PERMIT-TO-INSTALL APPLICATION
OHIO RIVER CLEAN FUELS FACILITY
VILLAGE OF WELLSVILLE, COLUMBIANA AND JEFFERSON COUNTIES, OHIO

SUBMITTED TO:

OHIO ENVIRONMENTAL PROTECTION AGENCY

SUBMITTED BY:

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CEC PROJECT 061-933.0024

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MODULE 8

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1.0 PROCESS DESCRIPTION

The Ohio River Clean Fuels facility will produce F-T diesel, F-T naphtha, and liquefied petroleum gas (LPG). As discussed in Module 7, a 36-million-gallon-capacity tank farm will be used to store liquid products and pressure cylinders will be used to store LPG prior to offsite shipment. An estimated 50,000 barrels of product will be loaded/shipped offsite daily.

Products will be shipped by tanker truck, railcar, barge, and pipeline. Current plans are for loading to tanker trucks and pipeline while future loading may include railcar or barge loading by one or more separate legal entities located off-site. The percentages of each product to be shipped via each alternative will be subject to change. However, as shown in Figure 18 (Attachment 8A), initial loading scenarios include the following:

- F-T Diesel: tanker trucks and pipeline (barges and railcars separate permittee)
- F-T Naphtha: tanker trucks and pipeline (barges and railcars separate permittee)
- LPG: tanker trucks (railcars separate permittee)

Tanker truck loading of product will occur at the loading rack adjacent to the tank farm. The design of the loading rack is not final at this time, but it is expected to provide capacity for four to eight tanker trucks to load F-T diesel and/or F-T naphtha simultaneously. A pipeline connection for product delivery is also anticipated for a later stage of facility development.

As discussed in the Best Available Control Technology (BACT) Analysis (Section 4.0), the product loading rack will be equipped with a vapor recovery system. The final design of that system has not been developed at this time, but will be provided as design details are available.

2.0 AIR EMISSIONS INVENTORY

Ohio River Clean Fuels will initially transfer products off-site by tanker truck and/or pipeline. This section presents estimated fugitive emissions associated with product loading to tanker trucks. Pipeline transfers of liquid products and pressurized transfers of LPG are not expected to produce fugitive Volatile Organic Compound (VOC) emissions and are therefore not discussed further.

Emission calculations have been based on the continuous loading of liquid products to tanker trucks at 7,500 barrels per day (15% of the 50,000 barrels per day anticipated production rate). Because the actual production mix of F-T diesel and F-T naphtha may vary, two scenarios have been evaluated: 100% F-T diesel loading and a 50/50 split of F-T diesel and F-T naphtha. While the facility is actually expected to produce more F-T diesel annually than F-T naphtha, a 50/50 production mix overestimates actual emissions because F-T naphtha loading results in higher emissions due to its higher vapor pressure.

2.1 *VOC from F-T Diesel & F-T Naphtha Loading to Tanker Trucks*

F-T diesel and F-T naphtha will be loaded into tanker trucks via submerged fill pipes. When loading F-T naphtha, a vapor recovery system will capture fugitive loading emissions and return condensed product to the tank farm. Emission estimates for VOCs released by tanker truck loading are based on the following AP-42, Section 5.2 equation:

$$L_L = 12.46\ (SPM)\ /\ T$$

Where:

- L_L: loading loss ($lb/10^3$ gal)
- S: saturation factor (Varies depending on loading method and shipping vessel. Submerged fill [S = 0.6] is assumed for all loading operations. See AP-42, Table 5.2.1)
- P: true vapor pressure of liquid loaded (psia) at temperature (T)
- M: molecular weight of product vapors (lb/lb-mole)
- T: temperature of product loaded, °R (°F + 460)

Estimates of potential emissions are provided in the accompanying Supporting Calculations (see Attachment 8B). Estimated actual controlled emissions have been adjusted based on the results of the BACT analysis presented in Section 4.0 to reflect a vapor recovery system for F-T naphtha loading that achieves a capture efficiency of at least 99% and control efficiency of 99.5% (overall efficiency of greater than 98.5%).

It should be noted that VOC emissions produced by product loading under the assumption that F-T diesel fuel could constitute 100% of the facility production (50,000 bpd) would be less than the emissions projected for the 50/50 product split. As shown in Attachment 8B, loading of 100% F-T diesel to tanker trucks (Case A) would produce 0.49 tpy VOC compared to 1.65 tpy for the 50/50 split (Case B). Therefore, loading production rates for the 50/50 split have been shown on the accompany Emission Activity Category Form (see Attachment 8D).

2.2 *N-Hexane from F-T Naphtha Loading to Tanker Trucks*

F-T naphtha can contain up to approximately 22.35 molar percent n-hexane. N-hexane is a hazardous air pollutant (HAP). Emission estimates for n-hexane shown in the Attachment 8B Supporting Calculations are based on the molecular weight of n-hexane and F-T naphtha vapors as predicted by the TANKS modeling performed for Module 7. The estimated emission rate for n-hexane based on uncontrolled loading of 3,750 bpd of F-T naphtha is about 24 tpy. Controlled emissions are estimated to be 0.08 lb/hr and 0.36 tpy.

3.0 SOURCE-SPECIFIC APPLICABLE REGULATIONS

This section presents information concerning applicable state and federal regulations as well as specific exemptions, as appropriate. State regulatory references are to the Ohio Administrative Code (OAC), unless otherwise noted. Source-specific regulations are discussed relative to each permit application module. Facility-wide applicable regulations are addressed in Section 5 of the PTI Application Introduction.

3.1 State Regulations

3.1.1 Control of Emissions of Organic Materials from Stationary Sources (3745-21-07)

This regulation is applicable to all new sources of organic materials. Subpart E of this rule applies to handling of volatile photochemically reactive materials at loading facilities. As a non-photochemically reactive material, these requirements do not apply to F-T diesel loading. Specific requirements applicable to F-T naphtha include:

1. No person shall load in any one day more than forty thousand gallons of any volatile photochemically reactive material into any tank truck, trailer, or railroad tank car from any loading facility unless the loading facility is equipped with a vapor collection and disposal system properly installed, in good working order, in operation, and consisting of one of the following:

    a. An adsorber system or condensation system which processes and recovers at least ninety per cent by weight of all vapors and gases from the equipment being controlled; or
    b. A vapor handling system which directs all vapors to a fuel gas system; or
    c. Other equipment or means for purposes of air pollution control as may be acceptable to and approved by the director.

2. All loading from facilities subject to the provisions of paragraphs (E)(1)(a) and (E)(1)(b) of this rule shall be accomplished in such a manner that all displaced vapors and gases shall be vented only to the vapor collection system. A means shall be provided to prevent liquid drainage from the loading device when it is not in use or to accomplish complete drainage before the loading device is disconnected.

3.1.2 Permit to Install New Sources (3745-31)

The loading rack has the potential to generate VOC emissions. These emission units are part of a major stationary source. Because the major stationary source is located within an attainment area for all criteria pollutants, according to 3745-31-12(A), each emissions unit is subject to an evaluation of best available control technology (BACT). The BACT analysis for these emission units is provided in Section 4.0. In accordance with 3745-31-05(A)(3), sources are also required to employ best available technology (BAT). Because all sources and pollutants are addressed in the BACT analysis, BAT is assumed to have been achieved for affected emission units.

