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 12

1.0 PROCESS DESCRIPTION

Plant roads at the Ohio River Clean Fuels facility will allow for delivery of raw materials (coal and biomass), export of products and wastes (F-T diesel, F-T naphtha, LPG, sulfur, fly ash, slag), and employee vehicle traffic and parking. Figure 23 is a block flow diagram of this process (see Attachment 12A).

Ohio River Clean Fuels may use pipelines, railcars, barges, or trucks to transport materials to and from the facility. This module for roadways and parking assumes that the majority of liquid products will be shipped by pipeline. Also, while the majority of coal and biomass will be delivered by conveyor, a percentage of coal and biomass will be delivered by truck. All plant roads will be paved. Haul trucks will be covered and roadways will be watered and swept in accordance with a dust control plan.

2.0 AIR EMISSIONS INVENTORY

Ohio River Clean Fuels intends to pave the proposed plant roads and parking areas, so emission estimates are based on AP-42 Section 13.2.1 Paved Roads. Although the final facility layout has not been completed, preliminary estimates for vehicle round trips have been developed utilizing the site layout (refer to Figure 2 in the Application Introduction).

2.1 F-T Diesel, F-T Naphtha, & LPG Tank Truck Trips

The number of tank trucks per day and the annual vehicle miles traveled were estimated as follows:

50,000 bpd product x 42 gal/bbl = 2,100,000 gpd product
(15% of product will be shipped by truck)
0.15 x 2,100,000 gpd product / 10,000 gal tanker capacity = 31.5 trucks/day

31.5 trucks/day will therefore be needed to transport the combination of F-T diesel, F-T naphtha, and LPG produced at the facility. Based on an estimated round trip distance of 1.7 miles, the vehicle miles traveled (VMT) equal:

31.5 trucks/day x 1.7 miles/truck/trip = 53.6 VMT/day
53.6 VMT/day x 365 days/year = 19,546 VMT/year

2.2 Coal, Biomass, Slag, Fly Ash & Sulfur Truck Trips

Portions of the same roadway used to ship product will be utilized to deliver coal and biomass to storage areas and to ship waste slag, fly ash, and sulfur off-site. Truck transfer/turn-around areas or appropriate roadways will be constructed at the coal and biomass hopper building and the slag, ash, and sulfur storage areas. The trucks will exit using the same roadway they entered. The proposed configuration is depicted on Figure 2 and ranges from 9,000 to 13,400 feet (~1.7 to 2.5 miles) total travel distance depending upon the pick-up/delivery destination.

Based on the possible coal and biomass deliveries by truck and the assumption that slag, ash, and sulfur will be shipped by truck, the number of haul trucks per day and the annual vehicle miles traveled were estimated as follows:

Table 2.2 Material Hauling Amounts and Trips Per Day

Material	Tons/Day	Truck Trips
Coal Deliveries	3,500	140
Biomass Deliveries	6,800	272
Slag Removal	5,500	220
Fly Ash Removal	2,150	86
Sulfur Removal	1,300	52

Individual VMT/day shown in the accompanying Supporting Calculations (see Attachment 12B) are used to estimate particulate emissions from transport of each material.

2.3 Employee Vehicle trips

For emission estimate purposes, the conservative estimate is that all employee vehicles enter and exit via the same roadway utilized for shipping and receiving, and park their vehicles in the lot adjacent to the Switchyard. It is estimated that approximately 300 employees will work at the facility in any 24-hour period.

The number of employee vehicles per day and the annual vehicle miles traveled were estimated as follows:

300 employees/day x 1.8 miles round trip = 540 VMT/day and 197,100 VMT/year

2.4 Paved Roadway Emissions

A reduced speed limit (< 10 mph for heavy-duty diesel vehicles; 25 mph for light-duty gasoline vehicles) will be enforced as a fugitive dust control measure. As previously mentioned, the preliminary roadway segments applicable to these emission estimate calculations have been highlighted on Figure 2. Round trip distances from the site boundary to the various destinations were evaluated based on their current proposed locations.

