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June 1 , 2013

Donald Welsted
NYS DEC Region 4
Division of Air Resources
1130 North Westcott Road
Schenectady, NY 12306-2014

Re: Global Companies LLC - Albany, NY Terminal
Title V Facility Permit No. 4-0101-00112/00029

Dear Mr. Welsted;

On behalf of Global Companies LLC (Global), Envirospec Engineering, PLLC is submitting the attached application for a Significant Title V Permit Modification at the Global Companies Albany Terminal (Terminal) located at 50 Church Street, Albany, New York. The terminal currently operates under Title V Facility Permit No. 4-0101-00112/00029.

Global is requesting to expand crude oil storage capabilities at the Terminal to include heated petroleum products (crude, residual fuel and bio-fuels). The modification includes three elements 1) reconfiguration of an existing intermodal rail yard to allow offloading of heated petroleum products, 2) conversion of Tank 33, which currently stores distillate oil, to volatile petroleum product storage, and 3) installation of boilers to heat products contained in rail cars and storage tanks.

The project involves installing additional offloading stations for heated rail cars at the existing Canadian Pacific Railroad (CP) Kenwood Yard. The additional offload positions would be located on land leased from CP within Kenwood Yard between the Albany Terminal and the existing rail offloading tracks. A project plan showing the locations of the offloading stations, approximate locations of boilers and Tank 33 is included for your reference.

Emissions from heated petroleum products are lower than the emissions from the crude oil that is currently permitted at the facility; therefore, the potential to emit (PTE) will continue to be based on crude oil to allow the Terminal the greatest flexibility. TANKS 4.09 Reports are included with this application.

A total of six (6) natural gas-fired boilers will be installed to heat the additional products, as needed, with two (2) boilers each rated at 4, 6 and 20 MMbtu/hr. Four (4) of the boilers are exempt from permitting per 6 NYCRR 201-3.2(1)(i), because they are less than 10 MMbtu/hr. The larger boilers (20 MMbtu/hr) are not exempt from permitting. In addition, they are subject to 40 CFR Part 60, Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. As indicated in the attached Project Summary, emissions from the boilers are far below the major source thresholds for all key combustion-related pollutants – particulate matter, nitrogen oxides, sulfur oxides, and carbon monoxide.

As previously mentioned, Global will be converting Tank 33 from distillate service to volatile petroleum product storage. To accommodate this change, an internal floating roof (IFR) will be installed in Tank 33, which will now be subject to 40 CFR Part 60, Subpart Kb – Standards of Performance of Volatile Organic Liquid Storage Vessels. To offset the increase in emissions from the conversion of Tank 33, Tank 118 will be limited to distillate service. The heated petroleum products will be throughput under the existing crude oil throughput cap; as a result, no throughput modifications are necessary.

As part of this modification application, Global is also proposing to modify Condition 2-3 which allows for a flexible tank grouping at the facility. Global is proposing to limit gasoline storage in the grouping. This change will allow the Terminal more flexibility for tank maintenance activities within the grouping without approaching the permitted PTE.

In support of this change, Global is proposing to add the following underlined language to Condition 2-3.7:

> "The following sources TK114, TK115, TK031, and TNK32 have the flexibility to be utilized as crude oil tanks. However, at any one time only two of these sources can be utilized to store either gasoline or crude oil. [THE EXISTING TEXT IS UNGRAMMATICAL. CONSIDER MAKING THE SUGGESTED CHANGE.] The remaining two tanks will either be in distillate or ethanol service. <u>If Tank 114 is in ethanol service, gasoline will not be stored in the remaining tanks.</u>
>
> The current emission profile or Potential To Emit (PTE) at the facility incorporates the aforementioned scenario. The facility has taken this cap to remain within this current emission profile."

Condition 4-10 must be modified to include Tank 33 as well, as Tank 33 will now be considered under that same project for NSR tracking purposes. Emission Unit 1-TANKS, Process CR1, Emission Source TK033 will need to be added to Item 4-10.1.

The facility PTE has been updated and the increase in emissions has been summarized on the revised Project Emission Summary sheet. Emission increases resulting from piping modifications related to the changes at the Terminal are also included.

In support of this application, please find attached the following items:

- Project Emission Summary
- Updated Emission Unit Matrix
- Facility Potential to Emit (PTE)
- Certification by a Responsible Official
- Relevant Title V facility application forms for the modification
- PE Certification form
- TANKS 4.09 Report
- Site Plan

Should you have any questions please feel free to contact me at 518-453-2203 or Tom Keefe of Global Companies LLC at 781-398-4132.

Sincerely,

Nicole Brower, PE
Senior Engineer
Envirospec Engineering PLLC

Cc: Tom Keefe – Global Companies LLC
Ron Kenny – Operations Manager
Charles Furman – Terminal Manager

Project Summary

EMISSION SOURCE	2011	2012	ACTUAL EMISSIONS (Average of 2011 & 2012 Emission Statements)	PROJECTED ACTUAL EMISSIONS
Tank 118 in Distillate Service	3.83	4.79	4.31	0.04
Tank 33 in Crude Oil Service	0.00	0.00	0.00	5.66
Marine Loading of Crude Oil (1,850 Mmgal)	0.39	20.55	10.47	39.50
VOC Emissions from Boilers	-	-	-	1.42
Additional Fugitive Emissions	-	-	-	0.08
TOTAL			14.78	46.70
			Total Projected Actual Emissions (tons/year)	**46.70**
			Total Actual Emissions (tons/year)	**14.78**
			Total Project Emission Potential (tons/year)	**31.92**

EMISSION SOURCE	PROJECTED ACTUAL EMISSIONS BY POLLUTANT (tons/year)				
	PM	SOx	NOx	CO	VOC
Boiler 1 (4 Mmbtu/hr)	0.13	0.01	1.72	1.44	0.09
Boiler 2 (6 Mmbtu/hr)	0.20	0.02	2.58	2.16	0.14
Boiler 2 (6 Mmbtu/hr)	0.20	0.02	2.58	2.16	0.14
Boiler 3 (4 Mmbtu/hr)	0.13	0.01	1.72	1.44	0.09
Boiler 4 (20 Mmbtu/hr)	0.650	0.050	8.59	7.21	0.47
Boiler 5 (20 Mmbtu/hr)	0.650	0.050	8.59	7.21	0.47
TOTAL:	**1.96**	**0.16**	**25.78**	**21.64**	**1.42**

Emission Unit Matrix

Emission Unit ID	Emission Unit Description	Process ID	Process Description	SCC Code	Source ID	Source Description	Control ID	Control Description	Emission Point ID
1-TANKS	This emission unit represents storage tanks at the facility.	GA1	Gasoline storage tanks used for storage and distribution at terminal.	4-03-010-99	TK114	3,715,740 gallon tank	T114C	Internal Floating Roof	00114
					TK115	5,812,800 gallon tank	T115C	Internal Floating Roof	00115
					TK117	2,717,148 gallon tank	T117C	Internal Floating Roof	00117
DELETE					TK118	1,963,290 gallon tank	T118C	Internal Floating Roof	00118
					TK119	1,292,886 gallon tank	T119C	Internal Floating Roof	00119
					TK120	1,364,748 gallon tank	T120C	Internal Floating Roof	00120
					TK121	4,603,563 gallon tank	T121C	Internal Floating Roof	00121
					TK130	1,421,868 gallon tank	T130C	Internal Floating Roof	00130
					TK039	139,344,878 gallon tank	T039C	Internal Floating Roof	00T39
		ET1	Ethanol storage tanks used for storage and distribution at terminal.	4-03-010-99	TK031	3,829,140 gallon tank	TK31C	Internal Floating Roof	00T31
					TK032	3,829,140 gallon tank	TK32C	Internal Floating Roof	00T32
					TK039	3,690,540 gallon tank	T039C	Internal Floating Roof	00T39
					TK114	3,715,740 gallon tank	T114C	Internal Floating Roof	00114
					TK115	5,812,800 gallon tank	T115C	Internal Floating Roof	00115
					TK117	2,717,148 gallon tank	T117C	Internal Floating Roof	00117
					TK118	1,963,290 gallon tank	T118C	Internal Floating Roof	00118
					TK119	1,292,886 gallon tank	T119C	Internal Floating Roof	00119
					TK120	1,364,748 gallon tank	T120C	Internal Floating Roof	00120
					TK121	4,603,563 gallon tank	T121C	Internal Floating Roof	00121
					TK130	1,421,868 gallon tank	T130C	Internal Floating Roof	00130
		CR1	Crude Oil storage tanks used for storage and distribution at terminal.	4-03-010-99	TK031	3,829,140 gallon tank	TK31C	Internal Floating Roof	00T31
					TK032	3,829,140 gallon tank	TK32C	Internal Floating Roof	00T32
ADD					TK033	3,715,740 gallon tank	TK33C	Internal Floating Roof	00T33
					TK114	3,715,740 gallon tank	T114C	Internal Floating Roof	00114
					TK115	5,812,800 gallon tank	T115C	Internal Floating Roof	00115
					TK117	2,717,148 gallon tank	T117C	Internal Floating Roof	00117
					TK118	1,963,290 gallon tank	T118C	Internal Floating Roof	00118
					TK119	1,292,886 gallon tank	T119C	Internal Floating Roof	00119
					TK120	1,364,748 gallon tank	T120C	Internal Floating Roof	00120
					TK121	4,603,563 gallon tank	T121C	Internal Floating Roof	00121
					TK130	1,421,868 gallon tank	T130C	Internal Floating Roof	00130
					TK039	139,344,878 gallon tank	T039C	Internal Floating Roof	00T39
		1FG	Wastewater tank contaminated with gasoline/distillate.	NOT NEEDED	1WATR	1,421,868 gal wastewater tank			001WW
1-RACK1	Truck loading rack with 3 gasoline bays and 5 distillate bays.	R1G	Emissions from VRU while loading gasoline/ethanol.	4-04-001-53	RACK1	Rack 1	VRUTK	Vapor Recovery Unit	00001
							VACTK	Vac Assist Vapor Reduction System	00004
		R1D	Emissions from Rack 1 while loading distillate at Rack 1	4-04-001-50	RACK1	Rack 1			
		FG1	Fugitive HAP/VOC emissions from Rack 1 and associated piping	4-04-001-51	RACK1	Rack 1			
1-RACK2	Railcar loading rack with 2 loading positions for distillate and gasoline/ethanol with vapor combustion control.	R2G	Emissions from Vapor Combustion Unit while loading all gasoline/ethanol.	4-04-001-53	RACK2	Rack 2	VCURR	Vapor Combustion Unit	00002
		R2D	Emissions from Rack 2 while loading distillate.	4-04-001-50	RACK2	Rack 2			
		FG2	Fugitive HAP/VOC emissions from Rack 2 and associated piping	4-04-001-51	RACK2	Rack 2			
1-RACK3	This emission unit represents marine loading of product at dock.	R3E	Marine loading of ethanol at the dock with vapor combustion unit (VCU) control device.	4-06-002-98	RACK3	Rack 3	VCUML	Vapor Combustion Unit for R3E/R3G	00003
		R3G	Marine loading of gasoline at the dock with VCU control device.	4-06-002-98	RACK3	Rack 3	VCUML	Vapor Combustion Unit for R3E/R3G	00003
		R3D	Emissions from Rack 3 while loading distillate.	4-06-002-98	RACK3	Rack 3			
		R3C	Emissions from Rack 3 while loading crude oil.	4-06-002-98	RACK3	Rack 3	VCUM2	Vapor Combustion Unit for R3C	00006
		FG3	Fugitive HAP/VOC emissions from Rack 3 and associated piping	4-04-001-51	RACK3	Rack 3			
1-RACK4	Railcar loading rack for distillate without control.	R4D	Emissions from Rack 4 while loading distillate.	4-04-001-50	RACK4	Rack 4			00005
		FG4	Fugitive HAP/VOC emissions from Rack 4 and associated piping.	4-04-001-51	RACK4	Rack 4			
1-BOLR1	Natural-Gas Fired Boiler for rail car heating.	NLG	Natural-Gas Fired Boiler for rail car heating.	1-02-006-02	BOLR1	20 Mmbtu Natural-Gas Fired Boiler			00007
ADD					BOLR2	20 Mmbtu Natural-Gas Fired Boiler			00008

GLOBAL COMPANIES

PRODUCT TERMINAL EMISSION REPORT
SIC CODE 5171

Albany

Report Purpose
2013 PTE

Version Date
5/17/2013

Emission Unit Overview

Description	VOC Tank Emissions	VOC Tank Landing Emissions	VOC TOTAL TANK EMISSIONS	HAP Tank Emissions	HAP Tank Landing Emissions	HAP TOTAL TANK EMISSIONS	SINGLE HAP Hexane Tank Emissions	SINGLE HAP Hexane Tank Landing Emissions	SINGLE HAP Hexane TOTAL TANK EMISSIONS
Gasoline Storage (RFG)									
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Gasoline Loading Emissions		Total Emissions From VCU	Gasoline Loading Emissions		Total Emissions From VCU			
	0.000		0.000	0.000		0.000	0.000		0.000
IFR Storage Tanks									
Tank 117_BLG	3.209	2.179	5.388	0.188	0.128	0.316	0.127	0.086	0.213
Tank 119_BLG	4.297	1.152	5.449	0.252	0.068	0.319	0.170	0.046	0.216
Tank 120	2.262	1.152	3.415	0.133	0.068	0.200	0.090	0.046	0.135
Tank 121_BLG	6.427	4.051	10.478	0.276	0.174	0.450	0.029	0.018	0.047
Tank 114_BLG	4.121	1.296	5.418	0.242	0.076	0.317	0.163	0.051	0.215
Tank 115_BLG	5.856	4.051	9.907	0.343	0.237	0.581	0.232	0.160	0.392
Tank 33**	3.491	2.125	5.616	0.246	0.125	0.370	0.138	0.084	0.222
Tank 39	5.885	4.220	10.105	0.253	0.181	0.434	0.027	0.019	0.046
Tank 31*	0.405	1.292	1.697	0.017	0.056	0.073	0.002	0.006	0.008
Tank 32*	0.405	1.292	1.697	0.017	0.056	0.073	0.002	0.006	0.008
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Tank Cleaning									
Gasoline Loading (CNV)	Gasoline Loading Emssions		Total Emissions From VCU	Gasoline Loading Emissions		Total Emissions From VCU			
Truck Loading Fugitive	0.000		0.000	0.000		0.000	0.000		0.000
Truck Loading Stack	5.424		5.424	0.233		0.233	0.025		0.025
Rail Loading Fugitive	5.007		5.007	0.215		0.215	0.023		0.023
Rail Loading Stack	6.258		6.258	0.269		0.269	0.028		0.028
Distillate Service	Distillate Tank Emissions		TOTAL TANK EMISSIONS	Distillate Tank Emissions		TOTAL TANK EMISSIONS			
Tank 28	0.799		0.799	0.081		0.081			
Tank 29	0.799		0.799	0.081		0.081			
Tank 64	0.508		0.508	0.051		0.051			
Tank 30	0.799		0.799	0.081		0.081			
Tank 118	0.037		0.037	0.004		0.004			
	0.000		0.000	0.000		0.000			
	0.000		0.000	0.000		0.000			
	0.000		0.000	0.000		0.000			
	0.000		0.000	0.000		0.000			
	0.000		0.000	0.000		0.000			
Truck Loading	1.626		1.626	0.165		0.165			
Rail Loading	0.000		0.000	0.000		0.000			
Aviation Gasoline Storage									
Product / Water Mixture Tank	0.000		0.000	0.000		0.000	0.000		0.000
CNV Equipment Fugitives	0.403		0.403	0.064		0.064	0.003		0.003
Marine Loading	68.229		68.229	2.164		2.164	0.179		0.179
Additive Tank Emissions	0.072		0.072	0.087		0.087			
TOTAL OF SOURCES			149.13			6.63			1.76