3.2 Federal Regulations

3.2.1 National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline) (40 CFR 63, Subpart EEEE)

This Subpart will apply to all transfer racks at ORCF where organic liquids are loaded into transport vehicles or containers. Pipelines used to transfer organic liquids between a storage tank and transfer rack are also subject to this regulation.

Organic liquids are defined as any non-crude oil liquid or liquid mixture that contains five percent by weight or greater of an organic HAP listed in Table 1 of the Subpart. F-T naphtha meets the definition of an organic liquid because it contains approximately 21% by weight n-hexane which is listed in Table 1 to Subpart EEEE as an organic hazardous air pollutant. F-T diesel does not contain five percent or greater of an organic HAP and is therefore not an organic liquid for purposes of this regulation.

The F-T naphtha transfer rack and associated pipelines are subject to this subpart because they are used in organic liquids distribution (OLD) service and the facility will be a major source of HAP emissions.

ORCF will comply with the requirements of 40 CFR Part 63.2346(b) for transfer racks by routing emissions back into a process as specified in 40 CFR 63, Subpart SS.

3.2.2 National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process (40 CFR 63, Subpart SS)

Subpart SS applies to facilities that are subject to a requirement that references this subpart. For ORCF that referencing subpart is Subpart EEEE, as discussed above.

The ORCF F-T naphtha loading (transfer) rack will transfer more than 11.8 million liters (equal to 3.1 million gallons and 74,220 barrels) of liquid containing regulated material annually. That throughput categorizes the ORCF operation as a "high throughput" transfer rack. For high throughput racks, requirements applicable to the control device being used must be met. At ORCF, recovered product will be routed back to the tank farm for recovery. The proposed vapor recovery system will use condensers as the control device and is therefore subject to Section 63.990 of Subpart SS (Absorbers, condensers, and carbon absorbers used as control devices).

In accordance with Subpart SS, ORCF is obliged to meet the applicable requirements for high throughput transfer racks. In this case, those requirements include 40 CFR 63.984 (processes to which transfer racks are routed), 63.990 (condensers), and applicable recordkeeping, reporting, and performance testing.

4.0 BACT ANALYSIS

4.1 Module 8 – Volatile Organic Compounds (VOC)

Loading of F-T diesel and F-T naphtha from the tank farm into transport vessels will result in evaporative emissions of volatile organic compounds (VOC). F-T diesel is a non-photochemically reactive material the storage of which is exempt from Ohio air permitting requirements. This portion of the BACT analysis addresses technologies for control of VOC emissions from F-T naphtha loading operations.

4.1.1 Available Control Technologies – Volatile Organic Compounds (VOC)

A review of the past 10 years of RBLC determinations located the following control technologies associated with VOC emissions from petroleum loading (Process 50.004) and SOCMI chemical loading/unloading (Process 64.0005) (see Attachment 8C).

- Vapor Recovery Unit
- Vapor Combustion Unit

4.1.2 Technically Infeasible Options – Volatile Organic Compounds (VOC)

All of the above-listed technologies are feasible for control of VOC emissions from product loading.

4.1.3 Technology Ranking – Volatile Organic Compounds (VOC)

Table 4.1.3 Technology Control Efficiencies for VOC

Technology	Estimated Control Efficiency (%)	Basis
Vapor Recovery Unit	98.5	Engineering estimate (assumed 99% capture and 99.5% control)
Vapor Collection System & Thermal Oxidizer	90	Engineering estimate (assumed 91% capture and 99% control)

4.1.4 Evaluate Most Effective Controls – Volatile Organic Compounds (VOC)

The most effective control technology for VOC emissions from product loading is use of a vapor recovery system. Vapor recovery systems are expected to achieve collection efficiencies of at least 91% with 99.5% recovery of collected vapors. While a thermal oxidation system would also achieve at least 91% collection efficiency, the maximum control efficiency is expected to be approximately 99% and additional pollutant emissions would be generated through the combustion process. Therefore, it is determined that recovery of product through a vapor recovery system is BACT for product loading operations.

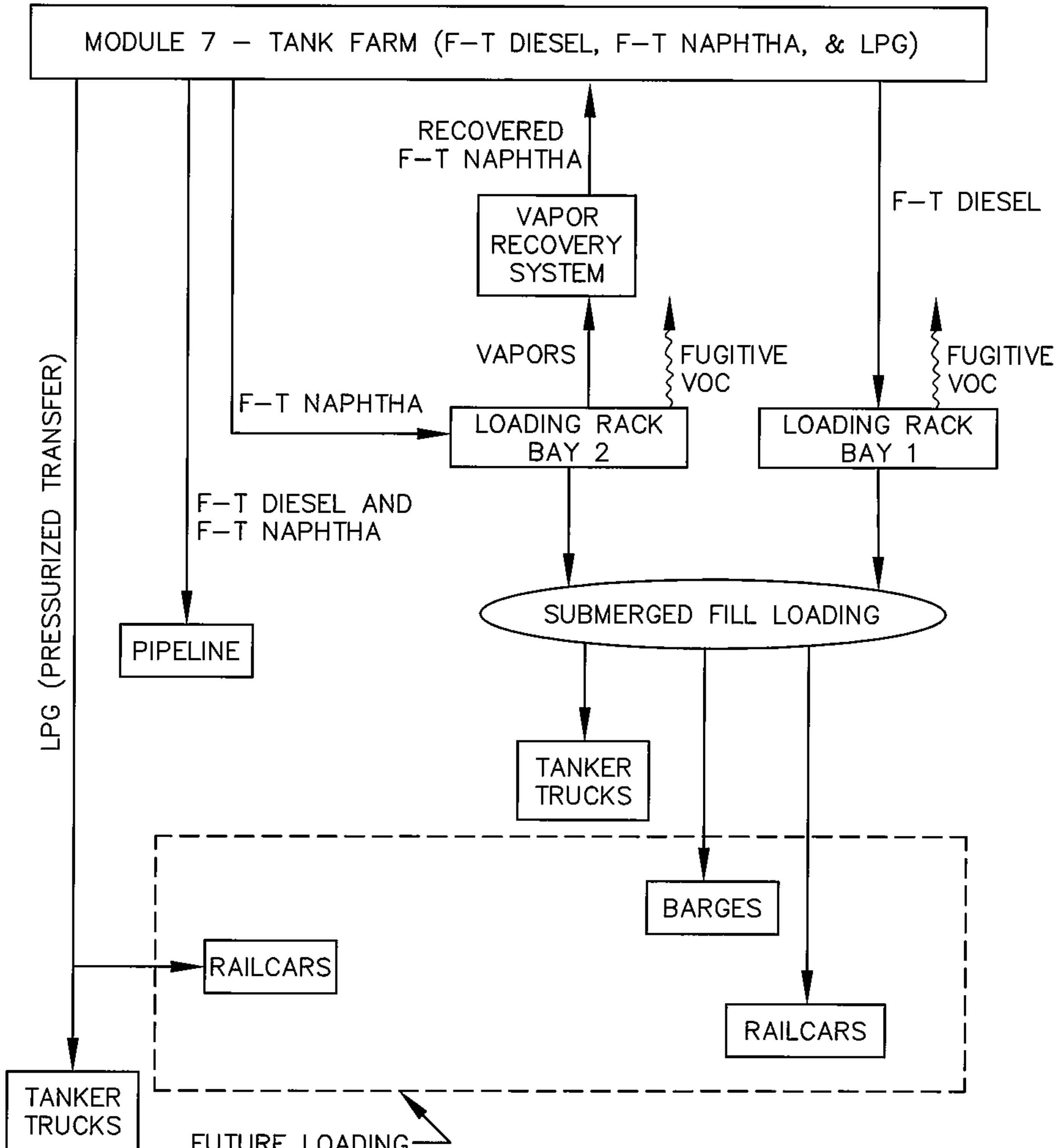
4.1.5 Proposed BACT Limits and Control Options – Volatile Organic Compounds (VOC)

