995	Diesel	Yes
3573 250-G AST	Steel Tank w/ Steel containment in Mech. Room	2002	Diesel	Yes
3573 (outside) 519-G AST	Double-Walled Steel Tank on Skid	2017	Diesel	Yes
3594 1830-G AST	Double-Walled Steel Tank on Skid	2018	Diesel	Yes
3688 2000-G UST	Double-walled -- fiberglass-coated steel	1989	Diesel	Yes
3688 75-G AST	Steel Tank in Mechanical Room	1989	Diesel	Yes
3689 4000-G AST	Double-walled Steel Tank on Skid	2003	Diesel	Yes
3691 275-G AST	Double-walled Steel Tank on Skid	2001	Diesel	Yes
3697 1700-G AST	Double-walled Steel Tank on Skid	2012	Diesel	Yes
3750 250-G AST	Double-walled Steel Tank on Skid in Mech. Room	2011	Diesel	Yes
3750 (outside) 660-G AST	Double-walled Steel Tank on Skid	2017	Diesel	Yes
3751 2000-G AST	Double-Walled Steel Tank on Skid	2005	Diesel	Yes
3752 1000G-AST	Double-walled Steel Tank on Skid	2003	Diesel	Yes

Table 7. Summary of AST/UST Compatibility with Contents for Busch Campus				
Building No. Size & Type	**Construction**	**Date Installed**	**Contents**	**Contents Compatible**
3757 250-G AST	Steel Tank on Skid in Mech. Room	1995	Diesel	Yes
3800 60-G AST	Double-Walled Steel Tank on Skid	2002	Diesel	Yes
3825 430-G AST	Double-Walled Steel Tank on Skid	2017	Diesel	Yes
3825 430-G AST	Double-Walled Steel Tank on Skid	2017	Diesel	Yes
3826 200-G AST	Double-walled steel tank	2008	Diesel	Yes
3831 200-G AST	Double-walled steel tank	2006	Diesel	Yes
3832 1,000-G AST Split	Patriot Vault Tank	NA	Unleaded gasoline and Diesel Oil	Yes
3862 200-G AST	Steel Tank on Skid	1995	Diesel	Yes
3866 5000-G UST	Double-walled -- fiberglass-coated steel	2009	Diesel	Yes
3866 75-G AST	Steel Tank in Mechanical Room	2009	Diesel	Yes
3877 250-G AST	Steel Tank on Skid	2002	Diesel	Yes
3881 250-G AST	Steel Tank w/ Steel containment in Mech. Room	1997	Diesel	Yes
3883 250-G AST	Steel Tank w/ Steel containment in Mech. Room	1995	Diesel	Yes
3888 100-G AST	Steel Tank on Skid	2001	Diesel	Yes

Table 7. Summary of AST/UST Compatibility with Contents for Busch Campus				
Building No. Size & Type	**Construction**	**Date Installed**	**Contents**	**Contents Compatible**
3892 225-G AST	Steel Tank on Skid	NA	Diesel	Yes
3903 1000-G AST	Double-walled Steel Tank	2011	Diesel	Yes
Tunnel 550G-AST	Double-walled Steel Tank on Skid	1999	Diesel	Yes

NA = not available

Table 8. Summary of AST/UST Compatibility with Contents for Livingston Campus				
Building No. Size & Type	**Construction**	**Date Installed**	**Contents**	**Contents Compatible**
3863 250-G AST	Steel Tank on Skid in Mech. Room	1995	Diesel	Yes
4101 2x275-G AST	Double-walled Steel Tank on Trailer	NA	Diesel	Yes
4100 550-G AST	Steel	NA	Diesel	Yes
4117 78-G AST	Steel Tank on Skid in Mech. Room	2011	Diesel	Yes
4136 250-G AST	Steel Tank on Skid	1998	Diesel	Yes
4138 275-G AST	Double-walled Steel Tank on Skid	2012	Diesel	Yes
4140 275-G AST	Double-walled Steel Tank on Skid	2023	Diesel	Yes
4143 200-G AST	Steel Tank on Skid in Mech. Room	2001	Diesel	Yes
4145 300-G AST	Steel Tank\ Steel Containment Mech. Room	1995	Diesel	Yes
4146 250-G AST	Double-walled Steel Tank on Skid	2013	Diesel	Yes
4152 275-G AST	Steel Tank\ Steel Containment Mech. Room	2017	Diesel	Yes
4153 275-G AST	Steel Tank\ Steel Containment Mech. Room	1998	Diesel	Yes
4156 250-G AST	Steel Tank\ Steel Containment Mech. Room	1998	Diesel	Yes
4177 500-G AST	Double-walled Steel Tank on Skid	2012	Diesel	Yes