Emission estimates for PM2.5, PM10, and PE produced by vehicle traffic are based on the following AP-42, Section 13.2.1 equation:

$$E\ (lb/VMT) = (k \times (sL/2)^{0.65} \times (W/3)^{1.5} - C) \times (1-(P/4N))$$

Where: E = emission rate in lb/vehicle mile traveled (VMT)

k = 0.004 for PM2.5
0.016 for PM10
0.082 for PE

sL = silt loading (g/m^2) low end of the Quarry range from AP-42 Table 13.2.1-4 for typical silt content and loading values for paved roads at industrial facilities (5)

W = mean vehicle weight (see Attachment 12B)

C = emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear:
0.00036 lb/VMT PM2.5,
0.00047 lb/VMT PM10, and
0.00047 lb/VMT PE

P = number of "wet" days with at least 0.01 inches of precipitation during the averaging period (150)

N = number of days in the averaging period (365)

The mean vehicle weights for the trucks are based on the average of the tare weights and fully-loaded weights, as shown in the following Supporting Calculations (see Attachment 12B). Uncontrolled emissions have been corrected to reflect natural precipitation (>0.01 inch on average, 150 days per year according to AP-42 Figure 13.2.2-1).

Potential emission estimate are summarized below.

	PM2.5	PM10	PE
lbs/hour	8.77	35.15	180.25
tons/year	38.42	153.95	789.49

Actual controlled emissions based on the implementation of a dust control program in accordance with the Best Available Control Technology (BACT) analysis provided in Section 4, are expected to be reduced by 90%.

Actual controlled emission estimates are as follow:

	PM2.5	PM10	PE
lbs/hour	0.88	3.51	18.02
tons/year	3.84	15.39	78.95

3.0 SOURCE-SPECIFIC APPLICABLE REGULATIONS

3.1 State Regulations

3.1.1 Air Pollution Nuisances Prohibited (3745-15-07)

The emission into the open air of smoke, ashes, dust, grime, acids, fumes, gases, vapors, odors, or any other substances or combinations of substances, in such a manner as to endanger the health, safety or welfare of the public, or cause unreasonable injury or damage to property, is a public nuisance. It is unlawful for any person to cause, permit or maintain any such public nuisance.

3.1.2 Visible Particulate Emissions Limitations for Fugitive Dust (3745-17-07(B))

Roadways and parking areas will be sources of fugitive dust emissions. Sources of fugitive dust are subject to Chapter 3745-17-07(B)(1) which limits visible particulate emissions to less than 20% opacity as a three-minute average. Chapter 3745-17-07(B)(4) further states that there shall be no visible particulate emissions from paved roadways or parking areas except for a period of time not to exceed six minutes during any 60-minute observation period.

3.1.3 Restriction of Emission of Fugitive Dust (3745-17-08)

Chapter 3745-17-08(B) applies to the facility roadways and parking areas because of the proposed location in Columbiana County. This rule requires that ORCF apply reasonably available control measures (RACM) to prevent fugitive dust from becoming airborne. Relative to roadways and parking areas, the rule states that one or more of the following measures shall be taken to minimize or eliminate visible particulate emissions of fugitive dust:

- The periodic application of water or other suitable dust suppression chemicals on surfaces which can cause emissions of fugitive dust;
- The paving of roadways and the maintaining of roadways in a clean condition; and
- The prompt removal, in such a manner as to minimize or prevent re-suspension, of earth or other material from paved streets.

3.1.4 Permits to Install New Sources (3745-31)

The roadways and parking areas constitute an emission unit that will generate fugitive particulate matter. 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. 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 rates.

3.2 Federal Regulations

No federal regulations have been identified that regulate fugitive dust emissions from roadways and parking areas.

4.0 BACT ANALYSIS

4.1 Particulate Matter

Vehicle traffic on facility roadways and parking areas will be sources of fugitive particulate emissions. Combined emissions from these sources are included in this analysis.

4.1.1 Available Control Technologies – Particulate Matter

A review of the RBLC database for the prior 10 years found 15 facilities where BACT determinations have been made for PM and PM10 emissions for fugitive dust sources from paved roadways (Process 99.140) (see Attachment 12C). The following control descriptions were found:

- Roadway watering (or use of other wetting agents)
- Covering of truck loads
- Limited Access
- Sweeping Roadways
- Use of Vacuum Sweepers
- Plant Speed Limits
- Dust Control Plan, Roadway Watering, Sweeping, and Limited Access
- Water Flush followed by Sweeping
- Wheel wash stations

4.1.2 Technically Infeasible Options – Particulate Matter

The only option that is not technically feasible for this facility is to limit access of the facility to the necessary vehicles for transport of materials offsite.