Total VOCs	149.13	tons/yr
Total HAPs	6.63	tons/yr
Total Hexane	1.76	tons/yr

*Modeled as Ethanol Only

TANK STORAGE, CLEANING AND LOADING RACK

RFG Tank No.	lb/yr	Benzene	Ethylbenzene	Hexane	Isooctane	MTBE	Toluene	Xylene (-m)	Biphenyl	Cresol (-o)	Cumene	Naphthalene	Methanol	Page Total Hap	Landing Total Hap	Total HAP
		-	-	-	-	-	-	-	N/A	N/A	N/A	N/A	N/A	-	-	-
		-	-	-	-	-	-	-						-	-	-
	Gasoline Loading Emissions															
Gasoline Loading (RFG)														-	-	-
Truck Loading		0	0	0	0	0	0	0						-	-	-
Rail Loading														-	-	-
Gasoline Storage (Conv)														-	-	-
Tank 117_BLG		64	2	254	26	N/A	24	6	N/A	N/A	N/A	N/A	-	376	255	631
Tank 119_BLG		85	3	340	34	N/A	33	9	N/A	N/A	N/A	N/A	-	504	135	639
Tank 120		45	1	179	18	N/A	17	5	N/A	N/A	N/A	N/A	-	265	135	400
Tank 121_BLG		74	25	58	114	N/A	158	123	N/A	N/A	N/A	N/A	-	552	348	901
Tank 114_BLG		82	2	326	33	N/A	31	8	N/A	N/A	N/A	N/A	-	483	152	635
Tank 115_BLG		116	4	464	47	N/A	45	12	N/A	N/A	N/A	N/A	-	686	475	1,161
Tank 33**		69	2	276	28	N/A	27	7	N/A	N/A	N/A	N/A	82	492	249	741
Tank 39		68	23	53	104	N/A	145	112	N/A	N/A	N/A	N/A	-	506	363	869
Tank 31*		5	2	4	7	N/A	10	8	N/A	N/A	N/A	N/A	-	35	111	146
Tank 32*		5	2	4	7	N/A	10	8	N/A	N/A	N/A	N/A	-	35	111	146
		-	-	-	-	N/A	-	-	N/A	N/A	N/A	N/A	-	-	-	-
		-	-	-	-	N/A	-	-	N/A	N/A	N/A	N/A	-	-	-	-
														-	-	-
	Gasoline Loading Emissions													-	-	-
														-	-	-
Gasoline Loading (CNV)														-	-	-
Truck Loading Fugitive		0	0	0	0	0	0	0						-	-	-
Truck Loading Stack		62	21	49	96	0	134	104						466	-	466
Rail Loading Fugitive		58	20	45	89	0	123	96						430	-	430
Rail Loading Stack		72	24	57	111	0	154	120						538	-	538
	Distillate Tank Emissions															
Distillate Service														-	-	-
Tank 28		4	6	N/A	N/A	N/A	44	107	0	0	0	1	0	162	-	162
Tank 29		4	6	N/A	N/A	N/A	44	107	0	0	0	1	0	162	-	162
Tank 64		3	4	N/A	N/A	N/A	28	68	0	0	0	1	0	103	-	103
Tank 30		4	6	N/A	N/A	N/A	44	107	0	0	0	1	0	162	-	162
Tank 118		0	0	N/A	N/A	N/A	2	5	0	0	0	0	0	8	-	8
		0	0	N/A	N/A	N/A	0	0	0	0	0	0	0	-	-	-
		0	0	N/A	N/A	N/A	0	0	0	0	0	0	0	-	-	-
		0	0	N/A	N/A	N/A	0	0	0	0	0	0	0	-	-	-
Truck Loading		8.1	11.7	N/A	N/A	N/A	90.0	217.5	0.0	0.0	0.0	1.9	0.0	329	-	329
Rail Loading		0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-
Av Gasoline Storage														-	-	-
														-	-	-
Av Gasoline Loading														-	-	-
RFG Equipment Fugitives														-	-	-
CNV Equipment Fugitives		10	8	6	23	0	40	40	0	0	0	0	0	127	-	127
Marine Loading		455	154	357	701	0	974	754	0	0	0	0	932	4,327	-	4,327
Additive Tank Emissions			46					127						173	-	173
Total of all Sources														10,920	2,334	13,254
lb/yr		1653	420	3518	1727	0	2536	2380	0	0	0	6	1015			
Tons/yr		0.83	0.21	1.76	0.86	-	1.27	1.19	-	-	-	0.00	0.51	-		
	13,254.31	lb/yr														
	6.63	ton/yr														

TANK LANDINGS

RFG		Lb/yr												Page
Tank No.		Benzene	Ethylbenzene	Hexane	Isooctane	MTBE	Toluene	Xylene (-m)	Biphenyl	Cresol (-o)	Cumene	Naphthalene	Methanol*	Total Hap
0		-	-	-	-	-	-	-	N/A	N/A	N/A	N/A	N/A	-
0		-	-	-	-	-	-	-						-
														-
														-
Gasoline Storage (Conv)														-
Tank 117_BLG		43	1	173	17	-	17	4	N/A	N/A	N/A	N/A	N/A	255
Tank 119_BLG		23	1	91	9	-	9	2	N/A	N/A	N/A	N/A	N/A	135
Tank 120		23	1	91	9	-	9	2	N/A	N/A	N/A	N/A	N/A	135
Tank 121_BLG		47	16	37	72	-	100	77	N/A	N/A	N/A	N/A	N/A	348
Tank 114_BLG		26	1	103	10	-	10	3	N/A	N/A	N/A	N/A	N/A	152
Tank 115_BLG		80	2	321	32	-	31	8	N/A	N/A	N/A	N/A	N/A	475
Tank 33**		42	1	168	17	-	16	4	N/A	N/A	N/A	N/A	N/A	249
Tank 39		49	16	38	75	-	104	81	N/A	N/A	N/A	N/A	N/A	363
Tank 31*		15	5	12	23	-	32	25	N/A	N/A	N/A	N/A	N/A	111
Tank 32*		15	5	12	23	-	32	25	N/A	N/A	N/A	N/A	N/A	111
		-	-	-	-	-	-	-	N/A	N/A	N/A	N/A	N/A	-
		-	-	-	-	-	-	-	N/A	N/A	N/A	N/A	N/A	-
Tank Cleaning														-
														-
														-

2013 PTE

	Stored	Rack Loaded	Rail Loaded	Ship/Barge Loaded		Sent Up Pipeline	
Conventional Gasoline	1,250,000,000	650,000,000	150,000,000	450,000,000		-	gal
RFG Gasoline (MTBE)						-	gal
RFG Gasoline (Ethanol)							
% of Gasoline as RFG (MTBE) (2)							0%
*** Total Gasoline (auto fuel)	1,250,000,000	650,000,000	150,000,000	450,000,000		-	gal
Crude	1,850,000,000			1,850,000,000		-	gal
Ethanol						-	gal
Distillate	229,300,000	229,300,000	-			-	gal
Facility Total	3,329,300,000	879,300,000	150,000,000	2,300,000,000	0	0	
	Actual	Calculated					
Total Additive Used		527,580	gal		Product-water		gal

RFG Gasoline Tanks

Tk. No.	Dia	Leg ht	no land	land av	Vol bbls	Volume gals	Actual Thruputs (2)	Turnovers	Calculated Thruputs	gal/day
						-	-		-	
								Average Turnovers		

VOC's from Tanks(lb/yr)					
Tk No	Standing	Working	Total	Ozone	Highest
			-		

IFR Tanks

Tk. No.	Dia	Leg ht	no land	land avg days	Vol bbls	Volume gals	BLG / ETH Thruputs	Turnovers	Other GAS Thruputs	gal/day
117_BLG	110	4	2	2.0	64,694	2,717,148	63,270,000	23.3	0	173,342
119_BLG	80	4	2	2.0	30,783	1,292,886	63,270,000	48.9	0	173,342
120	80	4	2	2.0	32,494	1,364,748		172.1	234,869,064	643,477
121_BLG	150	4	2	2.0	109,608	4,603,536	200,000,000	43.4	0	0
114_BLG	120	4	1	2.0	88,470	3,715,740	100,000,000	26.9	0	273,973
115_BLG	150	4	2	2.0	138,400	5,812,800	100,000,000	17.2	0	273,973
33**	120	4	2	2.0	88,470	3,715,740		124.5	462,500,000	0
39	125	4	3	2.0	87,870	3,690,540		172.1	635,130,936	1,740,085
31*	125	4	2	2.0	91,170	3,829,140		13.1	50,000,000	136,986
32*	125	4	2	2.0	91,170	3,829,140		13.1	50,000,000	136,986
						26,913,138	526,540,000		1,432,500,000	
								Average Turnovers	387.5	
								Total IFR Tank Throughput	1,959,040,000	

VOC's from Tanks (lb/yr)					
Tk No	Standing	Working	Total	Ozone	Highest
117_BLG	6310	108	6,419		
119_BLG	8444	149	8,594		
120	3971	554	4,525		
121_BLG	12602	251	12,854		
114_BLG	8,086	157	8,243		
115_BLG	11,586	126	11,712		
33**	3,080	3,901	6,982		
39	10,812	959	11,771		
31*	715	94	809		
32*	715	94	809		
			72,716		

*Modeled as Ethanol Only

**Modeled as Crude Oil Only

Distillate Tanks

Tk. No.	Dia	vol bbls	Volume gals	Actual Thruputs (2)	Turnover's	Calculated Thruputs	gal/day
28	125	91,170	3,829,140		13.4	51,222,741	140,336
29	125	91,170	3,829,140		13.4	51,222,741	140,336
64	125	87,870	3,690,540		13.4	49,368,676	135,257
30	125	91,170	3,829,140		13.4	51,222,741	140,336
118	100	46,745	1,963,290		13.4	26,263,102	71,954
Pct Top Loading Distillate	0%		17,141,250	-		229,300,000	
					Average Turnovers	13.4	

VOC's from Tanks (lb/yr)

Tk No	Standing	Working	Total	Ozone	Highest
28	766	832	1,598		
29	766	832	1,598		
64	350	666	1,015		
30	766	832	1,598		
118	12	63	75		
			5,882.8		

Additive Tanks

Tk. No.	Dia	vol bbls	Volume gals	Actual Thruputs (2)	Turnovers	Calculated Thruputs	gal/day
A-1		257	10,800		13.277	143,396.60	393
A-4		172	7,221		13.277	95,876.56	263
A-5		21	900		13.277	11,949.72	33
A-6		11	450		13.277	5,974.86	16
A-Generic		172	7,221		13.277	95,876.56	263
A-Exxon		85	3,554		13.277	47,188.10	129
SA		175	7,366		13.277	97,801.79	268
A-Red Dye		6	248		13.277	3,292.81	9
A-Red Dye 2		11	450		13.277	5,974.86	16
WHFO		6	250		13.277	3,319.37	9
D-Fire Pump		6	250		13.277	3,319.37	9
R-Fire Pump		3	125		13.277	1,659.68	5
GAFO		21	900		13.277	11,949.72	33
			39,735	0	Total Additive	527,580	

VOC's from Tanks (lb/yr)

Tk No	Standing	Working	Total	Ozone	Highest
A-1	16	23	39		
A-4	11	15	26		
A-5	1	2	3		
A-6	1	1	2		
A-Generic	11	15	26		
A-Exxon	6	8	13		
SA	11	14	25		
A-Red Dye	1	1	1		
A-Red Dye 2	1	1	2		
WHFO	1	1	1		
D-Fire Pump	1	1	1		
R-Fire Pump	0	0	1		
GAFO	1	2	3		
			144		

Product Water/Mixture tanks

Tk. No.	Dia	vol bbls	Volume gals	Actual Thruputs (2)	Turnovers	Calculated Thruputs	gal/day
65	92	39,072	1,641,015		-		
130	75	33,854	1,421,868		-		

VOC's from Tanks (lb/yr)

Tk No	Standing	Working	Total	Ozone	Highest
65			-		
130			-		

Gasoline Loading Control

Control Device Level

Truck Rack	2.0	mg/l	VRU
Rail Loading	10.0	mg/l	VDU

Meteorological Data Used: Albany, NY

Liquid Density in Apr from Tanks 4.0: 6.1 lb/gal

May temp from Tanks 4.0: 54.180 deg F

VP of VOC in Apr from Tanks 4.0: 6.62

MW of VOC in Apr from Tanks 4.0: 61 g/g-mole

Saturation Factor for landing: 0.6

INPUTS

Average days per landing: 2.5

Speciation Data from

	Distillate Tank	Gas tank	Additive tank
Tank No.	28	120	A-1
Benzene	3.99	26.04	
Ethylbenzene	5.76	8.82	12.44
Hexane	0.83	20.46	
Isooctane		40.15	
MTBE			
Toluene	44.18	55.76	
Xylene (-m)	106.83	43.21	34.54
Biphenyl			
Cresol (-o)			
Cumene			
Naphthalene	0.95		
Total VOC	1,597.61	4,525	39.13

	Data used for Calculated Fugitives		
	Tanks	Bays	
Gasoline (RFG)	0	0	Using Actual Values
Gasoline (CNV)	8	2	
Distillate (DIST)	5	2	If using 'Actual Values' then leave table empty

0.1 fraction of the fugitive valve/flange count assigned to the vapor phase

	RFG in Liquid Phase		RFG in Vapor Phase		CNV in Liquid Phase		CNV Gas Phase		DIS	
	Calculated	Actual	Calculated	Actual	Calc	Actual	Calc	Actual	Calc	Actual
Valves	-	-	-			350		20		110
Pumps	-					12				4
Other						1				
Loading Arm Valve	-					8				6
Flanges	-	-	-	-		881		47		410

	117_BLG	119_BLG	120	121_BLG	114_BLG	115_BLG	33**	39	31*	32*	-	-	Total Thruput		
Actual Thruput	63,270,000	63,270,000	-	200,000,000	100,000,000	100,000,000	-	-	-	-	-	-	526,540,000	gal/yr	
Calculated Thruput	-	-	234,869,064	-	-	-	462,500,000	635,130,936	50,000,000	50,000,000	-	-	##########	gal/yr	
Throughput (Bbl / Yr):	1,506,429	1,506,429	5,592,121	4,761,905	2,380,952	2,380,952	11,011,905	15,122,165	1,190,476	1,190,476	-	-	46,643,810	bbl/yr	
	Lb / Year	Lb / Year	Lb / Year	Lb / Year	Lb / Year	Lb / Year	Lb / Year	Lb / Year	Lb / Year	Lb / Year	Lb / Year	Lb / Year		Lb / Year	Tons /Year
Total VOC**	6,419	8,594	4,525	12,854	8,243	11,712	6,982	11,771	809	809	-	-		72,716	36.36
Benzene	64	85	45	74	82	116	69	68	5	5	-	-		611	0.31
Ethylbenzene	2	3	1	25	2	4	2	23	2	2	-	-		65	0.03
Hexane	254	340	179	58	326	464	276	53	4	4	-	-		1,959	0.98
Isooctane	26	34	18	114	33	47	28	104	7	7	-	-		419	0.21
MTBE														-	
Toluene	24	33	17	158	31	45	27	145	10	10	-	-		500	0.25
Xylene (-m)	6	9	5	123	8	12	7	112	8	8	-	-		297	0.15
Biphenyl														-	-
Cresol (-o)														-	-
Cumene														-	-
Naphthalene														-	-
Methanol*							82							82	0.04
Total HAP Species	376	504	265	552	483	686	492	506	35	35	-	-		3,933	1.97
Non Hap VOC	6,043	8,090	4,259	12,301	7,760	11,025	6,490	11,265	774	774	-	-		68,783	34.39

Total VOC:	6,419	8,594	4,525	12,854	8,243	11,712	6,982	11,771	809	809	-	-		72,716	36.36
Source Fraction Total VOC:	0.09	0.12	0.06	0.18	0.11	0.16	0.10	0.16	0.01	0.01	-	-			
Total HAP	376	504	265	552	483	686	492	506	35	35	-	-		3,933	1.97
SINGLE HAP: Hexane	254	340	179	158	326	464	276	145	10	10	-	-			
Source Fraction HAP:	0.10	0.13	0.07	0.14	0.12	0.17	0.12	0.13	0.01	0.01	-	-			