Product loading VOC emissions will be captured and controlled via a vapor recovery system. The details of the vapor recovery system will be developed during the final design phase of project development, but are expected to include use of condensers. The proposed BACT limit for VOC emissions is shown below.

- Proposed VOC BACT Limit: 0.06 lb/1,000 gallons loaded

This proposed limit is based on the estimated actual emissions from product loading to tanker trucks (see Section 2.1).

ATTACHMENT 8A
MODULE 8
FIGURES



SUBMITTAL & REVISION RECORD

NO	DATE	DESCRIPTION
A	08/10/07	DRAFT SUBMISSION, AS: 061-933-FIGURE-10-BLOCK-FLOW-DIAGRAM.dwg
B	12/17/07	AIR PERMIT APPLICATION

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OHIO RIVER CLEAN FUELS, LLC
PROPOSED COAL TO LIQUID FUEL PLANT
COLUMBIANA AND JEFFERSON COUNTY
WELLSVILLE, OHIO

MODULE 8
PRODUCT LOADING

APPROVED:			PROJECT NO:	061-933.0002	FIGURE NO: 18
DRAWN BY: CJD/LKC	CHKD BY: DJL	DWG SCALE: N.T.S.	LAST EDIT DATE:	11/27/07	

\\SVR-PITT\CADD\PROJECTS\2006\061-933\DWG\061933-ENV4-8.DWG {FIG 18} (LCOLAIZZI) – DEC 17, 2007 – 9:51:26

ATTACHMENT 8B
MODULE 8
SUPPORTING CALCULATIONS

Supporting Calculations

VOC Emission Factor Derivation using AP-42 Section 5.2

LL = 12.46 (SPM) / T

LL: VOC loading loss (lb/10^3 gal)
S: saturation factor (based on the type of loading)
P: true vapor pressure of liquid loaded (psia)
M: molecular weight of product vapors (lb/lb-mole)
T: temperature of bulk liquid loaded, °R (°F + 460)
eff = overall reduction efficiency, (percent)

Product Loading Assumptions (used in all Cases)

T	508.3	°R (°F+460): (48.3 °F corresponding to average liquid bulk temperture)
P	0.0045	psia F-T diesel (at 48.3 °F)
P	2.9917	psia F-T naphtha (at 48.3 °F)
M	130	lb/lb-mole F-T diesel vapor (at 48.3 °F)
M	74.2	lb/lb-mole F-T naphtha vapor (at 48.3 °F)
	99 %	- capture efficiency (vapor collection system for F-T Naphtha only)
	99.5 %	- control efficiency (vapor recovery system for F-T Naphtha only)
	98.5 %	- overall removal efficiency for F-T Naphtha
	114,975,000	gallons/year F-T diesel shipped (50,000 bbl/day x 365 days/yr x 15% trucked) - Case A
	57,487,500	Assumed maximum F-T diesel shipped for Case B emissions profile (gal/yr)
	57,487,500	Assumed maximum F-T naphtha shipped for Case B emissions profile (gal/yr)

Case A Assumptions: (100% F-T Diesel Loading)

0.60 S Factor (submerged loading: dedicated normal service)

Case A Results: (Tanker Truck Submerged Loading: dedicated normal service)

LL = 12.46 (SPM) / T

	Potential VOC Emissions (uncontrolled)			Actual VOC Emissions			
	F-T Diesel	F-T Naphtha	Combined	F-T Diesel	F-T Naphtha	Combined	
lb/10^3 gal loaded	0.01	0.00	0.01	0.01	0.00	0.01	lb/10^3 gal loaded
lb/hr	0.11	0.00	0.11	0.11	0.00	0.11	lb/hr
tpy	0.49	0.00	0.49	0.49	0.00	0.49	tpy

Case B Assumptions: (50/50% Split of F-T Naphtha and F-T Diesel)

0.60 S Factor (submerged loading: dedicated normal service)

Case B Results: (Tanker Truck Submerged Loading: dedicated normal service)

LL = 12.46 (SPM) / T

	Potential VOC Emissions (uncontrolled)			Actual VOC Emissions (controlled)			
	F-T Diesel	F-T Naphtha	Combined	F-T Diesel	F-T Naphtha	Combined	
lb/10^3 gal loaded	0.01	3.26	3.27	0.01	0.05	0.06	lb/10^3 gal loaded
lb/hr	0.06	21.43	21.48	0.06	0.32	0.38	lb/hr
tpy	0.25	93.85	94.09	0.25	1.40	1.65	tpy

Supporting Calculations

Hexane Emissions

Derivation of n-hexane loading amount:

74.2	MW of F-T naphtha vapors (per TANKS modeling - see Module 7)
86.17	MW of n-hexane vapors (per TANKS modeling - see Module 7)
0.2235	mole % of n-hexane in F-T naphtha
3.26	Uncontrolled emission rate of F-T naphtha VOC (including n-hexane) (lb/1000 gal)
99 %	- capture efficiency (vapor collection system)
99.5 %	- control efficiency (vapor recovery system)
98.5 %	- overall removal efficiency
57,487,500	Assumed maximum F-T naphtha shipped for Case B emissions profile (gal/yr)

Example Calculation:

3.26 lb VOC/1000 gal F-T Naphtha x lb-mole VOC/74.2 lb VOC x 0.2235 lb-mole n-hexane/lb-mole VOC x 86.17 lb/lb-mole n-hexane
= 0.85 lb n-hexane/1000 gal F-T Naphtha loaded

Potential Emissions (uncontrolled)

	n-Hexane
$lb/10^3$ gal loaded	0.85
lb/hr	5.56
tpy	24.36

Actual Emissions (controlled)

n-Hexane	
0.01	$lb/10^3$ gal loaded
0.08	lb/hr
0.36	tpy

ATTACHMENT 8C
MODULE 8
DOCUMENTATION

LIST OF REFERENCES

- U.S. EPA, AP-42 Section 5.2 – *Transportation and Marketing of Petroleum Liquids*, January 1995.
- U.S. EPA, RACT/BACT/LAER Clearinghouse (RBLC); website: http://cfpub.epa.gov/RBLC