4.1.3 Technology Ranking – Particulate Matter

Reduction of silt loading on paved roadways is the primary means to reduce fugitive emissions from paved roadways. Technologies that prevent material from being deposited on roadways such as covers on loads either being delivered to the facility or being shipped from the facility, or wheel wash stations at points where vehicles move from unpaved to paved areas, will have the greatest impact.

Combinations of technologies that reduce the potential for silt deposition on roadways and remove existing silt deposits will achieve the best fugitive particulate matter reductions. In addition, plant roadway speed limits are often imposed to further reduce the potential for fugitive dust entrainment.

4.1.4 Evaluate Most Effective Controls – Particulate Matter

An evaluation of control technology effectiveness for paved roadways and parking is shown in the following table.

Table 4.1.4 Technology Ranking – Roadway Particulate Matter

Technology	Estimated Control Efficiency (%)	Basis
Twice daily watering	> 90	AP-42
Maintain pavement and use vacuum sweeper/watering trucks and reduce speed to 15 mph	90	RBLC BACT
Water flushing with sweeping	80	RBLC BACT
Flushing with water	80	OEPA RACM Table 2.1.1-3
Speed reduction from 40 mph to 15 mph	80	OEPA RACM Table 2.1.1-3
Vacuum sweeping	75	OEPA RACM Table 2.1.1-3
Broom sweeping	70	OEPA RACM Table 2.1.1-3
Speed reduction from 40 mph to 20 mph	65	OEPA RACM Table 2.1.1-3
Twice daily watering	50	AP-42

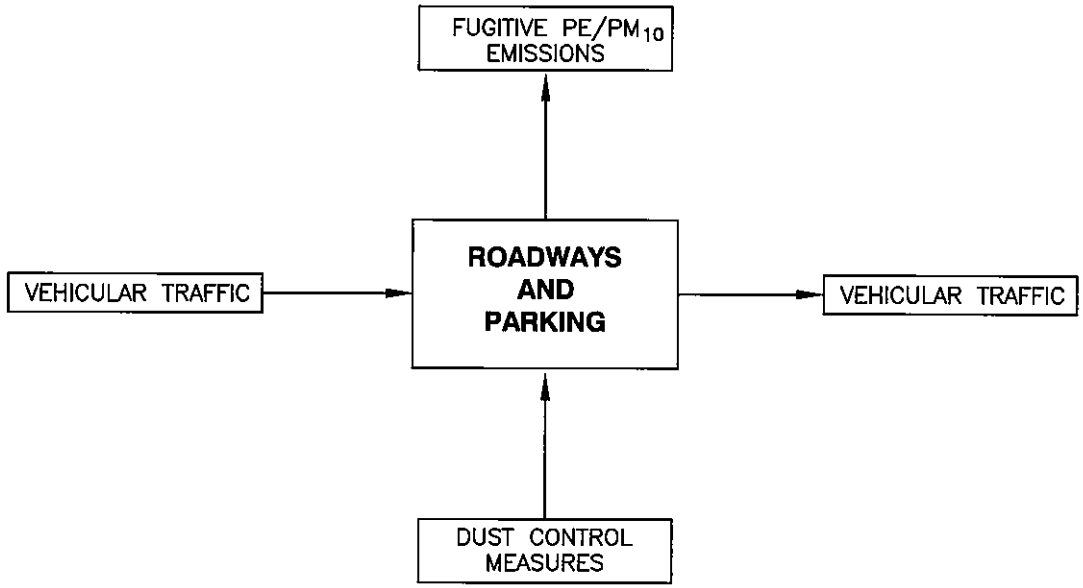
4.1.5 Proposed BACT Limits and Control Options – Particulate Matter

Particulate matter emission rate limits are not proposed as part of this BACT determination for fugitive emissions from feedstock storage sources. Instead, ORCF proposes to implement a dust control program that will incorporate a combination of efforts. In accordance with OAC 3745-17-08, ORCF will develop and implement a dust control program that will include measures such as:

- Periodic application of water or other suitable dust suppression chemicals (OAC 3745-17-08(B)(6))
- Covering, at all time, of open-bodied vehicles when transporting materials likely to become airborne (OAC 3745-17-08(B)(7))
- The prompt removal, in such a manner as to minimize or prevent re-suspension, of earth or other material from paved streets onto which earth or other material has been deposited by trucking or earth moving equipment or erosion by water or other means.
- Enforcement of reduced speed limits on facility roadways (10 mph for heavy-duty diesel trucks and 25 mph for light-duty gasoline vehicles).