Table 8. Summary of AST/UST Compatibility with Contents for Livingston Campus				
Building No. Size & Type	**Construction**	**Date Installed**	**Contents**	**Contents Compatible**
4178 500-G AST	Double-walled Steel Tank on Skid	2012	Diesel	Yes
4179 500-G AST	Double-walled Steel Tank on Skid	2012	Diesel	Yes
4180 500-G AST	Double-walled Steel Tank on Skid	2012	Diesel	Yes
4181 750-G AST	Double-walled Steel Tank on Skid	2013	Diesel	Yes
Pump House 200-G AST	Steel Tank on Skid in Mech. Room	1995	Diesel	Yes

NA = not available

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 550-gallon diesel fuel AST at Building 4100 is located atop a concrete slab surrounded by concrete walls for containment. The concrete is sufficiently impervious to retain the contents of the AST in the event of a failure. Secondary containment is designed to hold the entire contents of the AST. The AST is covered with a roof, hence, additional volume for precipitation is not provide nor necessary. The containment area will hold 605 gallons.

All remaining ASTs are equipped with a secondary containment structure. The secondary containment is designed to hold the entire contents of the ASTs in the event of a failure. Additional volume for precipitation is not necessary with skid-mounted ASTs since the containment structure is fully enclosed.

In addition, where ASTs are located within buildings and/ or mechanical spaces, the building serves as 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.

There are no diked storage areas where precipitation accumulates and is manually drained.

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.

All USTs contain corrosion protection in accordance with N.J.A.C. 7:14-4.2 and 40 CFR 280. The UST systems (i.e., tank and piping), including the three (3) 40,000-gallon No.2 fuel oil USTs (3540), the 10,000-gallon unleaded gasoline and 6,000-gallon diesel fuel USTs (3552), and the 2,000-gallon (3688) and 5,000-gallon (3866) diesel fuel USTs are double-walled, consisting of an inner steel tank surrounded by a fiberglass-coated outer steel tank with interstitial monitoring. The tanks were designed and installed in compliance with N.J.A.C. 7:14B-4 and 40 CFR part 280.

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

ASTs are constantly observed by Rutgers personnel during operating hours. Formal inspections are conducted monthly to examine the exterior of the ASTs and the containment areas. These inspections are documented using the form in Attachment B. At a minimum of every five years, ASTs are tested for shell thickness or more frequently based on the results of the visual inspections.

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.

Several UST's are equipped with fail-safe engineering systems as summarized in the following Table 9.

Table 9. Summary of Fail-Safe Engineering Systems					
Building No. Size & Type	**High Liquid Level Audible Alarm**	**High Liquid Level Visual Alarm**	**Pump Cutoff Device**	**Fast Response System for Liquid Level Gauging**	**Direct Communication between Gauger and Pumper**
3552 10,000-G UST	Yes	Yes	Yes	No	Yes
3552 6,000-G UST	Yes	Yes	Yes	No	Yes
3559 1,000-G AST	Yes	Yes	No	No	Yes
3572 1,000-G AST	Yes	Yes	No	No	Yes
3540 (3) 40,000-G USTs	Yes	Yes	Yes	No	Yes
3688 2,000-G UST	Yes	Yes	Yes	No	Yes
3751 2,000-G AST	Yes	Yes	No	No	Yes
3832 500/500-G AST	Yes	Yes	Yes	No	Yes
3866 5,000-G UST	Yes	Yes	Yes	No	Yes

The only USTs, which are equipped with fail-safe engineering systems, are the (3)40,000-gallon USTs (3540), the 10,000-gallon and 6,000-gallon USTs (3552) and the 2,000-gallon UST (3688) and 6,000-gallon UST (3866).

The remaining ASTs are small and not located adjacent to any storm water catch basins nor surface water bodies. Since the size of these ASTs is small (i.e., 600 gallons and less) and there are no adjacent potential surface water receptors, the installation of fail-safe engineering systems at these areas would not provide protection from a discharge affecting a navigable waterway commensurate with the cost of installing the engineering system.

The three 40,000-gallon USTs at Building 3540 are equipped with both visual and audible alarms. 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 alarms are activated when product reaches 95% of the storage capacity of the UST.

The 10,000-gallon and 6,000-gallon USTs at Building 3552 are also equipped with both visual and audible alarms. 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 alarms are activated when product reaches 95% of the storage capacity of the UST.