RBLC Matching Facilitied for Search Criteria:
Permit Date Between 1/1/1997 and 4/26/2007
And Process Type "50.004" Petroleum Refining Feedstock (blending, loading, unloading)
Pollutant: Volatile Organic Compounds

RBLCID	FACILITYNAME	PROCESSNAME	PROCTYPE	POLLUTANT	CTRLDESC	EMISLIMIT1	EMISLIMIT1UNIT	CASE-BY-CASE BASIS
LA-0211	GARYVILLE REFINERY	MARINE VAPOR COMBUSTOR (55-08) & MARINE LOADING VAPOR COMBUSTOR (107-90)	50.004	Volatile Organic Compounds (VOC)	SOURCE IS CONTROL DEVICE FOR VOC. COMPLY WITH 40 CFR 60.18. CONTROL PRODUCTS HAVING A TRUE VAPOR PRESSURE GREATER THAN 0.5 PSIA.			BACT-PSD
LA-0211	GARYVILLE REFINERY	MARINE/BARGE LOADING OPERATIONS (134-96)	50.004	Volatile Organic Compounds (VOC)				BACT-PSD
OK-0102	PONCA CITY REFINERY	TANK T-1101	50.004	Volatile Organic Compounds (VOC)	REFINERY MACT: INTERNAL FLOATING ROOF TANK WITH 2 VAPOR MOUNTED SEALS OR A MECHANICAL SHOE			BACT-PSD
TX-0235	VALERO REFINING COMPANY- CORPUS CHRISTI REFINERY	MARINE LOADING (BARGE AND SHIP)	50.004	Volatile Organic Compounds (VOC)	SEE POLLUTANT NOTES.	1655	LB/H	BACT-PSD
TX-0235	VALERO REFINING COMPANY- CORPUS CHRISTI REFINERY	TANKS	50.004	Volatile Organic Compounds (VOC)	INTERNAL FLOATING ROOF, MONTHLY EMISSIONS RECORD	4013	LB/H	BACT-PSD
LA-0166	ORION REFINING CORP (NOW VALERO)	MARINE TANK VESSEL LOADING OPERATIONS	50.004	Volatile Organic Compounds (VOC)	HIGH VAPOR PRESSURE MATERIAL (>1.5 PSIA) LOADED WITH VAPORS DIRECTED TO THERMAL OXIDIZER FOR VOC DESTRUCTION	512	LB/H	BACT-PSD
LA-0166	ORION REFINING CORP (NOW VALERO)	PETROLEUM PRODUCTS LOADING DOCKS	50.004	Volatile Organic Compounds (VOC)	HIGH VAPOR PRESSURE MATERIAL (>1.5 PSIA) LOADED WITH VAPORS IS DIRECTED TO THE MARINE VAPOR RECOVERY THERMAL OXIDIZER FOR VOC DESTRUCTION	687	LB/H	BACT-PSD
LA-0166	ORION REFINING CORP (NOW VALERO)	TANK TRUCK/RAIL CAR LOADING	50.004	Volatile Organic Compounds (VOC)	NOT SUBJECT TO BACT, ALL LOW PRESSURE MATERIALS	261	LB/H	BACT-PSD
LA-0151	LOUISIANA REFINING DIVISION	RAILCAR/TRUCK/BARGE LOADING OF COKE	50.004	Volatile Organic Compounds (VOC)		0.002	T/YR	Other Case-by-Case
TX-0319	EXXON MOBIL BAYTOWN REFINERY	DIESEL HYDROFINER TANK 904, TK0904	50.004	Volatile Organic Compounds (VOC)	NONE INDICATED	0.07	LB/H	Other Case-by-Case

RBLC Matching Facilitied for Search Criteria:
Permit Date Between 1/1/1997 and 4/26/2007
And Process Type "64.0005" Transfer of SOCMI Chemicals (loading, unloading, filling)
Pollutant: Volatile Organic Compounds

RBLCID	FACILITYNAME	PROCESSNAME	PROCTYPE	THRUPUT	THRUPUT	PROCESSNOTES	CTRLDESC	EMISLIMIT	EMISLIMIT	EMISLIMIT1AVG TIMECONDITION
IA-0084	ADM POLYMERS	POLYMER POWDER CONVEYING	64.005	5	t/h	THERE ARE THREE (3) IDENTICAL CONVEYING UNITS. EACH HAS A BAGHOUSE FOR PM CONTROL. THERE IS NO CONTROL FOR VOC.		0.25	LB/H	AVERAGE OF THREE (3) 1-HR TEST RUNS
IA-0084	ADM POLYMERS	EXTRUDER VACUUM PUMP	64.005	300	acfm	THERE ARE THREE (3) IDENTICAL VACUUM PUMPS IN THIS PROJECT.		0.03	LB/H	AVERAGE OF THREE (3) 1-HR TEST RUNS
IA-0084	ADM POLYMERS	PELLET DRYER	64.005	3	t/h	THERE ARE 3 IDENTICAL PELLET DRYERS AS PART OF THIS PROJECT.		0.63	LB/H	AVERAGE OF THREE (3) 1-HR TEST RUNS
IA-0084	ADM POLYMERS	PELLET BLENDING SILO	64.005	3550	cubic feet	THERE ARE FOUR (4) IDENTICAL PELLET BLENDING SILOS. EACH HAS A BAGHOUSE FOR PM CONTROL AND NO CONTROL FOR VOC.		0.12	LB/H	AVERAGE OF THREE (3) 1-HR TEST RUNS
IA-0084	ADM POLYMERS	PELLET STORAGE BIN	64.005	7550	cubic feet	THERE ARE THREE (3) IDENTICAL PELLET STORAGE BINS FOR THIS PROJECT. EACH HAS A BAGHOUSE FOR PM CONTROL AND NO CONTROL FOR VOC.		0.12	LB/H	AVERAGE OF THREE (3) 1-HR TEST RUNS
IA-0084	ADM POLYMERS	PELLET LOADOUT ASPIRATION	64.005	400000	lb/h	THERE IS A BAGHOUSE FOR PM CONTROL AND NO CONTROL FOR VOC.		0.51	LB/H	AVERAGE OF THREE (3) 1-HR TEST RUNS
IA-0084	ADM POLYMERS	BIOMASS CONVEYING SYSTEM	64.005	10	t/h	THERE IS A BAGHOUSE FOR PM CONTROL AND NO CONTROL FOR VOC.		0.25	LB/H	AVERAGE OF THREE (3) 1-HR TEST RUNS
IA-0084	ADM POLYMERS	BIOMASS STORAGE BIN	64.005	3500	cubic feet	THERE ARE TWO (2) IDENTICAL STORAGE BINS IN THIS PROJECT. EACH HAS A BAGHOUSE FOR PM CONTROL AND NO CONTROL FOR VOC.		0.12	LB/H	AVERAGE OF THREE (3) 1-HR TEST RUNS
IA-0084	ADM POLYMERS	BIOMASS LOADOUT ASPIRATION SYSTEM	64.005	400000	lb/h	THERE IS A BAGHOUSE FOR PM CONTROL AND NO CONTROL FOR VOC.		0.51	LB/H	AVERAGE OF THREE (3) 1-HR TEST RUNS
ND-0020	RICHARDTON PLANT	ETHANOL LOADOUT	64.005	68.3	MMGAL /YR		VAPOR COMBUSTION UNIT (ENCLOSED FLARE)	10	MG/L	MG/L OF PRODUCT 3 HOUR AVERAGE
OH-0271	SUNOCO INC.	BARGE LOADING	64.005			Barge loading of acetone, alphamethylstyrene and aniline	SUBMERGED FILL	0.45	T/YR	
OH-0271	SUNOCO INC.	RAILCAR AND TANK TRUCK LOADING	64.005			Railcar and tank truck loading of acetone, alphamethylstyrene, aniline, and/or phenol.		12.94	T/YR	for each, truck and rail
TX-0354	ATOFINA CHEMICALS INCORPORATED	MMP RAILCAR LOADING AREA PROCESS FUGITIVES	64.005			EPN: MMPRC-FUG	SEE POLLUTANT NOTES	0.01	LB/H	
TX-0354	ATOFINA CHEMICALS INCORPORATED	RAILCAR LOADING/UNLOADING FUGITIVES	64.005			EPN: RCSHIP. FUGITIVE EMISSIONS ARE AN ESTIMATE ONLY AND SHALL NOT BE CONSIDERED A MAXIMUM ALLOWABLE EMISSION RATE.	SEE POLLUTANT NOTES. FOLLOW PRACTICES OF GOOD ENGINEERING, LEAK DETECTION, ISOLATION, AND REPAIR.	0.03	LB/H	
TX-0354	ATOFINA CHEMICALS INCORPORATED	TANK TRUCK LOADING/UNLOADING FUGITIVES	64.005			EPN: TTSHIP. FUGITIVE EMISSIONS ARE AN ESTIMATE ONLY AND SHOULD NOT BE CONSIDERED A MAXIMUM ALLOWABLE EMISSION RATE.	SEE POLLUTANT NOTES. FOLLOW PRACTICES OF GOOD ENGINEERING, LEAK DETECTION, ISOLATION, AND REPAIR.	0.03	LB/H	