These or other appropriate procedures will be developed as components of a Dust Control Program for the ORCF facility. The 20% opacity limit for a 3-minute average visible particulate limit for fugitive dust as established in OAC 3745-17-07(B)(1) will apply to roadways and parking areas. A control efficiency of 90% or greater is expected to be achieved through implementation of these measures.

ATTACHMENT 12A
MODULE 12
FIGURES



12A-1

SUBMITTAL & REVISION RECORD

NO	DATE	DESCRIPTION
A	06/26/07	DRAFT SUBMISSION, AS: 061-933-FIGURE-15-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 12
ROADWAYS AND PARKING

APPROVED:					PROJECT NO:	061-933.0002	FIGURE NO: 23
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ATTACHMENT 12B
MODULE 12
SUPPORTING CALCULATIONS

Supporting Calculations

Product Loadout Traffic

Emission Factor Derivation using AP-42 Section 13.2.1

E=(k(sL/2)^0.65)((W/3)^1.5)-C*

E: particulate emission factor (lb/VMT)
k: particle size multiplier (lb/VMT)
sL: road surface silt loading (g/m^2)
W: average weight of vehicles (tons)
C: emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear
P: number of "wet" days with at least 0.01 inches of precipitation
N: 365 days

Assumptions

23.75 tons $(W)_1$ - (16.5 ton empty tanker + 10,000 gallons - assume all is F-T diesel at 0.77 g/mL)
2.4 g/m^2 (sL) - low end of the Quarry silt loading range per AP-42 Table 13.2.1-4
1.7 miles (estimated round trip to/from site property boundary from/to truck loading area) - Refer to Figure 2
31.5 trips per day for F-T diesel/F-T naphtha/LPG trucks (assumes 85% loadout by pipeline)
150 days (P) - AP-42 Figure 13.2.1-2
90 % reduction in emissions achieved through implementation of a dust control program

Vehicle Traffic on Paved Roads

Product Loadout (assumed to be 100% F-T diesel)

Predictive Emission Factor
E=(k(sL/2)^0.65)*((W/3)^1.5)-C

	PM-2.5	PM-10	PE
k	0.004	0.016	0.082
C	0.00036	0.00047	0.00047
E	0.09995	0.40077	2.05587
VMT/day	53.55	53.55	53.55
lb/day	5.35	21.46	110.09

Precipitation Correction
E=(k(sL/2)^0.65)*((W/3)^1.5)-C)*(1-(P/4N))

	Potential Emissions (Uncontrolled)			Actual Emissions (Controlled - 90% Reduction)		
	PM-2.5	PM-10	PE	PM-2.5	PM-10	PE
E	0.08968	0.35959	1.84465	0.08968	0.35959	1.84465
VMT/day	53.55	53.55	53.55	53.55	53.55	53.55
lbs/day	4.80	19.26	98.78	0.48	1.93	9.88
lbs/hour	**0.20**	**0.80**	**4.12**	**0.02**	**0.08**	**0.41**
lbs/year	1,752.87	7,028.51	36,055.10	175.29	702.85	3,605.51
tons/year	**0.88**	**3.51**	**18.03**	**0.09**	**0.35**	**1.80**

Supporting Calculations

Raw Materials and By-Product Truck Traffic (Coal, Biomass, Slag, Ash, Sulfur)

Emission Factor Derivation using AP-42 Section 13.2.1

E=(k(sL/2)^0.65)((W/3)^1.5)-C*

		PM-2.5	PM-10	PE
E: particulate emission factor (lb/VMT)	k	0.004	0.016	0.082
k: particle size multiplier (lb/VMT)	C	0.00036	0.00047	0.00047

sL: road surface silt loading (g/m^2)
W: average weight of vehicles (tons)
C: emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear
P: number of "wet" days with at least 0.01 inches of precipitation
N: 365 days

Assumptions

32.5 tons (W) = (20 ton empty haul truck + (20 tons truck + 25 tons material)) / 2
2.4 g/m^2 (sL) - low end of the Quarry silt loading range per AP-42 Table 13.2.1-4
1.6 miles (estimated round trip to/from site property boundary from/to coal hopper) - Refer to Figure 2
1.6 miles (estimated round trip to/from site property boundary from/to biomass hopper) - Refer to Figure 2
2.1 miles (estimated round trip to/from site property boundary from/to slag storage) - Refer to Figure 2
2.0 miles (estimated round trip to/from site property boundary from/to ash silos) - Refer to Figure 2
2.5 miles (estimated round trip to/from site property boundary from/to sulfur storage) - Refer to Figure 2
140 trips per day for coal trucks
272 trips per day for biomass trucks
220 trips per day for slag trucks
86 trips per day for ash trucks
52 trips per day for sulfur trucks
150 days (P) - AP-42 Figure 13.2.1-2