* Modeled as Ethanol

** Emissions from EPA Tanks 4.0 program.

	28	29	64	30	118	0					Total Thruput		
Actual Thruput	-	-	-	-	-	-	-	-	-	-	-	gal/yr	
Calculated Thruput	51,222,741	51,222,741	49,368,676	51,222,741	26,263,102	-	-	-	-	-	229,300,000	gal/yr	
Throughput (Bbl / Yr):	1,219,589	1,219,589	1,175,445	1,219,589	625,312	-	-	-	-	-	5,459,524	bbl/yr	
	Lb / Year	Lb / Year	Lb / Year	Lb / Year	Lb / Year	Lb / Year	Lb / Year	Lb / Year				Lb / Year	Tons /Year
Total VOC**	1,598	1,598	1,015	1,598	75	-	-	-	-	-		5,883	2.94
Benzene	4.0	4.0	2.5	4.0	0.2	-	-	-	-	-		15	0.01
Ethylbenzene	5.8	5.8	3.7	5.8	0.3	-	-	-	-	-		21	0.01
Hexane												-	-
Isooctane												-	-
MTBE												-	-
Toluene	44.2	44.2	28.1	44.2	2.1	-	-	-	-	-		163	0.08
Xylene (-m)	106.8	106.8	67.9	106.8	5.0	-	-	-	-	-		393	0.20
Biphenyl	-	-	-	-	-	-	-	-	-	-		-	-
Cresol (-o)	-	-	-	-	-	-	-	-	-	-		-	-
Cumene	-	-	-	-	-	-	-	-	-	-		-	-
Naphthalene	1.0	1.0	0.6	1.0	0.0	-	-	-	-	-		4	0.00
Methanol*	-	-	-	-	-	-	-	-	-	-		-	-
Total HAP Species	162	162	103	162	8	-	-	-	-	-		595	0.30
Non Hap VOC	1,436	1,436	913	1,436	67	-	-	-	-	-		5,287	2.64

Total VOC:	1,598	1,598	1,015	1,598	75	-						5,883	2.94
Source Fraction Total VOC:	0.27	0.27	0.17	0.27	0.01	-	-	-	-	-		1	
SINGLE HAP: Xylene (-m):	106.83	106.83	67.89	106.83	4.99	-	-	-	-	-		393	0.20
Total HAP:	162	162	103	162	8	-	-	-	-	-		595	0.30
Source Fraction HAP:	0.27	0.27	0.17	0.27	0.01	-	-	-	-	-		1	

* Emissions from EPA Tanks 4.0 program.

	A-1	A-4	A-5	A-6	A-Generic	A-Exxon	SA	A-Red Dye	A-Red Dye 2	WHFO	D-Fire Pump	R-Fire Pump	GAFO	Total		
Actual Thruput	-	-	-	-	-	-	-	-	-	-	-	-	-	-	gal/yr	
Calculated Thruput	143,397	95,877	11,950	5,975	95,877	95,877	95,877	95,877	95,877	95,877	95,877	95,877	95,877	1,120,087	gal/yr	
Throughput (Bbl / Yr):	3,414	2,283	285	142	2,283	2,283	2,283	2,283	2,283	2,283	2,283	2,283	2,283	26,669	bbl/yr	
	lb/year	lb/year	lb/year	lb/year	lb/year	lb/year	lb/year	lb/year	lb/year	lb/year	lb/year	lb/year	lb/year		lb/year	tons/year
Total VOC**	39	26	3	2	26	13	25	1	2	1	1	1	3		144.16	0.07
Benzene	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A		-	-
Ethylbenzene	12.4	8.3	1.0	0.5	8.3	4.3	7.9	0.4	0.5	0.5	0.4	0.2	1.0		45.83	0.02
Hexane	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A		-	-
Isooctane	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A		-	-
MTBE	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A		-	-
Toluene	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A		-	-
Xylene (-m)	34.5	23.1	2.9	1.5	23.1	11.9	21.8	1.1	1.5	1.3	1.1	0.6	2.9		127.25	0.06
Biphenyl	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A		-	-
Cresol (-o)	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A		-	-
Cumene	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A		-	-
Naphthalene	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A		-	-
Methanol*	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A		-	-
Total HAP Species	47	31	4	2	31	16	30	1	2	2	1	1	4		173	0.09
Non Hap VOC	(8)	(5)	(1)	(0)	(5)	(3)	(5)	(0)	(0)	(0)	(0)	(0)	(1)		(29)	(0.01)

Calculated using 23% ethyl benzene & 77% xylene(-m)

Sample Calculation for Additive thruput

use 0.6 gal of additive for each gal of LOADED gasoline and distillate

Total Additive thruput = (Total Loading Volume / 1000)*(0.6)

= (500,000,000 gallons / 1000)*(0.6)
= 300,000 gallons

* Emissions from EPA Tanks 4.0 program.

Loading Summary

	TRUCK LOADING				Rail Loading			Marine Loading			Total	
	Gasoline		Distillate	Total	Gasoline	Distillate	Total	Crude Oil	Gas / Eth	Total	lb/yr	Tons/yr
	RFG	CNV										
Total VOC lb/yr	0	10,848	3,253	14,100	22,530	0	22,530	79,000	57,459	136,459	173,089	86.54
Benzene	0	62	8	71	130	0	130	455	331	785	986	0.49
Ethylbenzene	0	21	12	33	44	0	44	154	112	266	343	0.17
Hexane (-n)	0	49	-	49	102	-	102	357	260	617	768	0.38
Iso-octane	0	96	-	96	200	-	200	701	510	1,211	1,507	0.75
MTBE	0	-	-	0	-	-	-	0	0	0	0	0.00
Toluene	0	134	90	224	278	0	278	974	708	1,682	2,183	1.09
Xylene (-m)	0	104	218	321	215	0	215	754	549	1,303	1,839	0.92
Biphenyl	-	-	0	0	-	0	0	-	-	0	0	0.00
Cresol	-	-	0	0	-	0	0	-	-	0	0	0.00
Cumeme	-	-	0	0	-	0	0	-	-	0	0	0.00
Naphthalene	-	-	2	2	-	0	0	-	-	0	2	0.00
Phenol	-	-	0	0	-	0	0	-	-	0	0	0.00
Methanol	-	-	-	-	-	-	-	932	-	932	932	0.47
Total HAP Species*	0	466	329	795	968	0	968	4,327	2,469	6,796	8,560	4.28
Non Hap VOC	0	10,382	2,923	13,305	21,562	0	21,562	74,673	54,989	129,662	164,529	82.26

				Loading Losses 2mg/l		Tank-truck loss 8 mg/l		Total	
			Vapor Fraction	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.
Gasoline Throughput at the Rack (MM gal)	650.0	Total VOC	100.00%	10,848	5.424	-	-	10,848	5.424
		Benzene	0.58%	62	0.031	0	-	62	0.031
Distillate bottom loading vapors are controlled		Ethylbenzene	0.19%	21	0.011	0	-	21	0.011
emissions from this loading are negligible		Hexane (-n)	0.45%	49	0.025	0	-	49	0.025
		Iso-octane	0.89%	96	0.048	0	-	96	0.048
VRU Emission Rating (mg/liter)	2.00	MTBE	N/A		-		-	-	0.000
		Toluene	1.23%	134	0.067	0	-	134	0.067
Tank-Truck Loss Factor (mg/liter)		Xylene (-m)	0.95%	104	0.052	0	-	104	0.052
		Biphenyl	N/A					-	
Controlled gasoline Loading Losses (lb/year)	10,848	Cresol	N/A					-	
		Cumeme	N/A					-	
Uncontrolled gasoline Loading Losses (lb/year)	6,360,783	Naphthalene	N/A					-	
		Phenol	N/A					-	
		Total HAP Species*	4.30%	466	0.233	-	-	466	0.233
		Non Hap VOC	95.70%	10,382	5.191	-	-	10,382	5.191
Temp. used in uncontrolled loading calculation	54.18 F								
	514.18 R	Total VOC		10,848	5.424	-	-	10,848	5.424
		Total HAP		466	0.233	-	-	466	0.233
PTE Vapor Control Down Time lb/yr	-	Highest Single HAP							
(tons/year)	0.0	Toluene		134	0.067	-	-	134	0.067

Sample Calculations

Volume Of Gasoline loaded (gallons)*3.785 litres/gallon*(VRU/VDU emission rate (mg/liter of gasoline loaded) + gasoline loading losses (mg/liter of gasoline loaded))*2.2046 lbs/Kg*1 Kg/1,000,000 mg = emissions (lbs)

For 100,000,000 gallons loaded, and a VDU rated at 10 mg/liter the equation yields:

100,000,000*3.785*(10+8)*2.2046*1/1,000,000 = 15,020 lbs

Uncontrolled Loading Emissions Factor, L = 12.46 SPM/T in lb VOC/1,000 gallons product loaded
for S = 1 (dimensionless); VP = 5.73 psia of VOC; M = 65 lb/lb-mole; T= 530 deg R
= 12.46*(1)*(5.73)*65/530
= 8.75609 lb / 1,000 gallons gasoline loaded

Uncontrolled Total VOC Emissions = Annual Loading Volume (M gallons) x Loading Emission Factor (lbs VOC per M gallons loaded)
for 100,000,000 gallons loaded, and a loading factor of 8.75609 lbsVOC per 1,000 gallons loaded
= 100,000,000*8.75609/1,000
= 875,609 lbs VOC

Gasoline Throughput at the Rack (MM gal)	150.0
Distillate bottom loading vapors are controlled emissions from this loading are negligible	
VRU Emission Rating (mg/liter)	10.00
Tank-Truck Loss Factor (mg/liter)	8
Controlled gasoline Loading Losses (lb/year)	22,530
Uncontrolled gasoline Loading Losses (lb/year)	1,467,873
Temp. used in uncontrolled loading calculation	54.18
	514.18
PTE Vapor Control Down Time lb/yr	-
(tons/year)	0.0

	Vapor Fraction	Loading Losses 10mg/l		Tank-truck loss 8 mg/l		Total	
		Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.
Total VOC	100.00%	12,517	6.258	10,013	5.007	22,530	11.265
Benzene	0.58%	72	0.036	58	0.029	130	0.065
Ethylbenzene	0.19%	24	0.012	20	0.010	44	0.022
Hexane (-n)	0.45%	57	0.028	45	0.023	102	0.051
Iso-octane	0.89%	111	0.056	89	0.044	200	0.100
MTBE	N/A		-		-	-	0.000
Toluene	1.23%	154	0.077	123	0.062	278	0.139
Xylene (-m)	0.95%	120	0.060	96	0.048	215	0.108
Biphenyl	N/A					-	
Cresol	N/A					-	
Cumeme	N/A					-	
Naphthalene	N/A					-	
Phenol	N/A					-	
Total HAP Species*	4.30%	538	0.269	430	0.215	968	0.484
Non Hap VOC	95.70%	11,979	5.989	9,583	4.791	21,562	10.781
Total VOC		12,517	6.258	10,013	5.007	22,530	11.265
Total HAP		538	0.269	430	0.215	968	0.484
Highest Single HAP							
Toluene		154	0.077	123	0.062	278	0.139

Sample Calculations

Volume Of Gasoline loaded (gallons)*3.785 litres/gallon*(VRU/VDU emission rate (mg/liter of gasoline loaded) + gasoline loading losses (mg/liter of gasoline loaded))*2.2046 lbs/Kg*1 Kg/1,000,000 mg = emissions (lbs)

For 100,000,000 gallons loaded, and a VDU rated at 10 mg/liter the equation yields:

100,000,000*3.785*(10+8)*2.2046*1/1,000,000 = 15,020 lbs

Uncontrolled Loading Emissions Factor, L = 12.46 SPM/T in lb VOC/1,000 gallons product loaded
for S =1.0 (dimensionless); VP = 5.73 psia of VOC; M = 65 lb/lb-mole; T= 530 deg R
= 12.46*(1)*(5.73)*65/530
= 8.75609 lb / 1,000 gallons gasoline loaded

Uncontrolled Total VOC Emissions = Annual Loading Volume (M gallons) x Loading Emission Factor (lbs VOC per M gallons loaded)
for 100,000,000 gallons loaded, and a loading factor of 8.75609 lbsVOC per 1,000 gallons loaded
= 100,000,000*8.75609/1,000
= 875,609 lbs VOC

EMISSIONS FROM MARINE LOADING OF CRUDE OIL:

Throughput: 1,850 Mmgal 3 mg/L 0.02503621 lbs/1000 gallons

Loading into an Uncleaned Barge:

Emission Factor (lb/1000 gal)	Throughput (Mmgal)	Loading Rack Emissions (lb/yr)	1.3% Remaining after 98.7% goes to VDU	98.7% to VDU	3 mg/L from VDU	Total Emissions (lbs)	Total Emissions (tons)
1.3590	1850	2514075	32683	2481392	46317	79000	39.50

Max Emissions Per Hour:

25,000 barrels / hr
1,050,000 gal / hr

Emission Factor (lb/1000 gal)	Throughput (Mmgal)	Loading Rack Emissions (lb/hr)	1.3% Remaining after 98.7% goes to VDU	98.7% to VDU	3 mg/L from VDU	Total Emissions (lbs)	Total Emissions (tons)
1.3590	1.05	1427	19	1408	28	47	0.02

EMISSIONS FROM MARINE LOADING OF GAS/ETH:

Throughput: 450 Mmgal

9.4 mg/L

Loading into an Uncleaned Barge:

Emission Factor* (lb/1000 gal)	Throughput (Mmgal)	Loading Rack Emissions (lb/yr)	1.3% Remaining after 98.7% goes to VDU	98.7% to VDU	98% Reduction from VDU	Total Emissions (lbs)	Total Emissions (tons)
3.9000	450	1755000	22815	1732185	34644	57459	28.73

* Emission Factor from Table 5.2-2 in AP-42 for an Uncleaned Barge previously loaded with a Volatile Liquid

Max Emissions Per Hour:

4000 barrels / hr
168000 gal / hr

Emission Factor* (lb/1000 gal)	Throughput (Mmgal)	Loading Rack Emissions (lb/hr)	1.3% Remaining after 98.7% goes to VDU	98.7% to VDU	98% Reduction from VDU	Total Emissions (lbs)	Total Emissions (tons)
3.9000	0.17	655	9	647	13	21	0.01

			Vapor Fraction	Up Stack Lbs/Year	Up Stack Tons/Yr	Top Load Fugitives Lbs/Year	Top Load Fugitives Tons/Yr
Distillate Throughput (MM gal)	-	Total VOC	100.00%	0.0	-	0.0	-
		Benzene	0.25%	0.0	-	0.0	-
		Ethylbenzene	0.36%	0.0	-	0.0	-
Uncontrolled Tank-Truck Splash		Hexane (-n)	0.00%	0.0	-	0.0	-
Loading Emission Factor (mg/l)	4.00	Iso-octane	0.00%	0.0	-	0.0	-
		MTBE	0.00%	0.0	-	0.0	-
Uncontrolled Tank-Truck		Toluene	2.77%	0.0	-	0.0	-
Bottom Loading Emission Factor (mg/l)	1.70	Xylene (-m)	6.69%	0.0	-	0.0	-
		Biphenyl	0.00%	0.0	-	0.0	-
Distillate Loading Rack Loss (lb/year)	-	Cresol	0.00%	0.0	-	0.0	-
		Cumeme	0.00%	0.0	-	0.0	-
Top Load Fugitive Loss (lb/year)	-	Naphthalene	0.06%	0.0	-	0.0	-
		Phenol	0.00%	0.0	-	0.0	-
		Total HAP Species*	10.12%	0.0	-	0.0	-
		Non Hap VOC	89.88%	0.0	-	0.0	-