RBLC Matching Facilitied for Search Criteria:
Permit Date Between 1/1/1997 and 4/26/2007
And Process Type "64.0005" Transfer of SOCMI Chemicals (loading, unloading, filling)
Pollutant: Volatile Organic Compounds

RBLCID	FACILITYNAME	PROCESSNAME	PROCTYPE	THRUPUT	THRUPUT	PROCESSNOTES	CTRLDESC	EMISLIMIT	EMISLIMIT	EMISLIMIT1AVG TIMECONDITION
TX-0422	BP TEXAS CITY CHEMICAL PLANT B	TANKS, INTERNAL FLOATING ROOF & FIXED ROOF	64.005			APPLIES TO VOC WITH AN AGGREGATE PARTIAL PRESSURE OF > 0.5 PSIA AT THE MAXIMIM EXPECTED OPERATING TEMPERATURE, AND TO STORAGE TANKS > 25,000 GALLONS.	INTERNAL FLOATING ROOF INSTALLED IN ALL TANKS, CLOSURE DEVICES, TANK EXTERIORS PAINTED WHITE OR ALUMINUM, OPERATION WITHOUT VISIBLE LEAKS AND SPILLS.			SEE NOTE
TX-0277	BASF CORPORATION	BARGE LOADING (POINT NO. 4-2-7)	64.005			FUGITIVE EMISSIONS ARE AN ESTIMATE ONLY AND SHOULD NOT BE CONSIDERED AS MAXIMUM ALLOWABLE EMISSION RATE. THE VOC EMISSIONS DO NOT INCLUDE ACRYLIC ACID; THEREFORE, EMISSIONS ARE ADDITIVE FOR A TOTAL VOC ESTIMATE. ALL VAPORS SHALL BE ROUTED TO THE CONTINUOUS FLARE.		0.04	LB/H	
TX-0347	CHOCOLATE BAYOU PLANT	RAIL LOADING FUGITIVES, FUG-RAIL	64.005				28 VHP LDAR PROGRAM	0.1	LB/H	
TX-0347	CHOCOLATE BAYOU PLANT	NO. 1 OLEFINS TRUCK LOADING, FUELTRK1	64.005				NONE INDICATED	11.05	LB/H	
TX-0347	CHOCOLATE BAYOU PLANT	NO. 2 OLEFINS TRUCK LOADING, FUELTRK2	64.005				NONE INDICATED	11.05	LB/H	
TX-0347	CHOCOLATE BAYOU PLANT	RAILROAD LOADING FUGITIVES, RAILLOAD	64.005				NONE INDICATED	10.58	LB/H	
TX-0353	NAFTA REGION OLEFINS COMPLEX	TANK TRUCK LOADING, P-10	64.005				FOLLOW PROCEDURES FOR INSPECTION, MITIGATION, AND REPAIR AS SPECIFIED IN PERMIT.	0.22	LB/H	
TX-0353	NAFTA REGION OLEFINS COMPLEX	DRUM LOADING, P-11	64.005				FOLLOW SPECIFIC LOADING PROCEDURES FOR REPORTING, INSPECTION, AND REPAIR.	0.04	LB/H	
TX-0306	CHEVRON PHILLIPS HOUSTON CHEMICAL	LOADING OPERATION LOSSES, 7080	64.005				CLOSED VENT SYSTEM ROUTED TO A FLARE	2.88	LB/H	
TX-0361	EQUISTAR CHEMICALS, LP	FUEL OIL TRUCK LOADING, EPN 43	64.005				EXPORTED BIPHENYLS SHALL BE LOADED VIA A PRESSURIZED LOADING SYSTEM TO PRESSURIZED TRUCKS RATED AT 25 PSIG OR HIGHER.	4.9	T/YR	SEE NOTES

ATTACHMENT 8D
MODULE 8
OEPA APPLICATION FORMS

Section II - Specific Air Contaminant Source Information

NOTE: One copy of this section should be filled out for each air contaminant source covered by this PTI application. See the line by line PTI instructions for additional information.

1. Company identification (name for air contaminant source for which you are applying): PRODUCT LOADING

2. List all equipment that are part of this air contaminant source: LOADING RACKS FOR TANKER TRUCKS

3. Air Contaminant Source Installation or Modification Schedule (must be completed regardless of date of installation or modification):

   When did/will you begin to install or modify the air contaminant source? (month/year) SECOND QUARTER 2008

   When did/will you begin to operate the air contaminant source? (month/year) THIRD QUARTER 2011 **OR** after issuance of PTI ______________

4. Emissions Information: The following table requests information needed to determine the applicable requirements and the compliance status of this air contaminant source with those requirements. Suggestions for how to estimate emissions may be found in the instructions to the Emissions Activity Category (EAC) forms required with this application. If you need further assistance, contact your Ohio EPA permit representative.