The 2,000-gallon UST (3688) and 5,000-gallon UST (3866) are also equipped with both visual and audible alarms. 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 alarms are activated when product reaches 90% of the storage capacity of the UST.

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.*

In addition, 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 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 inspect it for deterioration. If you find*

corrosion damage, you must undertake, additional examination and corrective action as indicated by the magnitude of the damage.

All underground piping associated with USTs is constructed in accordance with N.J.A.C. 7:14-4.2. Underground piping at the three 40,000-gallon USTs at Building 3540 and the 10,000-gallon and 6,000-gallon USTs at Building 3552 and the 2,000-gallon UST located at 3688 and 5,000-gallon UST located at 3866 is double-walled, fiberglass-coated outer steel and interstitial monitoring and alarm systems.

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 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.

There is no aboveground piping at ASTs at Buildings 3500, 3519, 3522, 3540, 3555, 3556, 3559 (Cell Repository), 3573 (outside), 3594, 3689, 3691, 3697, 3750 (outside), 3751, 3752, 3757, 3800, 3825, 3832, 3862, 3751, 3888, 3892, 4100, 4117, 4138, 4138, 4140, 4143, 4146, 4177, 4178, 4179, 4180, 4181, and the Tunnel.

The external aboveground piping at Buildings 3558, 3559 (Nelson D-Wing), 3573, 3688 (Day Tank), 3757, 3826, 3831, 3866 (Day Tank), 3881, 3883, 3903, 4140, 4143, 4145, 4152, and 4156 is adequately supported.

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.

All aboveground piping is protected from vehicular traffic. The aboveground piping at Buildings 3558, 3559 (Nelson D-Wing), 3573, 3688 (Day Tank), 3757, 3866 (Day Tank), 3881, 3883, 4143, 4145, 4152, and 4156 are located inside of a building/mechanical room.

The ASTs at Buildings 3826, 3831 and 3903 are enclosed within a fenced area and the aboveground piping is located between the AST and the building.

Piping at the 1,000-gallon (split 500 gallons unleaded gasoline and 500 gallons diesel) AST at Building 3832 is protected from vehicular traffic by concrete bollards.

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 D).

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 oil storage areas are undiked. However, the only areas where there is a reasonable potential for a discharge to reach a storm water catch basin are at Buildings 3540 and 3552. In other areas, a discharge from an AST or during truck unloading would either flow to the ground or laterally spread across paved areas. Under this scenario, the discharge could be cleaned prior to affecting any navigable waterway or any route to a navigable waterway.

To minimize the potential for a discharge to the storm water catch basins, prevention measures are utilized at these locations during unloading. At areas where there is a catch basin, a diversion boom is either placed around the catch basin and/or around the tanker truck prior to unloading.

At Building 3540 and 3552, a diversion boom is placed around the tank truck. The placement of the diversion boom is designed to contain a discharge within the asphalt pavement.

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 in all the unloading areas for the ASTs and UST 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 all the loading areas for the ASTs and the USTs to remind drivers to examine drain outlets prior to departure.

6.6. Inspections and Recordkeeping

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 inspections, 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 several ASTs, however, the tanks are fully enclosed, mounted on a skid and locked when not in use. These ASTs are located at Buildings 3500 (Stadium West & South), 3559 (Cell Repository East), 3573, 3750, 3751, 3752, 3862 and the Tunnel.

Fencing is provided around the ASTs at Buildings 3500 (East Stadium), 3522, 3559 (Cell Repository x2), 3689, 3691, 3826, 3831, 3832 (only 500/500-gallon split AST), 3903, 4138, 4140, 4177, 4178, 4179 and 4180.

There is a low probability that a discharge could occur as a result of unauthorized access to a UST area; therefore, fencing is not provided in UST areas.

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.*

The only ASTs where there is piping, which could result in the tank contents flowing to the ground surface, are at the ASTs at Buildings 4100. The piping for this AST is connected to a fuel dispenser which is protected by a lock.

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 generators are located in areas accessible only to authorized Rutgers personnel. Starter controls for fuel dispensers which service the AST at Buildings 3832 and 4100 are protected by locks.

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 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 Facility/Utility/Housing Director is the designated person accountable for spill prevention at Rutgers- Busch/Livingston.

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, storm drain covers, 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 Emergency Coordinator designated below. The Rutgers Police shall then contact REHS and Emergency Personnel, as necessary. Table No. 9 is a list of emergency contacts.

Table 10. 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: 3/8/16

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.