Total VOC	0.0	0.0
Total HAP	0.0	0.0

Highest Single HAP					
Benzene		-		-	-

Sample Calculations

Volume of distillate top loaded (gallons)*3.785 litres/gallon*4.0 mg/liter of distillate loaded
*2.2046 lbs/kg*1 kg/1,000,000 mg= emissions (lbs)

For 100,000,000 distillate gallons top loaded the equation yields:

100,000,000*3.785*4*2.2046*1/1,000,000 = 3,338 lbs
Top load emissions are all fugitive

Volume of distillate bottom loaded (gallons)*3.785 litres/gallon* 1.7 mg/liter of distillate loaded
*2.2046 lbs/kg*1 kg/1,000,000 =emissions (lbs)

For 100,000,000 distillate gallons bottom loaded the eqution yields:

100,000,000*3.785*1.7*2.2046*1/1,000,000 = 1,419 lbs
Bottom Loaded emission are discharged up the stack.
The 'fugitive" emissions are negligible, and are assumed to be zero

			Vapor Fraction	Up Stack Lbs/Year	Up Stack Tons/Yr	Top Load Fugitives Lbs/Year	Top Load Fugitives Tons/Yr
Distillate Throughput (MM gal)	229.30	Total VOC	100.00%	3252.7	1.626	0.0	-
		Benzene	0.25%	8.1	0.004	0.0	-
		Ethylbenzene	0.36%	11.7	0.006	0.0	-
Uncontrolled Tank-Truck Splash		Hexane (-n)	0.00%	0.0	-	0.0	-
Loading Emission Factor (mg/l)	4.00	Iso-octane	0.00%	0.0	-	0.0	-
		MTBE	0.00%	0.0	-	0.0	-
Uncontrolled Tank-Truck		Toluene	2.77%	90.0	0.045	0.0	-
Bottom Loading Emission Factor (mg/l)	1.70	Xylene (-m)	6.69%	217.5	0.109	0.0	-
		Biphenyl	0.00%	0.0	-	0.0	-
Distillate Loading Rack Loss (lb/year)	3,253	Cresol	0.00%	0.0	-	0.0	-
		Cumeme	0.00%	0.0	-	0.0	-
Top Load Fugitive Loss (lb/year)	-	Naphthalene	0.06%	1.9	0.001	0.0	-
		Phenol	0.00%	0.0	-	0.0	-
		Total HAP Species*	10.12%	329.2	0.165	0.0	-
		Non Hap VOC	89.88%	2923.5	1.462	0.0	-

Total VOC		3252.7		0.0	
Total HAP		329.2		0.0	
Highest Single HAP					
Xylene (-m)		217.5		-	0.109

Sample Calculations

Volume of distillate top loaded (gallons)*3.785 litres/gallon*4.0 mg/liter of distillate loaded
*2.2046 lbs/kg*1 kg/1,000,000 mg= emissions (lbs)

For 100,000,000 distillate gallons top loaded the equation yields:

100,000,000*3.785*4*2.2046*1/1,000,000 = 3,338 lbs
Top load emissions are all fugitive

Volume of distillate bottom loaded (gallons)*3.785 litres/gallon* 1.7 mg/liter of distillate loaded
*2.2046 lbs/kg*1 kg/1,000,000 =emissions (lbs)

For 100,000,000 distillate gallons bottom loaded the eqution yields:

100,000,000*3.785*1.7*2.2046*1/1,000,000 = 1,419 lbs
Bottom Loaded emission are discharged up the stack.
The 'fugitive" emissions are negligible, and are assumed to be zero

Fugitive VOC Emissions

Count				Light	Heavy	Gas			
Light	Heavy	Gas		Factor (lbs/hr)	Factor (lbs/hr)	Factor (lbs/hr)	Lbs/Hr	Lbs/Year	lb/day
350	110	20	Valves	9.48E-05	9.48E-05	2.87E-05	0.04	3.9E+02	1.06
12	4	-	Pumps	1.19E-03	1.19E-03	1.43E-04	0.02	1.7E+02	0.46
1	-	-	Other	2.87E-04	2.87E-04	2.65E-04	0.00	2.5E+00	0.01
8	6	-	Loading Arm Valve	9.48E-05	9.48E-05	2.87E-05	0.00	1.2E+01	0.03
881	410	47	Flanges	1.76E-05	1.76E-05	9.26E-05	0.03	2.4E+02	0.65
							0.09	805.65	2.21

		Light Liquid	Fraction Light Liquid	Lbs/Year	Heavy Liquid Fraction	Heavy Liquid Lbs/Year	Gas	Fraction	Gas Lbs/Year	Total Lbs/Year
Total VOC		100.00%	561.06	100.00%	201.45	100.00%	43.14	805.65		
Benzene	00071-43-2	1.80%	10.10	0.001%	0.00	0.58%	0.25	10.35		
Ethylbenzene	00100-41-4	1.40%	7.85	0.01%	0.03	0.19%	0.08	7.97		
Hexane	00110-54-3	1.00%	5.61	N/A	N/A	0.45%	0.20	5.81		
Isooctane	00540-84-1	4.00%	22.44	N/A	N/A	0.89%	0.38	22.83		
MTBE	01634-04-4		0.00	N/A	N/A	0.00%	0.00	0.00		
Toluene	00108-88-3	7.00%	39.27	0.03%	0.06	1.23%	0.53	39.87		
Xylene (-m)	00108-38-3	7.00%	39.27	0.29%	0.58	0.95%	0.41	40.27		
biphenyl	00092-52-4	N/A	N/A	0.00%	0.00	N/A	N/A	0.00		
Cresol (-o)	00095-48-7	N/A	N/A	0.00%	0.00	N/A	N/A	0.00		
Cumene	00098-82-8	N/A	N/A	0.00%	0.00	N/A	N/A	0.00		
Naphthalene	00091-20-3	N/A	N/A	0.10%	0.20	N/A	N/A	0.20		
Methanol*	0.00%	N/A	N/A	0.00%	0.00	N/A	N/A	0.00		
Total HAPS		22.20%	124.56	0.44%	0.88	4.30%	1.85	127.29		
Non Hap VOC		77.80%	436.51	99.56%	200.57	95.70%	41.29	678.37		

* Based on facility-specific equipment component counts and EPA, November 1995, Equipment Leak Emission Factors.

HAP	VAPOR FRACTION Gasoline Conventional	Blending		Liquid Speciation Weight Fraction Gasoline (used for liquid fugitives) Blending	Conventional	Liquid Weight Fraction Distillate	Vapor Fraction (calculated) Distillate	Additive Tanks	Vapor Faction Av Gas	HAP	Cas Numbers	Texas TNRCC Numbers
Benzene	0.58%	0.99%		5.00%	1.80%	0.00001	0.00250		0.006	Benzene	00071-43-2	
Ethylbenzene	0.19%	0.03%		2.00%	1.40%	0.00013	0.00361	0.318	0.002	Ethylbenzene	00100-41-4	
Hexane	0.45%	3.96%		12.00%	1.00%	0.00000	-		0.005	Hexane	00110-54-3	
Isooctane	0.89%	0.40%		4.00%	4.00%					Isooctane	00540-84-1	
MTBE										MTBE	01634-04-4	
Toluene	1.23%	0.38%		7.00%	7.00%	0.00032	0.02765		0.012	Toluene	00108-88-3	
Xylene (-m)	0.95%	0.10%		7.00%	7.00%	0.00290	0.06687	0.883	0.010	Xylene (-m)	00108-38-3	
Biphenyl										Biphenyl	00092-52-4	
Cresol (-o)									0.000	Cresol (-o)	00095-48-7	
Cumene									0.000	Cumene	00098-82-8	
Naphthalene						0.00100	0.00060		0.000	Naphthalene	00091-20-3	
Methanol*	1.18%	1.18%		2.00%	2.00%							

Tank No.	117_BLG	119_BLG	120	121_BLG	114_BLG	115_BLG	33**	39	31*	32*	-	-
Tank Diam	110	80	80	150	120	150	120	125	125	125	-	-
Heel Height	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	-	-
Volume ft3	38,013	20,106	20,106	70,686	45,239	70,686	45,239	49,087	49,087	49,087	-	-
Vol bbl	6,771	3,581	3,581	12,590	8,058	12,590	8,058	8,743	8,743	8,743	-	-
Volume gal	284,377	150,414	150,414	528,800	338,432	528,800	338,432	367,222	367,222	367,222	-	-
Vol liters	1,076,367	569,318	569,318	2,001,509	1,280,966	2,001,509	1,280,966	1,389,937	1,389,937	1,389,937	-	-
Avg Temp F	54.18	54.18	54.18	54.18	54.18	54.18	54.18	54.18	54.18	54.18	54.18	54.18
Avg Temp K	285.47	285.47	285.47	285.47	285.47	285.47	285.47	285.47	285.47	285.47	285.47	285.47
temp corr	0.9568	0.9568	0.9568	0.9568	0.9568	0.9568	0.9568	0.9568	0.9568	0.9568	0.9568	0.9568
moles	45,978	24,319	24,319	85,496	54,718	85,496	54,718	59,372	59,372	59,372	-	-
VP of VOC(psia)	6.62	6.62	6.62	6.62	6.62	6.62	6.62	6.62	3.72	3.72	3.72	6.62
VOC theo fraction	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.25	0.25	0.25	0.45
Sat Factor	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
moles VOC	12,424	6,571	6,571	23,102	14,785	23,102	14,785	16,043	9,024	9,024	-	-
mol weight g/g-mole	61.00	61.00	61.00	61.00	61.00	61.00	50.00	61.00	49.82	49.82	49.82	61.00
VOC grams/landing	757,841	400,841	400,841	1,409,208	901,893	1,409,208	739,257	978,617	449,541	449,541	-	-
VOC lbs/landing	1,670.73	884	884	3,107	1,988	3,107	1,630	2,157	991	991	-	-
VOC tons/landing	0.84	0.44	0.44	1.55	0.99	1.55	0.81	1.08	0.50	0.50	-	-
land/yr	2	2	2	2	1	2	2	3	2	2	-	-
average days per landing	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	-	-
VOC lb filling	3,341	1,767	1,767	6,213	1,988	6,213	3,260	6,472	1,982.10	1,982.10	-	-
VOC lb standing	1,016	537	537	1,889	604	1,889	991	1,968	602.56	602.56	-	-
VOC lb/hr when landing	45	24	24	84	54	84	44	59	27	27	#DIV/0!	#DIV/0!
VOC lb/day when landing	2,179	1,152	1,152	4,051	1,296	4,051	2,125	4,220	1,292	1,292	#DIV/0!	#DIV/0!
Total VOC lbs	4,357	2,305	2,305	8,102	2,593	8,102	4,250	8,440	2,585	2,585	-	-
Total VOC tons	2.18	1.15	1.15	4.05	1.30	4.05	2.13	4.22	1.29	1.29	-	-

Total VOC	100.00%	4,357	2,305	2,305	8,102	2,593	8,102	4,250	8,440	2,585	2,585	-	-
Benzene	0.58%	43	23	23	47	26	80	42	49	15	15	-	-
Ethylbenzene	0.19%	1	1	1	16	1	2	1	16	5	5	-	-
Hexane (-n)	0.45%	173	91	91	37	103	321	168	38	12	12	-	-
Iso-octane	0.89%	17	9	9	72	10	32	17	75	23	23	-	-
MTBE	0.00%	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	1.23%	17	9	9	100	10	31	16	104	32	32	-	-
Xylene (-m)	0.95%	4	2	2	77	3	8	4	81	25	25	-	-
Biphenyl	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cresol	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cumeme	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Naphthalene	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Phenol	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total HAP Species*	4.30%	255	135	135	348	152	475	249	363	111	111	-	-
Non Hap VOC	95.70%	4,102	2,170	2,170	7,754	2,441	7,628	4,001	8,077	2,474	2,474	-	-

Fuel Consumption

Product	Unit	Gal/yr (Liquid)	SCF/yr (Gas)	Liters/year (Gas)	MMBTU/yr
Distillate	Furnace	590			66.08
Natural Gas	Boiler (water bldg)	1,863			54.00
Natural Gas	Boiler (garage)	105			22.00
Natural Gas	Boiler (office)	1,720			163.00
Natural Gas	Boiler (line trace)	TBD			35,040.00
Natural Gas	Boiler (tanks)	TBD			52,560.00
Natural Gas	Boiler (tanks)	TBD			52,560.00
Natural Gas	Boiler (line trace)	TBD			35,040.00
Natural Gas	Boiler (rail cars)	TBD			175,200.00
Natural Gas	Boiler (rail cars)	TBD			175,200.00
Natural Gas	Furnace	857			120.00
Natural Gas	VDU	82,315			11,524.10
		86,860			537,483

Distillate Service

	Pollutant				
Pollutant	PM	SOx	NOx	VOC	CO
Factor - lb/1000 gal	2.00	52.54	20.00	0.20	5.00
lb/yr	1.18	31.00	11.80	0.12	2.95
tons/yr	0.00	0.02	0.01	0.00	0.00

* Emission factors used to estimate emissions are from AP-42 workbook.

Example calculation

= gal/yr / 1000 gal * emission factor

Natural Gas Service

	lbs Pollutant / MM BTU				
Pollutant	PM	SOx	NOx	VOC	CO
Factor	0.007	0.001	0.098	0.005	0.082
lb/yr	4004.78	316.17	52694.42	2898.19	44263.31
tons/yr	2.00	0.16	26.35	1.45	22.13

* Emission factors used to estimate emissions are from AP-42 section 1.4, tables 1.4-1, 1.4-2, and 1.4-3.

Example Calculation of Natural Gas Useage

= Natural Gas Used 537,483 MMBTU/yr

= Natural Gas Used * Emission factor

Gasoline Vapor Service

	lbs Pollutant /10^6 liter (PM) or mg/liter (NOx and CO)				
Pollutant	PM	SOx	NOx	VOC	CO
Factor	0.044	Nil	4	NA	10
lb/yr	0.00	0.00	2.75	NA	6.87
tons/yr	0.00	0.00	0.00	NA	0.00

Propane Vapor Service

	lbs Pollutant/ 10^6 liter or lbs/10^6 BTU (CO and NOx)				
Pollutant	PM	SOx	NOx	VOC	CO
Factor	0.044	Nil	0.068	NA	0.37
lb/yr	0.00	0.00	0.00	NA	0.00
tons/yr	0.00	0.00	0.00	NA	0.00

VCU Gasoline Combustion

857 gallons of gasoline loaded at the rack

20 micrograms/liter PM2.5 emission factor

* flare soot emission factor from AP-42 Table 13.5-1 (assumes nearly no smoke)

VCU Propane Combustion

82315 gallons of propane combusted

36.3 cubic feet gas/gallon of propane

** from NGPA publication 2145-71

20 micrograms/liter PM2.5 emission factor

* flare soot emission factor from AP-42 Table 13.5-1 (assumes nearly no smoke)

Total of all Services

Pollutant	PM	SOx	NOx	VOC	CO
lb/yr	4,005.96	347.17	52,708.97	2,898.31	44,273.13
tons/yr	2.00	0.17	26.35	1.45	22.14

Note: Sulfur content assumed to be 0.37%

Note: These emissions are from Gasoline combustion and pilot light gas. Gasoline VOC's are already accounted for in the VDU effiency (i.e. 10 mg/l loaded). The pilot gas is basically propane, and contributes almost no non-propane VOC's.

New York State Department of Environmental Conservation
Air Permit Application

DEC ID	APPLICATION ID	OFFICE USE ONLY
4 - 0 1 0 1 - 0 0 1 1 2	- - /	/ /

Section I - Certification

Title V Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information [required pursuant to 6 NYCRR 201-6.3(d)] I believe the information is, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Responsible Official Tom Keefe	Title Director of EHS Operations
Signature	Date 6 / 10 / 2013

State Facility Certification

I certify that this facility will be operated in conformance with all provisions of existing regulations.