   - If total potential emissions of HAPs or any Air Toxic is greater than 1 ton/yr, fill in the table for that (those) pollutant(s). For all other pollutants, if "Emissions before controls (max), lb/hr" multiplied by 24 hours/day is greater than 10 lb/day, fill in the table for that pollutant.
   - If you have no add-on control equipment, "Emissions before controls= will be the same as "Actual emissions"
   - Annual emissions should be based on operating 8760 hr/yr unless you are requesting operating restrictions to limit emissions in line # 8 or have described inherent limitations below.
   - If you use units other than lb/hr or ton/yr, specify the units used (e.g., gr/dscf, lb/ton charged, lb/MMBtu, ton/12-months).
   - Requested Allowable (ton/yr) is often equivalent to Potential to Emit (PTE) as defined in OAC rule 3745-31-01 and OAC rule 3745-77-01.

Pollutant	Emissions before controls (max) (lb/hr)	Actual emissions (lb/hr)	Actual emissions (ton/year)	Requested Allowable (lb/hr)	Requested Allowable (ton/year)
Particulate emissions (PE) (formerly particulate matter, PM)	0	0	0	0	0
PM_{10} (PM < 10 microns in diameter)	0	0	0	0	0
Sulfur dioxide (SO_2)	0	0	0	0	0
Nitrogen oxides (NO_x)	0	0	0	0	0
Carbon monoxide (CO)	0	0	0	0	0
Organic compounds (OC)	21.5	0.4	1.7	0.4	1.7
Volatile organic compounds (VOC)	21.5	0.4	1.7	0.4	1.7
Total HAPs	5.6	0.08	0.4	0.08	0.4
Highest single HAP (hexane):	5.6	0.08	0.4	0.08	0.4
Air Toxics (see instructions):	5.6	0.08	0.4	0.08	0.4

Provide your calculations as an attachment and explain how all process variables and emission factors were selected. Note the emissions factor(s) employed and document the origin. Example: AP-42, Table 4.4-3 (8/97); stack test, Method 5, 4/96; mass balance based on MSDS; etc.

Section II - Specific Air Contaminant Source Information

5. **Does this air contaminant source employ emissions control equipment?**

☒ **Yes** - fill out the applicable information below.

☐ **No** - proceed to item # 6.

Note: Pollutant abbreviations used below: Particulates = PE; Organic compounds = OC; Sulfur dioxide = SO_2; Nitrogen oxides = NOx; Carbon monoxide = CO

☐ **Cyclone/Multiclone**

Manufacturer: ____________ Year installed: ____________
What do you call this control equipment: ____________
Pollutant(s) controlled: ☐ PE ☐ OC ☐ SO_2 ☐ NOx ☐ CO ☐ Other ____________
Estimated capture efficiency (%): ________ Basis for efficiency: ____________
Design control efficiency (%): ________ Basis for efficiency: ____________
Type: ☐ Cyclone ☐ Multiclone ☐ Rotoclone ☐ Other ____________
☐ This is the only control equipment on this air contaminant source
If no, this control equipment is: ☐ Primary ☐ Secondary ☐ Parallel
List any other air contaminant sources that are also vented to this control equipment:
____

☐ **Fabric Filter/Baghouse**

Manufacturer: ____________ Year installed: ____________
What do you call this control equipment: ____________
Pollutant(s) controlled: ☐ PE ☐ OC ☐ SO_2 ☐ NOx ☐ CO ☐ Other ____________
Estimated capture efficiency (%): ________ Basis for efficiency: ____________
Design control efficiency (%): ________ Basis for efficiency: ____________
Operating pressure drop range (inches of water): Minimum: ________ Maximum: ________
Pressure type: ☐ Negative pressure ☐ Positive pressure
Fabric cleaning mechanism: ☐ Reverse air ☐ Pulse jet ☐ Shaker ☐ Other ____________
☐ Lime injection or fabric coating agent used: Type: ________ Feed rate: ________
☐ This is the only control equipment on this air contaminant source
If no, this control equipment is: ☐ Primary ☐ Secondary ☐ Parallel
List any other air contaminant sources that are also vented to this control equipment:
____

☐ **Wet Scrubber**

Manufacturer: ____________ Year installed: ____________
What do you call this control equipment: ____________
Pollutant(s) controlled: ☐ PE ☐ OC ☐ SO_2 ☐ NOx ☐ CO ☐ Other ____________
Estimated capture efficiency (%): ________ Basis for efficiency: ____________
Design control efficiency (%): ________ Basis for efficiency: ____________
Type: ☐ Spray chamber ☐ Packed bed ☐ Impingement ☐ Venturi ☐ Other ____________
Operating pressure drop range (inches of water): Minimum: ________ Maximum: ________
pH range for scrubbing liquid: Minimum: ________ Maximum: ________
Scrubbing liquid flow rate (gal/min): ________
Is scrubber liquid recirculated? ☐ Yes ☐ No
Water supply pressure (psig): ________ NOTE: This item for spray chambers only.
☐ This is the only control equipment on this air contaminant source
If no, this control equipment is: ☐ Primary ☐ Secondary ☐ Parallel
List any other air contaminant sources that are also vented to this control equipment:
____

☐ **Electrostatic Precipitator**

Manufacturer: ____________ Year installed: ____________
What do you call this control equipment: ____________
Pollutant(s) controlled: ☐ PE ☐ OC ☐ SO_2 ☐ NOx ☐ CO ☐ Other ____________
Estimated capture efficiency (%): ________ Basis for efficiency: ____________
Design control efficiency (%): ________ Basis for efficiency: ____________

Type: ☐ Plate-wire ☐ Flat-plate ☐ Tubular ☐ Wet ☐ Other ___________
Number of operating fields: ___________

☐ This is the only control equipment on this air contaminant source
If no, this control equipment is: ☐ Primary ☐ Secondary ☐ Parallel
List any other air contaminant sources that are also vented to this control equipment:
____

☐ **Concentrator**

Manufacturer: ____________________ Year installed: ____________________
What do you call this control equipment: ____________________
Pollutant(s) controlled: ☐ PE ☐ OC ☐ SO_2 ☐ NOx ☐ CO ☐ Other ____________
Estimated capture efficiency (%):________ Basis for efficiency: __________________
Design regeneration cycle time (minutes): __________
Minimum desorption air stream temperature (°F): ________
Rotational rate (revolutions/hour): __________
☐ This is the only control equipment on this air contaminant source
If no, this control equipment is: ☐ Primary ☐ Secondary ☐ Parallel
List any other air contaminant sources that are also vented to this control equipment:
____

☐ **Catalytic Incinerator**

Manufacturer: ____________________ Year installed: ____________________
What do you call this control equipment: ____________________
Pollutant(s) controlled: ☐ PE ☐ OC ☐ SO_2 ☐ NOx ☐ CO ☐ Other ____________
Estimated capture efficiency (%):________ Basis for efficiency: __________________
Design control efficiency (%):________ Basis for efficiency: __________________
Minimum inlet gas temperature (°F): __________
Combustion chamber residence time (seconds): __________
Minimum temperature difference (°F) across catalyst during air contaminant source operation: ______
☐ This is the only control equipment on this air contaminant source
If no, this control equipment is: ☐ Primary ☐ Secondary ☐ Parallel
List any other air contaminant sources that are also vented to this control equipment:
____