Responsible Official N/A	Title N/A
Signature N/A	Date / /

Section II - Identification Information

Title V Facility Permit	State Facility Permit
• New X Significant Modification • Administrative Amendment • Renewal • Minor Modification General Permit Title:_____	• New • Modification General Permit Title:_____

• Application involves construction of new facility • Application involves construction of new emission unit(s)

Owner/Firm

Name Global Companies LLC

Street Address 800 South Street

City Waltham	State MA	Country US	Zip 02453

Owner Classification • Federal • State • Municipal
X Corporation/Partnership • Individual

Taxpayer ID: 0 4 3 4 4 3 0 2 9

Facility

• Confidential

Name Global Companies LLC - Albany Terminal

Location Address 50 Church Street

X City / • Town / • Village Albany — Zip 12202

Project Description

• Continuation Sheet(s)

This project includes the conversion of Tank 33 into crude oil storage from distillate service. An IFR will be installed in Tank 33 to accommodate this change of service. Tank 118, which is currently permitted for gasoline storage, will be limited to distillate service. Six (6) boilers will be installed to heat crude oil.

Owner/Firm Contact Mailing Address

Name (Last, First, Middle Initial) Tom Keefe		Phone No. (781) 398.4132
Affiliation Global Companies LLC	Title Director EHS OPS	Fax No. (781) 398.9212
Street Address 800 South Street		
City Waltham	State MA	Country US — Zip 02453

Facility Contact Mailing Address

Name (Last, First, Middle Initial) Charles Furman		Phone No. (518) 436.6570
Affiliation Global Companies LLC	Title Terminal Manager	Fax No. (518) 436.6788
Street Address 50 Church Street		
City Albany	State NY	Country US — Zip 12202

New York State Department of Environmental Conservation
Air Permit Application

DEC ID
4 - 0 1 0 1 - 0 0 1 1 2

Section III - Facility Information

Classification

“ Hospital “ Residential “ Educational/Institutional “ Commercial X Industrial “ Utility

Affected States (Title V Only)

“ Vermont “ Massachusetts “ Rhode Island “ Pennsylvania Tribal Land:_____
“ New Hampshire “ Connecticut “ New Jersey “ Ohio Tribal Land:_____

SIC Codes

5171												

Facility Description “ Continuation Sheet(s)

PETROLEUM BULK TERMINAL

Compliance Statements (Title V Only)

I certify that as of the date of this application the facility is in compliance with all applicable requirements: X YES “ NO

If one or more emission units at the facility are not in compliance with all applicable requirements at the time of signing this application (the ‘NO’ box must be checked), the noncomplying units must be identified in the “Compliance Plan” block on page 8 of this form along with the compliance plan information required. For all emission units at this facility that are operating in compliance with all applicable requirements complete the following:

- “ This facility will continue to be operated and maintained in such a manner as to assure compliance for the duration of the permit, except those units referenced in the compliance plan portion of Section IV of this application.
- “ For all emission units, subject to any applicable requirements that will become effective during the term of the permit, this facility will meet all such requirements on a timely basis.
- “ Compliance certification reports will be submitted at least once a year. Each report will certify compliance status with respect to each requirement, and the method used to determine the status.

Facility Applicable Federal Requirements “ Continuation Sheet(s)

Title	Type	Part	Sub Part	Section	Sub Division	Paragraph	Sub Paragraph	Clause	Sub Clause

Facility State Only Requirements “ Continuation Sheet(s)

Title	Type	Part	Sub Part	Section	Sub Division	Paragraph	Sub Paragraph	Clause	Sub Clause

New York State Department of Environmental Conservation
Air Permit Application

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Section III - Facility Information (continued)

Facility Compliance Certification ❝ Continuation Sheet(s)

Rule Citation

Title	Type	Part	Sub Part	Section	Sub Division	Paragraph	Sub Paragraph	Clause	Sub Clause

❝ Applicable Federal Requirement
❝ State Only Requirement

❝ Capping

CAS No.	Contaminant Name
- -	

Monitoring Information

❝ Ambient Air Monitoring ❝ Work Practice Involving Specific Operations ❝ Record Keeping/Maintenance Procedures

Description

Work Practice Type	Process Material Code	Process Material Description	Reference Test Method

Parameter Code	Parameter Description	Manufacturer Name/Model No.

Limit Upper	Limit Lower	Limit Units Code	Limit Units Description

Averaging Method Code	Averaging Method Description	Monitoring Frequency Code	Monitoring Frequency Description	Reporting Requirements Code	Reporting Requirements Description

Facility Emissions Summary ❝ Continuation Sheet(s)

CAS No.	Contaminant Name	PTE (lbs/yr)	PTE Range Code	Actual (lbs/yr)
NY075 - 00 - 5	PM-10			
NY075 - 00 - 0	PARTICULATES			
7446 - 09 - 5	SULFUR DIOXIDE			
NY210 - 00 - 0	OXIDES OF NITROGEN			
630 - 08 - 0	CARBON MONOXIDE			
7439 - 92 - 1	LEAD			
NY998 - 00 - 0	VOC			
NY100 - 00 - 0	HAP			
- -				
- -				
- -				
- -				
- -				

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Section IV - Emission Unit Information

Emission Unit Description

" Continuation Sheet(s)

EMISSION UNIT	1 - T A N K S	Storage Tanks at the Facility.

Building

" Continuation Sheet(s)

Building	Building Name	Length (ft)	Width (ft)	Orientation

Emission Point

" Continuation Sheet(s)

EMISSION PT.	0 0 T 3 3					
Ground Elev. (ft)	Height (ft)	Height Above Structure (ft)	Inside Diameter (in)	Exit Temp. (EF)	Cross Section Length (in)	Cross Section Width (in)
	48		1440			
Exit Velocity (FPS)	Exit Flow (ACFM)	NYTM (E) (KM)	NYTM (N) (KM)	Building	Distance to Property Line (ft)	Date of Removal
		601.833	4720.724			

EMISSION PT.						
Ground Elev. (ft)	Height (ft)	Height Above Structure (ft)	Inside Diameter (in)	Exit Temp. (EF)	Cross Section Length (in)	Cross Section Width (in)
Exit Velocity (FPS)	Exit Flow (ACFM)	NYTM (E) (KM)	NYTM (N) (KM)	Building	Distance to Property Line (ft)	Date of Removal

Emission Source/Control

X" Continuation Sheet(s)

Emission Source ID	Emission Source Type	Date of Construction	Date of Operation	Date of Removal	Control Type Code	Control Type Description	Manufacturer's Name/Model No.
TK033	I						

Design Capacity	Design Capacity Units Code	Design Capacity Units Description	Waste Feed Code	Waste Feed Description	Waste Type Code	Waste Type Description
3,715,740	15	GALLONS				

Emission Source ID	Emission Source Type	Date of Construction	Date of Operation	Date of Removal	Control Type Code	Control Type Description	Manufacturer's Name/Model No.
TK33C	K				091	FLOATING ROOF	

Design Capacity	Design Capacity Units Code	Design Capacity Units Description	Waste Feed Code	Waste Feed Description	Waste Type Code	Waste Type Description

DEC ID
4-0101-00112

Section IV - Emission Unit Information (continued)

Process Information

" Continuation Sheet(s)

EMISSION UNIT	1 - TANKS	PROCESS	CR1

Description

Crude Oil Storage Tanks used for storage and distribution at terminal.

Source Classification Code (SCC)	Total Thruput		Thruput Quantity Units	
	Quantity/Hr	Quantity/Yr	Code	Description
4-06-010-99				

" Confidential " Operating at Maximum Capacity " Activity with Insignificant Emissions	Operating Schedule		Building	Floor/Location
	Hrs/Day	Days/Yr		
	24	365		

Emission Source/Control Identifier(s)

TK033							
TK33C							

EMISSION UNIT	1 - TANKS	PROCESS	GAS

Description

Gasoline storage tanks used for storage and distribution at terminal.

Source Classification Code (SCC)	Total Thruput		Thruput Quantity Units	
	Quantity/Hr	Quantity/Yr	Code	Description
4-04-001-60				

" Confidential " Operating at Maximum Capacity " Activity with Insignificant Emissions	Operating Schedule		Building	Floor/Location
	Hrs/Day	Days/Yr		
	24	365		

Emission Source/Control Identifier(s)

TK114	TK115	TK117	TK119	TK120	TK121	TK130	TK039
T114C	T115C	T117C	T119C	T120C	T121C	T130C	T039C

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Section IV - Emission Unit Information (continued)

Emission Unit	Emission Point	Process	Emission Source	Emission Unit Applicable Federal Requirements									" Continuation Sheet(s)
				Title	Type	Part	Sub Part	Section	Sub Division	Parag.	Sub Parag.	Clause	Sub Clause
1 -TANKS	00T33	CR1	TK033	40	CFFR	60	Kb	113b	(a)				
1 -TANKS	00T33	CR1	TK033	40	CFR	60	Kb	115b	(a)				
1 -TANKS	00T33	CR1	TK033	40	CFR	60	Kb	116b					
-													

Emission Unit	Emission Point	Process	Emission Source	Emission Unit State Only Requirements									" Continuation Sheet(s)
				Title	Type	Part	Sub Part	Section	Sub Division	Parag.	Sub Parag.	Clause	Sub Clause
-													
-													
-													
-													

Emission Unit Compliance Certification

" Continuation Sheet(s)

Rule Citation

Title	Type	Part	Sub Part	Section	Sub Division	Paragraph	Sub Paragraph	Clause	Sub Clause

" Applicable Federal Requirement " State Only Requirement " Capping

Emission Unit	Emission Point	Process	Emission Source	CAS No.	Contaminant Name
-				- -	

Monitoring Information

" Continuous Emission Monitoring
" Intermittent Emission Testing
" Ambient Air Monitoring

" Monitoring of Process or Control Device Parameters as Surrogate
" Work Practice Involving Specific Operations
" Record Keeping/Maintenance Procedures

Description

Work Practice	Process Material		Reference Test Method
Type	Code	Description	

Parameter		Manufacturer Name/Model No.
Code	Description	

Limit		Limit Units	
Upper	Lower	Code	Description

Averaging Method		Monitoring Frequency		Reporting Requirements	
Code	Description	Code	Description	Code	Description

New York State Department of Environmental Conservation
Air Permit Application

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Section IV - Emission Unit Information

Emission Unit Description

" Continuation Sheet(s)

EMISSION UNIT	1	-	T	A	N	K	S	Storage Tanks at the Facility.

Building

" Continuation Sheet(s)

Building	Building Name	Length (ft)	Width (ft)	Orientation

Emission Point

" Continuation Sheet(s)

EMISSION PT.	0 0 T 3 3					
Ground Elev. (ft)	Height (ft)	Height Above Structure (ft)	Inside Diameter (in)	Exit Temp. (EF)	Cross Section Length (in)	Cross Section Width (in)
	48		1440			
Exit Velocity (FPS)	Exit Flow (ACFM)	NYTM (E) (KM)	NYTM (N) (KM)	Building	Distance to Property Line (ft)	Date of Removal
		601.833	4720.724			

EMISSION PT.	0 0 0 0 8					
Ground Elev. (ft)	Height (ft)	Height Above Structure (ft)	Inside Diameter (in)	Exit Temp. (EF)	Cross Section Length (in)	Cross Section Width (in)
Exit Velocity (FPS)	Exit Flow (ACFM)	NYTM (E) (KM)	NYTM (N) (KM)	Building	Distance to Property Line (ft)	Date of Removal

Emission Source/Control

X Continuation Sheet(s)

Emission Source ID	Emission Source Type	Date of Construction	Date of Operation	Date of Removal	Control Type Code	Control Type Description	Manufacturer's Name/Model No.
BOLR1	C						

Design Capacity	Design Capacity Units Code	Design Capacity Units Description	Waste Feed Code	Waste Feed Description	Waste Type Code	Waste Type Description
3,715,740	25	MILLION BTU PER HOUR				

Emission Source ID	Emission Source Type	Date of Construction	Date of Operation	Date of Removal	Control Type Code	Control Type Description	Manufacturer's Name/Model No.
BOLR2	C						

Design Capacity	Design Capacity Units Code	Design Capacity Units Description	Waste Feed Code	Waste Feed Description	Waste Type Code	Waste Type Description
	25	MILLION BTU PER HOUR				

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Section IV - Emission Unit Information (continued)

Process Information

" Continuation Sheet(s)

EMISSION UNIT	1 - TANKS	PROCESS	CR1

Description

Crude Oil Storage Tanks used for storage and distribution at terminal.

Source Classification Code (SCC)	Total Thruput		Thruput Quantity Units	
	Quantity/Hr	Quantity/Yr	Code	Description
4-06-010-99				

" Confidential " Operating at Maximum Capacity " Activity with Insignificant Emissions	Operating Schedule		Building	Floor/Location
	Hrs/Day	Days/Yr		
	24	365		

Emission Source/Control Identifier(s)

TK033							
TK33C							

EMISSION UNIT	1 -	PROCESS	

Description

Gasoline storage tanks used for storage and distribution at terminal.

Source Classification Code (SCC)	Total Thruput		Thruput Quantity Units	
	Quantity/Hr	Quantity/Yr	Code	Description
4-04-001-60				

" Confidential " Operating at Maximum Capacity " Activity with Insignificant Emissions	Operating Schedule		Building	Floor/Location
	Hrs/Day	Days/Yr		
	24			

Emission Source/Control Identifier(s)

TK114	TK115	TK117	TK119	TK120	TK121	TK130	TK039
T114C	T115C	T117C	T119C	T120C	T121C	T130C	T039C

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Section IV - Emission Unit Information (continued)

Emission Unit	Emission Point	Process	Emission Source	Emission Unit Applicable Federal Requirements									" Continuation Sheet(s)
				Title	Type	Part	Sub Part	Section	Sub Division	Parag.	Sub Parag.	Clause	Sub Clause
1 -BOLR1	00T33	CR1	TK033	40	CFFR	60	Kb	113b	(a)				
-	00T33	CR1	TK033	40	CFR	60	Kb	115b	(a)				
-	00T33	CR1	TK033	40	CFR	60	Kb	116b					
-													

Emission Unit	Emission Point	Process	Emission Source	Emission Unit State Only Requirements									" Continuation Sheet(s)
				Title	Type	Part	Sub Part	Section	Sub Division	Parag.	Sub Parag.	Clause	Sub Clause
-													
-													
-													
-													

Emission Unit Compliance Certification

" Continuation Sheet(s)

Rule Citation

Title	Type	Part	Sub Part	Section	Sub Division	Paragraph	Sub Paragraph	Clause	Sub Clause

" Applicable Federal Requirement " State Only Requirement " Capping

Emission Unit	Emission Point	Process	Emission Source	CAS No.	Contaminant Name
-				- -	

Monitoring Information

" Continuous Emission Monitoring
" Intermittent Emission Testing
" Ambient Air Monitoring

" Monitoring of Process or Control Device Parameters as Surrogate
" Work Practice Involving Specific Operations
" Record Keeping/Maintenance Procedures

Description

Work Practice	Process Material		Reference Test Method
Type	Code	Description	

Parameter		Manufacturer Name/Model No.
Code	Description	

Limit		Limit Units	
Upper	Lower	Code	Description

Averaging Method		Monitoring Frequency		Reporting Requirements	
Code	Description	Code	Description	Code	Description

New York State Department of Environmental Conservation
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P.E. Certification

I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments as they pertain to the practice of engineering. This is defined as the performance of a professional service such as consultation, investigation, evaluation, planning, design or supervision of construction or operation in connection with any utilities, structures, buildings, machines, equipment, processes, works, or projects wherein the safeguarding of life, health and property is concerned, when such service or work requires the application of engineering principals and data. Based on my inquiry of those individuals with primary responsibility for obtaining such information, I certify that the statements and information are to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name of P.E. Gianna Aiezza, PE

Signature of P.E. Gianna Aiezza

Date 6 / 12 / 13

NYS License No. 081422

Phone (518) 453.2203 x113

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	2013 PTE Tank 33 - CRUDE
City:	Albany
State:	New York
Company:	Global
Type of Tank:	Internal Floating Roof Tank
Description:	Kb

Tank Dimensions

Diameter (ft):	120.00
Volume (gallons):	3,715,740.00
Turnovers:	124.47
Self Supp. Roof? (y/n):	N
No. of Columns:	7.00
Eff. Col. Diam. (ft):	1.00

Paint Characteristics

Internal Shell Condition:	Light Rust
Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Rim-Seal System

Primary Seal:	Mechanical Shoe
Secondary Seal	Rim-mounted

Deck Characteristics

Deck Fitting Category:	Detail
Deck Type:	Bolted
Construction:	Sheet
Deck Seam:	Sheet: 5 Ft Wide
Deck Seam Len. (ft):	2,261.94

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1
Automatic Gauge Float Well/Bolted Cover, Gasketed	1
Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Gask.	7
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1
Stub Drain (1-in. Diameter)/Slit Fabric Seal 10% Open	125
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1

Meterological Data used in Emissions Calculations: Albany, New York (Avg Atmospheric Pressure = 14.59 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

2013 PTE Tank 33 - CRUDE - Internal Floating Roof Tank
Albany, New York

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Crude Oil (RVP 11)	All	48.97	43.66	54.29	47.37	7.0858	N/A	N/A	50.0000			207.00	Option 4: RVP=11
1,2,4-Trimethylbenzene						0.0130	N/A	N/A	120.1900	0.0033	0.0000	120.19	Option 2: A=7.04383, B=1573.267, C=208.56
2,2,4-Trimethylpentane (isooctane)						0.4299	N/A	N/A	114.2300	0.0010	0.0003	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
Benzene						0.8532	N/A	N/A	78.1100	0.0060	0.0030	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Cyclohexane						0.8915	N/A	N/A	84.1600	0.0070	0.0036	84.16	Option 2: A=6.841, B=1201.53, C=222.65
Ethylbenzene						0.0732	N/A	N/A	106.1700	0.0040	0.0002	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						1.4254	N/A	N/A	86.1700	0.0040	0.0033	86.17	Option 2: A=6.876, B=1171.17, C=224.41
Isopropyl benzene						0.0315	N/A	N/A	120.2000	0.0010	0.0000	120.20	Option 2: A=6.93666, B=1460.793, C=207.78
Methyl alcohol						1.0099	N/A	N/A	32.0400	0.0200	0.0118	32.04	Option 2: A=7.897, B=1474.08, C=229.13
Toluene						0.2320	N/A	N/A	92.1300	0.0100	0.0014	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Unidentified Components						9.0694	N/A	N/A	50.0780	0.9297	0.9759	252.80	
Xylene (-m)						0.0607	N/A	N/A	106.1700	0.0140	0.0005	106.17	Option 2: A=7.009, B=1462.266, C=215.11

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

2013 PTE Tank 33 - CRUDE - Internal Floating Roof Tank
Albany, New York

Annual Emission Calcaulations	
Rim Seal Losses (lb):	237.2404
Seal Factor A (lb-mole/ft-yr):	0.6000
Seal Factor B (lb-mole/ft-yr (mph)^n):	0.4000
Value of Vapor Pressure Function:	0.1648
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	7.0858
Tank Diameter (ft):	120.0000
Vapor Molecular Weight (lb/lb-mole):	50.0000
Product Factor:	0.4000
Withdrawal Losses (lb):	3,901.4403
Number of Columns:	7.0000
Effective Column Diameter (ft):	1.0000
Annual Net Throughput (gal/yr.):	462,500,000.0000
Shell Clingage Factor (bbl/1000 sqft):	0.0060
Average Organic Liquid Density (lb/gal):	7.1000
Tank Diameter (ft):	120.0000
Deck Fitting Losses (lb):	1,514.3846
Value of Vapor Pressure Function:	0.1648
Vapor Molecular Weight (lb/lb-mole):	50.0000
Product Factor:	0.4000
Tot. Roof Fitting Loss Fact.(lb-mole/yr):	459.6000
Deck Seam Losses (lb):	1,328.5463
Deck Seam Length (ft):	2,261.9448
Deck Seam Loss per Unit Length Factor (lb-mole/ft-yr):	0.1400
Deck Seam Length Factor(ft/sqft):	0.2000
Tank Diameter (ft):	120.0000
Vapor Molecular Weight (lb/lb-mole):	50.0000
Product Factor:	0.4000
Total Losses (lb):	6,981.6115

Roof Fitting/Status	Quantity	Roof Fitting Loss Factors KFa(lb-mole/yr)	KFb(lb-mole/(yr mph^n))	m	Losses(lb)
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1	1.60	0.00	0.00	5.2720
Automatic Gauge Float Well/Bolted Cover, Gasketed	1	2.80	0.00	0.00	9.2260
Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Gask.	7	33.00	0.00	0.00	761.1463
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1	56.00	0.00	0.00	184.5203
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1	12.00	0.00	0.00	39.5401
Stub Drain (1-in. Diameter)/	125	1.20	0.00	0.00	494.2508
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1	6.20	1.20	0.94	20.4290

TANKS 4.0.9d
Emissions Report - Detail Format

Individual Tank Emission Totals

Emissions Report for: Annual

2013 PTE Tank 33 - CRUDE - Internal Floating Roof Tank
Albany, New York

	Losses(lbs)				
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Crude Oil (RVP 11)	237.24	3,901.44	1,514.38	1,328.55	6,981.61
Hexane (-n)	0.79	15.61	5.04	4.43	25.87
Benzene	0.71	23.41	4.53	3.97	32.62
2,2,4-Trimethylpentane (isooctane)	0.06	3.90	0.38	0.33	4.68
Toluene	0.32	39.01	2.05	1.80	43.19
Ethylbenzene	0.04	15.61	0.26	0.23	16.13
Xylene (-m)	0.12	54.62	0.75	0.66	56.15
Isopropyl benzene	0.00	3.90	0.03	0.02	3.96
1,2,4-Trimethylbenzene	0.01	12.87	0.04	0.03	12.95
Cyclohexane	0.87	27.31	5.52	4.84	38.54
Methyl alcohol	2.80	78.03	17.87	15.68	114.38
Unidentified Components	231.53	3,627.17	1,477.91	1,296.55	6,633.15

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	2013 PTE Tank 33 - Heated Product 1
City:	Albany
State:	New York
Company:	Global
Type of Tank:	Internal Floating Roof Tank
Description:	Kb

Tank Dimensions

Diameter (ft):	120.00
Volume (gallons):	3,715,740.00
Turnovers:	124.47
Self Supp. Roof? (y/n):	N
No. of Columns:	7.00
Eff. Col. Diam. (ft):	1.00

Paint Characteristics

Internal Shell Condition:	Light Rust
Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Rim-Seal System

Primary Seal:	Mechanical Shoe
Secondary Seal	Rim-mounted

Deck Characteristics

Deck Fitting Category:	Detail
Deck Type:	Bolted
Construction:	Sheet
Deck Seam:	Sheet: 5 Ft Wide
Deck Seam Len. (ft):	2,261.94

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1
Automatic Gauge Float Well/Bolted Cover, Gasketed	1
Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Gask.	7
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1
Stub Drain (1-in. Diameter)/Slit Fabric Seal 10% Open	125
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1

Meterological Data used in Emissions Calculations: Albany - 60*F, New York (Avg Atmospheric Pressure = 14.59 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

2013 PTE Tank 33 - Heated Product 1 - Internal Floating Roof Tank
Albany, New York

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Crude Oil (RVP 7.5)	All	65.34	62.57	68.11	63.73	5.5166	N/A	N/A	50.0000			207.00	Option 4: RVP=7.5
1,2,4-Trimethylbenzene						0.0252	N/A	N/A	120.1900	0.0033	0.0001	120.19	Option 2: A=7.04383, B=1573.267, C=208.56
2,2,4-Trimethylpentane (isooctane)						0.6934	N/A	N/A	114.2300	0.0010	0.0005	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
Benzene						1.3517	N/A	N/A	78.1100	0.0060	0.0061	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Cyclohexane						1.3974	N/A	N/A	84.1600	0.0070	0.0073	84.16	Option 2: A=6.841, B=1201.53, C=222.65
Ethylbenzene						0.1304	N/A	N/A	106.1700	0.0040	0.0004	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						2.1948	N/A	N/A	86.1700	0.0040	0.0066	86.17	Option 2: A=6.876, B=1171.17, C=224.41
Isopropyl benzene						0.0586	N/A	N/A	120.2000	0.0010	0.0000	120.20	Option 2: A=6.93666, B=1460.793, C=207.78
Toluene						0.3890	N/A	N/A	92.1300	0.0100	0.0029	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Unidentified Components						6.1042	N/A	N/A	49.4704	0.9497	0.9749	220.76	
Xylene (-m)						0.1088	N/A	N/A	106.1700	0.0140	0.0011	106.17	Option 2: A=7.009, B=1462.266, C=215.11

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

2013 PTE Tank 33 - Heated Product 1 - Internal Floating Roof Tank
Albany, New York

Annual Emission Calcaulations	
Rim Seal Losses (lb):	170.1963
Seal Factor A (lb-mole/ft-yr):	0.6000
Seal Factor B (lb-mole/ft-yr (mph)^n):	0.4000
Value of Vapor Pressure Function:	0.1182
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	5.5166
Tank Diameter (ft):	120.0000
Vapor Molecular Weight (lb/lb-mole):	50.0000
Product Factor:	0.4000
Withdrawal Losses (lb):	3,736.5907
Number of Columns:	7.0000
Effective Column Diameter (ft):	1.0000
Annual Net Throughput (gal/yr.):	462,500,000.0000
Shell Clingage Factor (bbl/1000 sqft):	0.0060
Average Organic Liquid Density (lb/gal):	6.8000
Tank Diameter (ft):	120.0000
Deck Fitting Losses (lb):	1,086.4196
Value of Vapor Pressure Function:	0.1182
Vapor Molecular Weight (lb/lb-mole):	50.0000
Product Factor:	0.4000
Tot. Roof Fitting Loss Fact.(lb-mole/yr):	459.6000
Deck Seam Losses (lb):	953.0991
Deck Seam Length (ft):	2,261.9448
Deck Seam Loss per Unit Length Factor (lb-mole/ft-yr):	0.1400
Deck Seam Length Factor(ft/sqft):	0.2000
Tank Diameter (ft):	120.0000
Vapor Molecular Weight (lb/lb-mole):	50.0000
Product Factor:	0.4000
Total Losses (lb):	5,946.3057

Roof Fitting/Status	Quantity	Roof Fitting Loss Factors KFa(lb-mole/yr)	KFb(lb-mole/(yr mph^n))	m	Losses(lb)
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1	1.60	0.00	0.00	3.7821
Automatic Gauge Float Well/Bolted Cover, Gasketed	1	2.80	0.00	0.00	6.6187
Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Gask.	7	33.00	0.00	0.00	546.0464
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1	56.00	0.00	0.00	132.3749
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1	12.00	0.00	0.00	28.3660
Stub Drain (1-in. Diameter)/	125	1.20	0.00	0.00	354.5756
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1	6.20	1.20	0.94	14.6558

TANKS 4.0.9d
Emissions Report - Detail Format

Individual Tank Emission Totals

Emissions Report for: Annual

2013 PTE Tank 33 - Heated Product 1 - Internal Floating Roof Tank
Albany, New York

	Losses(lbs)				
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Crude Oil (RVP 7.5)	170.20	3,736.59	1,086.42	953.10	5,946.31
Hexane (-n)	1.12	14.95	7.16	6.28	29.51
Benzene	1.04	22.42	6.61	5.80	35.87
2,2,4-Trimethylpentane (isooctane)	0.09	3.74	0.57	0.50	4.89
Toluene	0.50	37.37	3.17	2.78	43.82
Ethylbenzene	0.07	14.95	0.43	0.37	15.81
Xylene (-m)	0.19	52.31	1.24	1.09	54.84
Isopropyl benzene	0.01	3.74	0.05	0.04	3.83
1,2,4-Trimethylbenzene	0.01	12.33	0.07	0.06	12.47
Cyclohexane	1.25	26.16	7.98	7.00	42.38
Unidentified Components	165.92	3,548.64	1,059.15	929.18	5,702.90

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	2013 PTE Tank 33 - Heated Product 2
City:	Albany
State:	New York
Company:	Global
Type of Tank:	Internal Floating Roof Tank
Description:	Kb

Tank Dimensions

Diameter (ft):	120.00
Volume (gallons):	3,715,740.00
Turnovers:	124.47
Self Supp. Roof? (y/n):	N
No. of Columns:	7.00
Eff. Col. Diam. (ft):	1.00

Paint Characteristics

Internal Shell Condition:	Light Rust
Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Rim-Seal System

Primary Seal:	Mechanical Shoe
Secondary Seal	Rim-mounted

Deck Characteristics

Deck Fitting Category:	Detail
Deck Type:	Bolted
Construction:	Sheet
Deck Seam:	Sheet: 5 Ft Wide
Deck Seam Len. (ft):	2,261.94

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1
Automatic Gauge Float Well/Bolted Cover, Gasketed	1
Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Gask.	7
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1
Stub Drain (1-in. Diameter)/Slit Fabric Seal 10% Open	125
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1

Meterological Data used in Emissions Calculations: Albany - 100*F, New York (Avg Atmospheric Pressure = 14.59 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

2013 PTE Tank 33 - Heated Product 2 - Internal Floating Roof Tank
Albany, New York

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Crude oil (RVP 5)	All	101.63	100.20	103.06	100.02	6.1345	N/A	N/A	50.0000			207.00	Option 4: RVP=5
1,2,4-Trimethylbenzene						0.0927	N/A	N/A	120.1900	0.0033	0.0002	120.19	Option 2: A=7.04383, B=1573.267, C=208.56
2,2,4-Trimethylpentane (isooctane)						1.7764	N/A	N/A	114.2300	0.0010	0.0012	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
Benzene						3.3425	N/A	N/A	78.1100	0.0060	0.0135	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Cyclohexane						3.3858	N/A	N/A	84.1600	0.0070	0.0160	84.16	Option 2: A=6.841, B=1201.53, C=222.65
Ethylbenzene						0.4047	N/A	N/A	106.1700	0.0040	0.0011	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						5.1382	N/A	N/A	86.1700	0.0040	0.0139	86.17	Option 2: A=6.876, B=1171.17, C=224.41
Isopropyl benzene						0.1977	N/A	N/A	120.2000	0.0010	0.0001	120.20	Option 2: A=6.93666, B=1460.793, C=207.78
Toluene						1.0746	N/A	N/A	92.1300	0.0100	0.0073	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Unidentified Components						6.6626	N/A	N/A	48.7768	0.9497	0.9435	220.76	
Xylene (-m)						0.3417	N/A	N/A	106.1700	0.0140	0.0032	106.17	Option 2: A=7.009, B=1462.266, C=215.11

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

2013 PTE Tank 33 - Heated Product 2 - Internal Floating Roof Tank
Albany, New York

Annual Emission Calcaulations	
Rim Seal Losses (lb):	195.1787
Seal Factor A (lb-mole/ft-yr):	0.6000
Seal Factor B (lb-mole/ft-yr (mph)^n):	0.4000
Value of Vapor Pressure Function:	0.1355
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	6.1345
Tank Diameter (ft):	120.0000
Vapor Molecular Weight (lb/lb-mole):	50.0000
Product Factor:	0.4000
Withdrawal Losses (lb):	3,901.4403
Number of Columns:	7.0000
Effective Column Diameter (ft):	1.0000
Annual Net Throughput (gal/yr.):	462,500,000.0000
Shell Clingage Factor (bbl/1000 sqft):	0.0060
Average Organic Liquid Density (lb/gal):	7.1000
Tank Diameter (ft):	120.0000
Deck Fitting Losses (lb):	1,245.8906
Value of Vapor Pressure Function:	0.1355
Vapor Molecular Weight (lb/lb-mole):	50.0000
Product Factor:	0.4000
Tot. Roof Fitting Loss Fact.(lb-mole/yr):	459.6000
Deck Seam Losses (lb):	1,093.0007
Deck Seam Length (ft):	2,261.9448
Deck Seam Loss per Unit Length Factor (lb-mole/ft-yr):	0.1400
Deck Seam Length Factor(ft/sqft):	0.2000
Tank Diameter (ft):	120.0000
Vapor Molecular Weight (lb/lb-mole):	50.0000
Product Factor:	0.4000
Total Losses (lb):	6,435.5103