☐ **Thermal Incinerator/Thermal Oxidizer**

Manufacturer: Year installed:
What do you call this control equipment: ____________________
Pollutant(s) controlled: ☐ PE ☐ OC ☐ SO_2 ☐ NOx ☐ CO ☐ Other VOC
Estimated capture efficiency (%): Basis for efficiency:
Design control efficiency (%): Basis for efficiency:
Minimum operating temperature (°F) and location: (See line by line instructions.)
Combustion chamber residence time (seconds):
☐ This is the only control equipment on this air contaminant source
If no, this control equipment is: ☐ Primary ☐ Secondary ☐ Parallel
List any other air contaminant sources that are also vented to this control equipment:
____

☐ **Flare**

Manufacturer: ____________________ Year installed: ____________________
What do you call this control equipment: ____________________
Pollutant(s) controlled: ☐ PE ☐ OC ☐ SO_2 ☐ NOx ☐ CO ☐ Other ____________
Estimated capture efficiency (%):________ Basis for efficiency: __________________
Design control efficiency (%):________ Basis for efficiency: __________________
Type: ☐ Enclosed ☐ Elevated (open)
Ignition device: ☐ Electric arc ☐ Pilot flame
Flame presence sensor: ☐ Yes ☐ No
☐ This is the only control equipment on this air contaminant source
If no, this control equipment is: ☐ Primary ☐ Secondary ☐ Parallel
List any other air contaminant sources that are also vented to this control equipment:

☐ **Condenser**

Manufacturer: ______ Year installed: ______
What do you call this control equipment: ______
Pollutant(s) controlled: ☐ PE ☐ OC ☐ SO_2 ☐ NOx ☐ CO ☐ Other ______
Estimated capture efficiency (%):______ Basis for efficiency: ______
Design control efficiency (%):______ Basis for efficiency: ______

Type: ☐ Indirect contact ☐ Direct contact
Maximum exhaust gas temperature (°F) during air contaminant source operation: ______
Coolant type: ______
Design coolant temperature (°F): Minimum ______ Maximum ______
Design coolant flow rate (gpm): ______
☐ This is the only control equipment on this air contaminant source
If no, this control equipment is: ☐ Primary ☐ Secondary ☐ Parallel
List any other air contaminant sources that are also vented to this control equipment:

☐ **Carbon Absorber**

Manufacturer: ______ Year installed: ______
What do you call this control equipment: ______
Pollutant(s) controlled: ☐ PE ☐ OC ☐ SO_2 ☐ NOx ☐ CO ☐ Other ______
Estimated capture efficiency (%):______ Basis for efficiency: ______
Design control efficiency (%):______ Basis for efficiency: ______
Type: ☐ On-site regenerative ☐ Disposable
Maximum design outlet organic compound concentration (ppmv): ______
Carbon replacement frequency or regeneration cycle time (specify units): ______
Maximum temperature of the carbon bed, after regeneration (including any cooling cycle): ______
☐ This is the only control equipment on this air contaminant source
If no, this control equipment is: ☐ Primary ☐ Secondary ☐ Parallel
List any other air contaminant sources that are also vented to this control equipment:
______

☐ **Dry Scrubber**

Manufacturer: ______ Year installed: ______
What do you call this control equipment: ______
Pollutant(s) controlled: ☐ PE ☐ OC ☐ SO_2 ☐ NOx ☐ CO ☐ Other ______
Estimated capture efficiency (%):______ Basis for efficiency: ______
Design control efficiency (%):______ Basis for efficiency: ______
Reagent(s) used: Type: ______ Injection rate(s): ______
Operating pressure drop range (inches of water): Minimum: ______ Maximum: ______
☐ This is the only control equipment on this air contaminant source
If no, this control equipment is: ☐ Primary ☐ Secondary ☐ Parallel
List any other air contaminant sources that are also vented to this control equipment:

☐ **Paint booth filter**

Type: ☐ Paper ☐ Fiberglass ☐ Water curtain ☐ Other ______
Design control efficiency (%):______ Basis for efficiency: ______

☒ **Other**, describe VAPOR RECOVERY SYSTEM

Manufacturer: TO BE DETERMINED Year installed: 2nd QUARTER 2008
What do you call this control equipment: PRODUCT LOADING VAPOR RECOVERY SYSTEM
Pollutant(s) controlled: ☐ PE ☒ OC ☐ SO_2 ☐ NOx ☐ CO ☐ Other ______
Estimated capture efficiency (%):91 Basis for efficiency: AP-42 MAXIMUM
Design control efficiency (%):99.5 Basis for efficiency: ENGINEERING ESTIMATE
☒ This is the only control equipment on this air contaminant source
If no, this control equipment is: ☐ Primary ☐ Secondary ☐ Parallel
List any other air contaminant sources that are also vented to this control equipment:
______

Section II - Specific Air Contaminant Source Information

6. Attach a Process or Activity Flow Diagram to this application for each air contaminant source included in the application. The diagram should indicate their relationships to one another. See the line by line PTI instructions for additional information.

7. Emissions egress point(s) information: PTIs which allow total emissions in excess of the thresholds listed below will be subject to an air quality modeling analysis. This analysis is to assure that the impact from the requested project will not exceed Ohio=s Acceptable Incremental Impacts for criteria pollutants and/or Maximum Allowable Ground Level Concentrations (MAGLC) for air toxics. Permit requests that would have unacceptable impacts can not be approved as proposed. See the line by line PTI instructions for additional information.

   Complete the tables below if the requested allowable annual emission rate for this PTI exceeds any of the following:

   - Particulate Matter (PM10): 10 tons per year
   - Sulfur Dioxide (SO2): 25 tons per year
   - Nitrogen Oxides (NOx): 25 tons per year
   - Carbon Monoxide (CO): 100 tons per year
   - Air Toxic: 1 ton per year. An air toxic is any air pollutant for which the American Council of Governmental Industrial Hygienists (ACGIH) has established a Threshold Limit Value (TLV).

   Complete Table 7-A below for each stack emissions egress point. An egress point is a point at which emissions from an air contaminant source are released into the ambient (outside) air. List each individual egress point on a separate line.

Table 7-A, Stack Egress Point Information

Company Name or ID for the Egress Point (examples: Stack A; Boiler Stack; etc.)	Type Code*	Stack Egress Point Shape and Dimensions (in)(examples: round 10 inch ID; rectangular 14 X 16 inches; etc.)	Stack Egress Point Height from the Ground (ft)	Stack Temp. at Max. Capacity (F)	Stack Flow Rate at Max. Capacity (ACFM)	Minimum Distance to the Property Line (ft)
NA						

*Type codes for stack egress points:

A. vertical stack (unobstructed): There are no obstructions to upward flow in or on the stack such as a rain cap.
B. vertical stack (obstructed): There are obstructions to the upward flow, such as a rain cap, which prevents or inhibits the air flow in a vertical direction.
C. non-vertical stack: The stack directs the air flow in a direction which is not directly upward.