Roof Fitting/Status	Quantity	Roof Fitting Loss Factors KFa(lb-mole/yr)	KFb(lb-mole/(yr mph^n))	m	Losses(lb)
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1	1.60	0.00	0.00	4.3373
Automatic Gauge Float Well/Bolted Cover, Gasketed	1	2.80	0.00	0.00	7.5903
Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Gask.	7	33.00	0.00	0.00	626.1983
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1	56.00	0.00	0.00	151.8056
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1	12.00	0.00	0.00	32.5298
Stub Drain (1-in. Diameter)/	125	1.20	0.00	0.00	406.6223
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1	6.20	1.20	0.94	16.8071

TANKS 4.0.9d
Emissions Report - Detail Format

Individual Tank Emission Totals

Emissions Report for: Annual

2013 PTE Tank 33 - Heated Product 2 - Internal Floating Roof Tank
Albany, New York

	Losses(lbs)				
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Crude oil (RVP 5)	195.18	3,901.44	1,245.89	1,093.00	6,435.51
Hexane (-n)	2.71	15.61	17.28	15.16	50.75
Benzene	2.64	23.41	16.86	14.79	57.71
2,2,4-Trimethylpentane (isooctane)	0.23	3.90	1.49	1.31	6.94
Toluene	1.42	39.01	9.04	7.93	57.39
Ethylbenzene	0.21	15.61	1.36	1.19	18.37
Xylene (-m)	0.63	54.62	4.02	3.53	62.80
Isopropyl benzene	0.03	3.90	0.17	0.15	4.24
1,2,4-Trimethylbenzene	0.04	12.87	0.26	0.23	13.40
Cyclohexane	3.12	27.31	19.93	17.48	67.84
Unidentified Components	184.15	3,705.20	1,175.48	1,031.23	6,096.06

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	2013 PTE Tank 33 - Heated Product 3
City:	Albany
State:	New York
Company:	Global
Type of Tank:	Internal Floating Roof Tank
Description:	Kb

Tank Dimensions

Diameter (ft):	120.00
Volume (gallons):	3,715,740.00
Turnovers:	124.47
Self Supp. Roof? (y/n):	N
No. of Columns:	7.00
Eff. Col. Diam. (ft):	1.00

Paint Characteristics

Internal Shell Condition:	Light Rust
Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Rim-Seal System

Primary Seal:	Mechanical Shoe
Secondary Seal	Rim-mounted

Deck Characteristics

Deck Fitting Category:	Detail
Deck Type:	Bolted
Construction:	Sheet
Deck Seam:	Sheet: 5 Ft Wide
Deck Seam Len. (ft):	2,261.94

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1
Automatic Gauge Float Well/Bolted Cover, Gasketed	1
Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Gask.	7
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1
Stub Drain (1-in. Diameter)/Slit Fabric Seal 10% Open	125
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1

Meterological Data used in Emissions Calculations: Albany - 120*F, New York (Avg Atmospheric Pressure = 14.59 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

2013 PTE Tank 33 - Heated Product 3 - Internal Floating Roof Tank
Albany, New York

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Resdual Oil - Heated	All	121.63	120.20	123.06	120.02	0.0004	N/A	N/A	190.0000			387.00	Option 4: RVP=.00019, ASTM Slope=3

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

2013 PTE Tank 33 - Heated Product 3 - Internal Floating Roof Tank
Albany, New York

Annual Emission Calcaulations	
Rim Seal Losses (lb):	0.0995
Seal Factor A (lb-mole/ft-yr):	0.6000
Seal Factor B (lb-mole/ft-yr (mph)^n):	0.4000
Value of Vapor Pressure Function:	0.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0004
Tank Diameter (ft):	120.0000
Vapor Molecular Weight (lb/lb-mole):	190.0000
Product Factor:	1.0000
Withdrawal Losses (lb):	1,085.2598
Number of Columns:	7.0000
Effective Column Diameter (ft):	1.0000
Annual Net Throughput (gal/yr.):	462,500,000.0000
Shell Clingage Factor (bbl/1000 sqft):	0.0015
Average Organic Liquid Density (lb/gal):	7.9000
Tank Diameter (ft):	120.0000
Deck Fitting Losses (lb):	0.6350
Value of Vapor Pressure Function:	0.0000
Vapor Molecular Weight (lb/lb-mole):	190.0000
Product Factor:	1.0000
Tot. Roof Fitting Loss Fact.(lb-mole/yr):	459.6000
Deck Seam Losses (lb):	0.5571
Deck Seam Length (ft):	2,261.9448
Deck Seam Loss per Unit Length Factor (lb-mole/ft-yr):	0.1400
Deck Seam Length Factor(ft/sqft):	0.2000
Tank Diameter (ft):	120.0000
Vapor Molecular Weight (lb/lb-mole):	190.0000
Product Factor:	1.0000
Total Losses (lb):	1,086.5514

Roof Fitting/Status	Quantity	Roof Fitting Loss Factors KFa(lb-mole/yr)	KFb(lb-mole/(yr mph^n))	m	Losses(lb)
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1	1.60	0.00	0.00	0.0022
Automatic Gauge Float Well/Bolted Cover, Gasketed	1	2.80	0.00	0.00	0.0039
Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Gask.	7	33.00	0.00	0.00	0.3192
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1	56.00	0.00	0.00	0.0774
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1	12.00	0.00	0.00	0.0166
Stub Drain (1-in. Diameter)/	125	1.20	0.00	0.00	0.2072
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1	6.20	1.20	0.94	0.0086

TANKS 4.0.9d
Emissions Report - Detail Format

Individual Tank Emission Totals

Emissions Report for: Annual

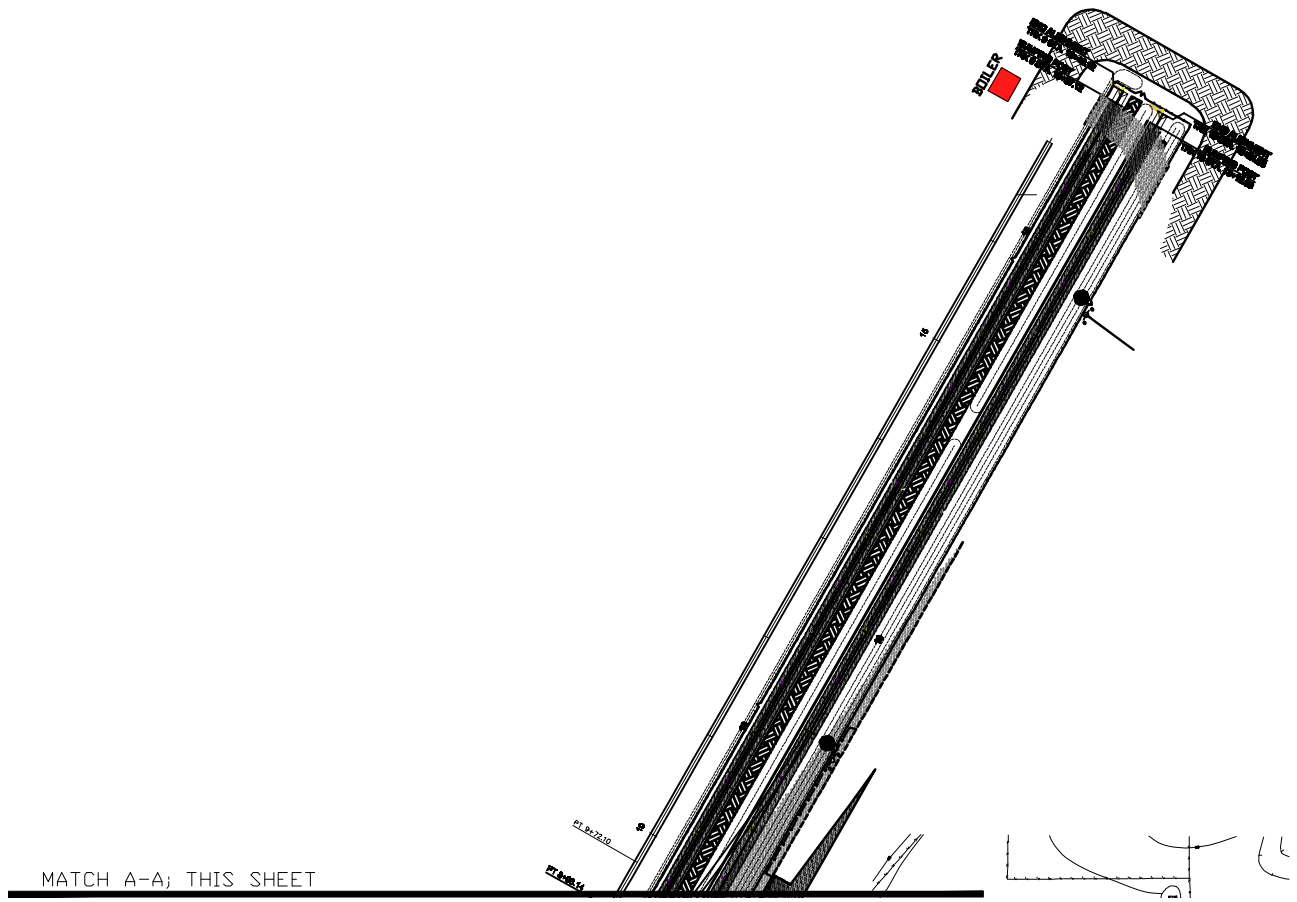
2013 PTE Tank 33 - Heated Product 3 - Internal Floating Roof Tank
Albany, New York

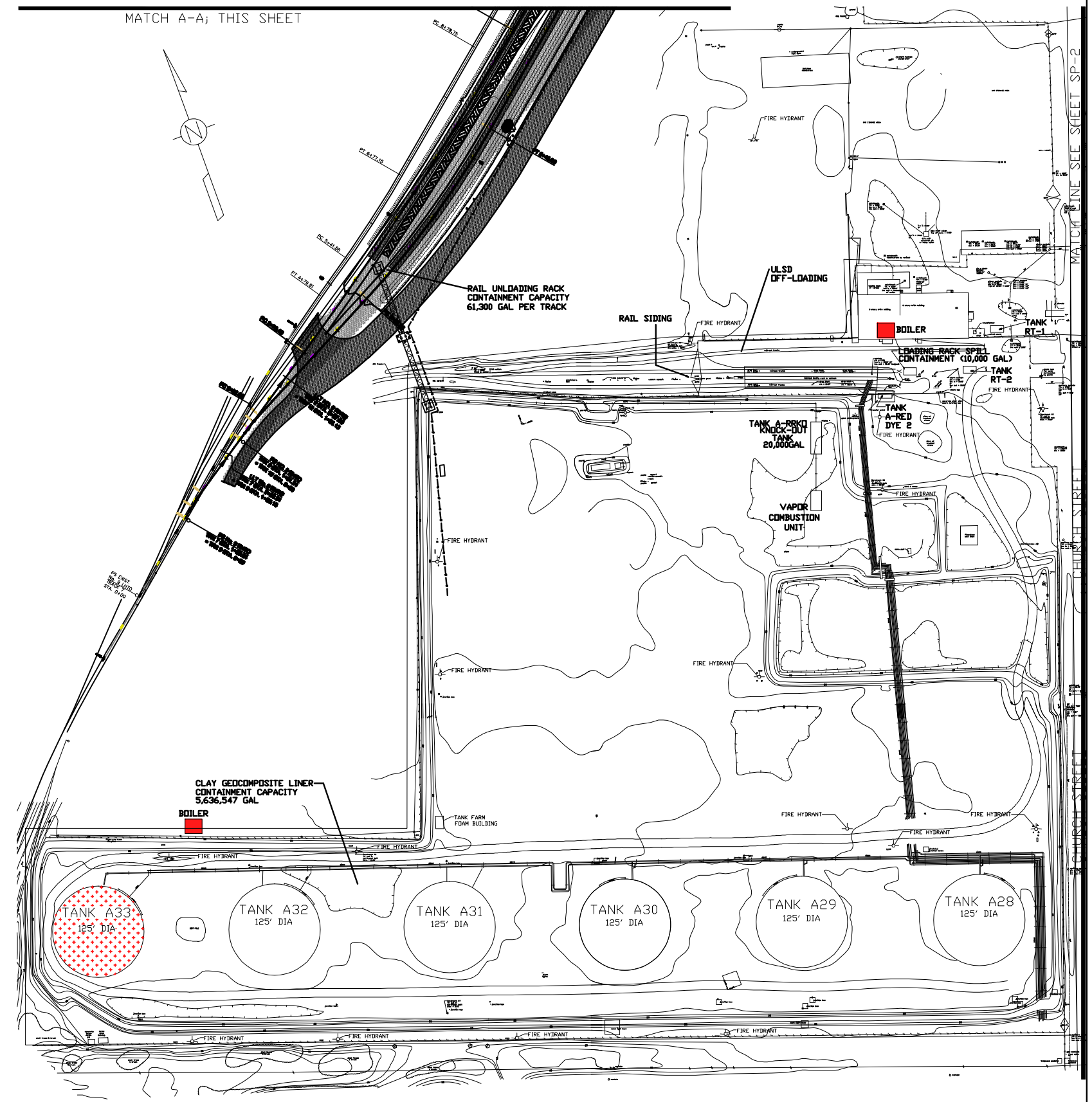
	Losses(lbs)				
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Resdual Oil - Heated	0.10	1,085.26	0.64	0.56	1,086.55

TANKS 4.0.9d
Emissions Report - Detail Format
Total Emissions Summaries - All Tanks in Report

Emissions Report for: Annual

Tank Identification				Losses (lbs)
2013 PTE Tank 33 - CRUDE	Global	Internal Floating Roof Tank	Albany, New York	6,981.61
2013 PTE Tank 33 - Heated Product 1	Global	Internal Floating Roof Tank	Albany, New York	5,946.31
2013 PTE Tank 33 - Heated Product 2	Global	Internal Floating Roof Tank	Albany, New York	6,435.51
2013 PTE Tank 33 - Heated Product 3	Global	Internal Floating Roof Tank	Albany, New York	1,086.55
Total Emissions for all Tanks:				20,449.98





ABOVE GROUND STORAGE TANKS

Tank No.	Substance Stored	Working Capacity, gals	SHELL Capacity, gals	Tank Type / Year	Failure / Cause
28	Distillate	3,952,242	4,069,601	1924 CRR	None
29	Distillate	3,959,248	4,069,248	1924 CRR	None
30	Distillate	3,951,540	4,089,234	1924 CRR	None
31	Crude Oil	3,974,293	4,112,245	1924 CRR	None
32	Crude Oil	3,959,942	4,110,114	1925 CRR	None
33	Distillate	3,989,171	4,089,549	1925 CRR	None
34	Gasoline/Distillate	3,765,168	4,131,631	1931 CRR	None
64	Distillate	3,789,083	4,137,643	1938 CRR	None
114	Distillate/Ethanol	3,788,709	3,887,965	1951 CRW	None
115	Distillate/Ethanol	5,842,527	5,951,912	1951 CRW	None
117	Gasoline/Ethanol	2,743,228	3,028,032	1952 CRWIF	None
118	Gasoline/Ethanol	2,203,637	2,428,510	1952 CRWIF	None
119	Gasoline/Ethanol	1,434,161	1,619,258	1952 CRWIF	None
120	Gasoline/Ethanol	1,439,058	1,849,922	1952 CRWIF	None
121	Gasoline/Ethanol	5,105,286	5,370,184	1954 CRWIF	None
130	Product (Water Mixture	1,449,271	1,512,686	1954 CRWIF	None
A-1	Mobil Gas Additive	10,862	12,000	1990 Horiz.	None
A-4	Mobil Diesel Additive	7,221	8,000	1993 Horiz.	None
A-5	Lubricity Additive	900	1,000	2007 Horiz.	None
A-6	Heating Oil Additive	450	500	2007 Horiz.	None
A-Generic	Generic Gas Additive	7,221	8,000	1995 Horiz.	None
A-Exxon	Exxon Additive	3,554	4,000	1999 Horiz.	None
SA	Shell Additive	7,369	8,000	1999 Horiz.	None
A-Red Dye-1	Red Dye	249	275	1995 Horiz.	None
A-Red Dye -2	Red Dye	450	500	2007 Horiz.	None
GAFO	Fuel Oil	900	1,000	1992 Horiz.	None
WHFO	Fuel Oil	249	275	Horiz.	None
D-Fire	Diesel	249	275	Horiz.	None
R-Fire	Diesel	135	150	Horiz.	None

The facility also has a 1,413,727 gal treated water tank (tank 65) and a 1,449,271 gal untreated water tank (tank 130). Tank: Any container that stores oil.
Abbreviations: CRWIF - Cone Roof Welded Internal Floating Roof Tank
CRR - Cone Roof Riveted CRW - Cone Roof Welded
There are no Surface Impoundments

PRODUCT TANKAGE

Tank Dike ID	Largest Shell Capacity, gals	Dike Volume, gals	Containment Capacity, %	Comments
28, 29, 30, 31, 32 and 33	4,128,809	4,620,276	110**	Daymax lined dike. Manual pump to oil water separator
38, 64, 65, 114, 115, 117, 118, 119, 120, and 121*	6,302,992	9755622*	154*	Daymax lined dike. Manual pump to oil water separator
130*	1,566,095	1835935*	117*	Daymax lined dike. Manual pump to oil water separator

* Largest tank in tank dike in tank dike
* Based on SPEC Engineering Secondary Containment Capacity Evaluation dated 4/23/2008
** Based on SPEC Engineering Secondary Containment Capacity Evaluation - Kifco Tank Farm dated 7/6/2006

CONTAINMENT VOLUME ANALYSIS

Tank ID	Shell, Capacity,	Tank Dike Measurements Length, ft	Width, ft	Depth, ft	Volume, gals	Containment Capacity, %	Comments
A-1	12,000				22,000	183	Earthen dike. Manual drain valve to site drainage.
A-4	8,000	27.67	11.0	4.0	9,107	114	Integral steel containment. Manual drain valve to site drainage.
A-5	1,000	19	7	1.3	1,293	129	Double wall tank with interstitial monitoring and containment for overfill
A-6	500					>100*	Double wall tank with interstitial monitoring
A-Generic	8,000					>100*	Double wall tank with interstitial monitoring
A-Exxon	4,000	18	10.1	4.1	5,575	139	Integral steel containment. Manual drain valve to site drainage.
SA	8,000	27.4	10.75	4.0	8,913	110	Integral steel containment. Manual drain valve to yard spill tank (U-12) and pumped to Tank 130.
A-Red Dye-1	300	6.33	4.0	1.67	315	>110	Ultimate Truck Loading Rack
GAFO	1,000					>100*	Double wall tank with interstitial monitoring
Desk - FW Pump	275	10.83	10.0	1.5	2,000	1302*	Concrete floor and steel wall inside building.
LR - FW Pump	150	17.00 8.08	9.67 4.67	0.625 0.625	802****	6940*	Concrete floor and curbing inside building.
WHFO	275					>100*	Concrete basement floor inside building.
RT-1	2,000					>100*	Double wall tank with interstitial monitoring.
RT-2	1,000	12.75	5.75	2.0	1,097	110	Integral steel containment. Manual drain valve to site drainage.
Waste Drum Storage	55	28.67	12.0	0.5	1,287	2,339	Concrete floor and wall. Manual pump to wastewater system.
A-Red Dye-2	500	16	10	0.9	1077	215	Double wall tank with interstitial monitoring

* Tank containment is under rain cover (freeboard for precipitation not required).
** Field measurements
*** Pre-fabricated HDPE containment pack or pallet.
**** Containment calculated using two sections.

NOTES:

1. SECONDARY CONTAINMENT IS EQUAL TO 110% OF THE LARGEST TANK IN SYSTEM.
2. COMMUNICATION EQUIPMENT IS LOCATED OFFICE.
3. EMERGENCY RESPONSE EQUIPMENT IS IN THE OFFICE OFFICE AND THE WAREHOUSE.
4. 5 DRUMS STORED IN THE GARAGE GREASE, OIL AND KERO.

LEGEND:

- CHAIN LINK FENCE
- FIRE HYDRANT
- LIGHT
- POSTS
- FIRE HOSE

80 0 40 80 160 320

(IN FEET)
1 inch = 80 ft.

1 SP-1 **PORT OF ALBANY TERMINAL SITE PLAN**
SCALE: AS SHOWN

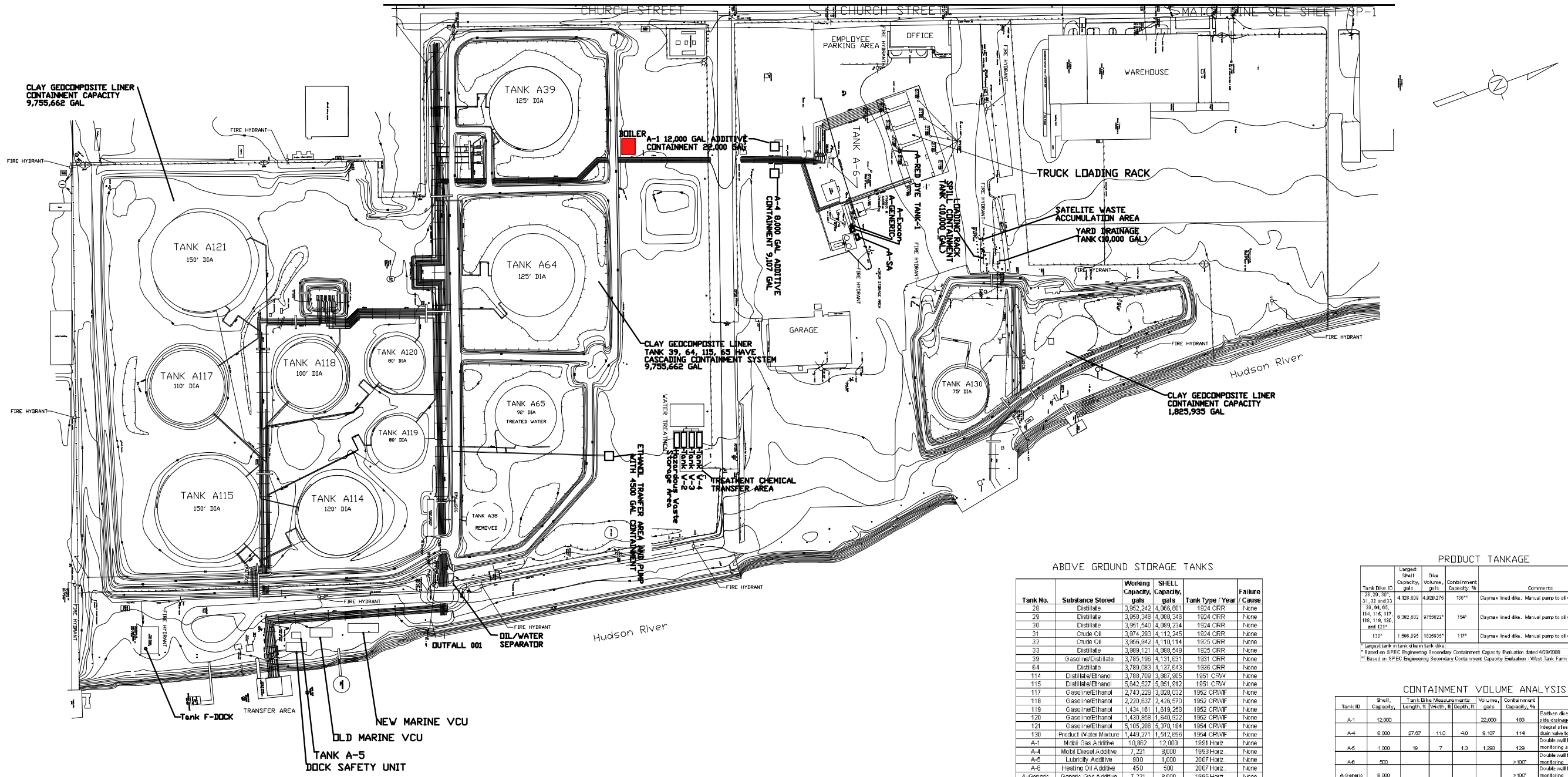
SPEC CONSULTING, LLC
10 COMPUTER DRIVE WEST
ALBANY, NY 12203
PHONE: 518.438.8800
FAX: 518.438.8807

DRAWING STATUS	REV.	DATE	DESCRIPTION	FIRM DRN.	FIRM CKD.	FIRM APPD.
	A	10/12	2012 ERAP	NB		

GLOBAL COMPANIES LLC

DIAGRAM #1
PORT OF ALBANY TERMINAL
SITE PLAN

SCALE: AS SHOWN DATE: 06/21/2012
DWG. NO. SP-1



1 SP-1 **PORT OF ALBANY TERMINAL SITE PLAN**
SCALE: AS SHOWN

80 0 40 80 160 320
(IN FEET)
1 inch = 80 ft.

ABOVE GROUND STORAGE TANKS

Tank No.	Substance Stored	Working Capacity, gals	SHELL Capacity, gals	Tank Type / Year	Failure / Cause
28	Distillate	3,962,242	4,069,601	1924 CRR	None
29	Distillate	3,969,348	4,088,348	1924 CRR	None
30	Distillate	3,951,540	4,089,234	1924 CRR	None
31	Crude Oil	3,974,283	4,112,245	1924 CRR	None
32	Crude Oil	3,956,842	4,110,114	1925 CRR	None
33	Distillate	3,969,121	4,069,549	1925 CRR	None
39	Gasoline/Distillate	3,785,156	4,131,691	1921 CRR	None
64	Distillate	3,789,083	4,137,643	1936 CRR	None
114	Distillate/Ethanol	3,789,709	3,987,905	1951 CRVW	None
115	Distillate/Ethanol	5,642,527	5,851,912	1951 CRVW	None
117	Gasoline/Ethanol	2,743,229	3,029,032	1952 CRVW	None
118	Gasoline/Ethanol	2,220,637	2,426,670	1952 CRVW	None
119	Gasoline/Ethanol	1,434,161	1,619,258	1952 CRVW	None
120	Gasoline/Ethanol	1,430,958	1,640,922	1952 CRVW	None
121	Gasoline/Ethanol	5,105,268	5,370,104	1954 CRVW	None
130	Product Water Mixture	1,449,271	1,512,696	1954 CRVW	None
A-1	Mobil Gas Additive	10,952	12,000	1991 Horiz	None
A-4	Mobil Diesel Additive	7,221	8,000	1993 Horiz	None
A-5	Lubricity Additive	900	1,000	2007 Horiz	None
A-6	Heating Oil Additive	450	500	2007 Horiz	None
A-Generic	Generic Gas Additive	7,221	8,000	1995 Horiz	None
A-Exxon	Exxon Additive	3,564	4,000	1999 Horiz	None
SA	Shell Additive	7,369	8,000	1995 Horiz	None
A-Red Dye-1	Red Dye	249	275	1995 Horiz	None
A-Red Dye - 2	Red Dye	450	500	2007 Horiz	None
GAFO	Fuel Oil	800	1,000	1992 Horiz	None
WHFO	Fuel Oil	249	275	Horiz	None
D-Fire	Diesel	249	275	Horiz	None
R-Fire	Diesel	135	150	Horiz	None

The facility also has a 1,413,787 gal treated water tank (tank 65) and a 1,449,271 gal untreated water tank (tank 130). Tank Any container that stores oil.
Abbreviations: CRVIF - Cone Roof Veloed Internal Floating Roof Tank
CRR - Cone Roof Riveted CRV - Cone Reef Veloed
There are no Surface Impoundments

PRODUCT TANKAGE

Tank Dike ID	Largest Shell Capacity, gals	Dike Volume, gals	Containment Capacity, %	Comments
28, 29, 30, 31, 32 and 33	4,129,609	4,920,275	119**	Daymax lined dike. Manual pump to oil water separator
39, 64, 65, 114, 115, 117, 118, 119, 120, and 121*	9,382,882	9755662*	104*	Daymax lined dike. Manual pump to oil water separator
130*	1,566,005	1825935*	117*	Daymax lined dike. Manual pump to oil water separator

* Largest tank in tank dike in tank dike
* Based on SPEC Engineering Secondary Containment Capacity Evaluation dated 4/29/2008
** Based on SPEC Engineering Secondary Containment Capacity Evaluation - Wilmot Tank Farm dated 7/8/2009

CONTAINMENT VOLUME ANALYSIS

Tank ID	Shell, Capacity,	Tank Dike Measurements Length, ft	Width, ft	Depth, ft	Volume, gals	Containment Capacity, %	Comments
A-1	12,000				22,000	183	Earthen dike. Manual drain valve to site drainage.
A-4	8,000	27.67	11.0	4.0	9,107	114	Integral steel containment. Manual drain valve to site drainage.
A-6	1,000	16	7	1.3	1,293	129	Double wall tank with interstitial monitoring and containment for overfill
A-5	500					> 100*	Double wall tank with interstitial monitoring.
A-Generic	8,000					> 100*	Double wall tank with interstitial monitoring.
A-Exxon	4,000	18	10.1	4.1	5,675	139	Integral steel containment. Manual drain valve to site drainage.
A-SA	8,000	27.4	10.75	4.0	6,813	110	Integral steel containment. Manual drain valve to yard spill tank (U-12) and pumped to Tank 130.
A-Red Dye-1	300	6.92	4.0	1.67	215	> 110	Within Truck Loading Rack
GAFO	1,000					> 100*	Double wall tank with interstitial monitoring.
Dock - FW Pump	275	18.83	13.0	1.5	3,803	1383*	Concrete floor and steel wall inside building.
LR - FW Pump	150	17.08	8.08	4.67	5,502****	6040*	Concrete floor and curbing inside building.
WHFO	225					> 100*	Concrete basement floor inside building.
R-F-1	2,000					> 100*	Double wall tank with interstitial monitoring.
R-F-2	1,000	12.75	5.75	2.0	1,097	110	Integral steel containment. Manual drain valve to site drainage.
Waste Drum Storage	55	28.67	12.0	0.5	1,237	2,339	Concrete floor and wall. Manual pump to wastewater system.
A-Red Dye-2	500	16	10	0.9	1077	215	Double wall tank with interstitial monitoring

* Tank containment is under rain cover (freeboard for precipitation not required).
** Field measurements
*** Pre-fabricated HDPE containment pack or pallet.
**** Containment calculated using two sections.

NOTES:
1. SECONDARY CONTAINMENT IS EQUAL TO 110% OF THE LARGEST TANK IN SYSTEM.
2. COMMUNICATION EQUIPMENT IS LOCATED OFFICE.
3. EMERGENCY RESPONSE EQUIPMENT IS IN THE OFFICE OFFICE AND THE WAREHOUSE.
4. 5 DRUMS STORED IN THE GARAGE GREASE, OIL AND KERO.

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DRAWING STATUS	REV.	DATE	DESCRIPTION	FIRM DRN. / ENVIRO. NB	FIRM CKD.	FIRM APPD.
	A	10/12	2012 ERAP			

GLOBAL COMPANIES LLC

DIAGRAM #1A
PORT OF ALBANY TERMINAL
SITE PLAN

SCALE: AS SHOWN DATE: 6/21/2011
DWG. NO. SP-2