Complete Table 7-B below for each fugitive emissions egress point. List each individual egress point on a separate line. Refer to the description of the fugitive egress point type codes below the table for use in completing the type code column of the table. For air contaminant sources like roadways and storage piles, only the first 5 columns need to be completed. For an air contaminant source with multiple fugitive emissions egress points, include only the primary egress points.

Table 7-B, Fugitive Egress Point Information

Company ID for the Egress Point (examples; Garage Door B, Building C; Roof Monitor; etc.)	Type Code*	Egress Point Description (examples: garage door, 12 X 30 feet, west wall; outside gravel storage piles; etc.)	Fugitive Egress Point Height from the Ground (ft)	Minimum Distance to the Property Line (ft)	Exit Gas Temp. (F)
LOADING RACK(S)	F	TANKER TRUCK LOADING RACK	12	1,700	ambient

*Type codes for fugitive egress point:

D. door or window
E. other opening in the building without a duct
F. no stack and no building enclosing the air contaminant source (e.g., roadways)

Complete Table 7-C below for each Stack Egress Point identified in Table 7-A above. In each case, use the dimensions of the largest nearby building, building segment or structure. List each individual egress point on a separate line. Use the same Company Name or ID for the Egress Point in Table 7-C that was used in Table 7-A. See the line by line PTI instructions for additional information.

Table 7-C, Egress Point Additional Information (Add rows as necessary)

Company ID or Name for the Egress Point	Building Height (ft)	Building Width (ft)	Building Length (ft)
NA			

8. Request for Federally Enforceable Limits

As part of this permit application, do you wish to propose voluntary restrictions to limit emissions in order to avoid specific requirements listed below, (i.e., are you requesting federally enforceable limits to obtain synthetic minor status)?

☐ yes
☒ no
☐ not sure - please contact me if this affects me

If yes, why are you requesting federally enforceable limits? Check all that apply.

a. ☐ to avoid being a major source (see OAC rule 3745-77-01)
b. ☐ to avoid being a major MACT source (see OAC rule 3745-31-01)
c. ☐ to avoid being a major modification (see OAC rule 3745-31-01)
d. ☐ to avoid being a major stationary source (see OAC rule 3745-31-01)
e. ☐ to avoid an air dispersion modeling requirement (see Engineering Guide # 69)
f. ☐ to avoid another requirement. Describe: ______________________________

If you checked a., b. or d., please attach a facility-wide potential to emit (PTE) analysis (for each pollutant) and synthetic minor strategy to this application. (See line by line instructions for definition of PTE.) If you checked c., please attach a net emission change analysis to this application.

9. If this air contaminant source utilizes any continuous emissions monitoring equipment for indicating or demonstrating compliance, complete the following table. This does not include continuous parametric monitoring systems.

Company ID for Egress Point	Type of Monitor	Applicable performance specification (40 CFR 60, Appendix B)	Pollutant(s) Monitored
NA			

10. Do you wish to permit this air contaminant source as a portable source, allowing relocation within the state in accordance with OAC rule 3745-31-03 or OAC rule 3745-31-05?

☐ yes - Note: notification requirements in rules cited above must be followed.
☒ no

11. The appropriate Emissions Activity Category (EAC) form(s) must be completed and attached for each air contaminant source. At least one complete EAC form must be submitted for each air contaminant source for the application to be considered complete. Refer to the list attached to the PTI instructions.

FOR OHIO EPA USE
FACILITY ID: ______
EU ID ______ PTI# ______

EMISSIONS ACTIVITY CATEGORY FORM
LOADING RACK FOR LIQUID MATERIALS

This form is to be completed for each loading rack for liquid materials. State/Federal regulations which may apply to loading racks for liquid materials are listed in the instructions. Note that there may be other regulations which apply to this emissions unit which are not included in this list.

1. Reason this form is being submitted (Check one)

☒ New Permit ☐ Renewal or Modification of Air Permit Number(s) (e.g. J001) ______

2. Maximum Operating Schedule: 24 hours per day; 365 days per year

If the schedule is less than 24 hours/day or 365 days/year, what limits the schedule to less than maximum? See instructions for examples. ______

3. Complete the following table for each bay:

Bay Identification	Number of Loading Arms	Type of Vehicle Loaded (check one or more)	Loading Method (check one or more)
1	4	☒ Tank Truck ☐ Barge ☐ RR Car ☐ Ship ☐ Other (describe):______	☐ Top Load, Splash Fill ☐ Bottom Load ☒ Top Load, fully Submerged ☐ Top Load, Partial Submerged
2	4	☒ Tank Truck ☐ Barge ☐ RR Car ☐ Ship ☐ Other (describe):______	☐ Top Load, Splash Fill ☐ Bottom Load ☒ Top Load, fully Submerged ☐ Top Load, Partial Submerged
		☐ Tank Truck ☐ Barge ☐ RR Car ☐ Ship ☐ Other (describe):______	☐ Top Load, Splash Fill ☐ Bottom Load ☐ Top Load, fully Submerged ☐ Top Load, Partial Submerged

4. Complete this section for each material loaded.

Liquid Material Loaded	Bay ID	Average Material Vapor Pressure at Loading Temperature (millimeters mercury)	Is liquid a photo-chemically reactive material?*	Maximum Daily Throughput (gallons)	Proposed Maximum Annual Throughput (gallons)
F-T DIESEL	1	0.233	☐Yes ☒ No	315,000	114,975,000
F-T NAPHTHA	2	154.7	☒Yes ☐ No	157,500	57,487,500

* Photochemically reactive material is defined in OAC rule 3745-21-01(C)(5).

5. Complete this section for each vapor control system.

Type of Vapor Control System (check one):	Minimum Control Efficiency (% by weight):	Maximum Controlled Mass Emissions Rate (pounds/1,000 gallons):	Basis for Mass Emissions Rate Data (check one):
☐ Vapor Balance ☐ Adsorption ☐ Incineration ☒ Condenser ☐ None ☐ Other (describe):	98.5	0.06 (VOC)	☐ Design criteria ☐ Equipment vendor guarantee ☐ Emissions test at this facility ☐ Emissions test at another facility with similar vapor control system ☒ Other (describe):ENGINEERING ESTIMATE
☐ Vapor Balance ☐ Adsorption ☐ Incineration ☐ Condenser ☐ None ☐ Other (describe): ________			☐ Design criteria ☐ Equipment vendor guarantee ☐ Emissions test at this facility ☐ Emissions test at another facility with similar vapor control system ☐ Other (describe):__________
☐ Vapor Balance ☐ Adsorption ☐ Incineration ☐ Condenser ☐ None ☐ Other (describe): ________			☐ Design criteria ☐ Equipment vendor guarantee ☐ Emissions test at this facility ☐ Emissions test at another facility with similar vapor control system ☐ Other (describe):__________
☐ Vapor Balance ☐ Adsorption ☐ Incineration ☐ Condenser ☐ None ☐ Other (describe): ________			☐ Design criteria ☐ Equipment vendor guarantee ☐ Emissions test at this facility ☐ Emissions test at another facility with similar vapor control system ☐ Other (describe):__________