Vehicle Traffic on Paved Roads

Coal

Predictive Emission Factor
E=(k(sL/2)^0.65)*((W/3)^1.5)-C

	PM-2.5	PM-10	PE
E	0.16021	0.64182	3.29126
VMT/day	224	224	224
lb/day	35.89	143.77	737.24

Precipitation Correction
E=(k(sL/2)^0.65)*((W/3)^1.5)-C)*(1-(P/4N))

	PM-2.5	PM-10	PE
E	0.14375	0.57588	2.95312
VMT/day	224	224	224
lbs/day	32.20	129.00	661.50
lbs/hour	1.34	5.37	27.56
lbs/year	11,753.18	47,083.89	241,447.18
tons/year	5.88	23.54	120.72

Slag

Predictive Emission Factor
E=(k(sL/2)^0.65)*((W/3)^1.5)-C

	PM-2.5	PM-10	PE
E	0.16021	0.64182	3.29126
VMT/day	462	462	462
lb/day	74.02	296.52	1,520.56

Precipitation Correction
E=(k(sL/2)^0.65)*((W/3)^1.5)-C)*(1-(P/4N))

	PM-2.5	PM-10	PE
E	0.14375	0.57588	2.95312
VMT/day	462	462	462
lbs/day	66.41	266.06	1364.34
lbs/hour	2.77	11.09	56.85
lbs/year	24,240.94	97,110.53	497,984.80
tons/year	12.12	48.56	248.99

Total Potential (Uncontrolled) Particulate Emissions (coal + biomass + slag + ash + sulfur traffic)

	PM-2.5	PM-10	PE
lbs/day	204.73	819.77	4,203.07
lbs/hour	**8.53**	**34.16**	**175.13**
lbs/year	74,726.00	299,217.86	1,534,118.87
tons/year	**37.36**	**149.61**	**767.06**

Biomass

Predictive Emission Factor
E=(k(sL/2)^0.65)*((W/3)^1.5)-C

	PM-2.5	PM-10	PE
E	0.16057	0.64229	3.29173
VMT/day	435	435	435
lb/day	69.88	279.52	1,432.56

Precipitation Correction
E=(k(sL/2)^0.65)*((W/3)^1.5)-C)*(1-(P/4N))

	PM-2.5	PM-10	PE
E	0.14408	0.57630	2.95354
VMT/day	435	435	435
lbs/day	62.70	250.81	1,285.38
lbs/hour	2.61	10.45	53.56
lbs/year	22,886.07	91,544.27	469,164.36
tons/year	11.44	45.77	234.58

Ash

Predictive Emission Factor
E=(k(sL/2)^0.65)*((W/3)^1.5)-C

	PM-2.5	PM-10	PE
E	0.16021	0.64182	3.29126
VMT/day	172	172	172
lb/day	27.56	110.39	566.10

Precipitation Correction
E=(k(sL/2)^0.65)*((W/3)^1.5)-C)*(1-(P/4N))

	PM-2.5	PM-10	PE
E	0.14375	0.57588	2.95312
VMT/day	172	172	172
lbs/day	24.73	99.05	507.94
lbs/hour	1.03	4.13	21.16
lbs/year	9,024.77	36,153.70	185,396.94
tons/year	4.51	18.08	92.70

Sulfur

Predictive Emission Factor
E=(k(sL/2)^0.65)*((W/3)^1.5)-C

	PM-2.5	PM-10	PE
E	0.16021	0.64182	3.29126
VMT/day	130	130	130
lb/day	20.83	83.44	427.86

Precipitation Correction
E=(k(sL/2)^0.65)*((W/3)^1.5)-C)*(1-(P/4N))

	PM-2.5	PM-10	PE
E	0.14375	0.57588	2.95312
VMT/day	130	130	130
lbs/day	18.69	74.86	383.91
lbs/hour	0.78	3.12	16.00
lbs/year	6,821.04	27,325.47	140,125.59
tons/year	3.41	13.66	70.06

Supporting Calculations

Employee Traffic

Emission Factor Derivation using AP-42 Section 13.2.1

E=(k(sL/2)^0.65)((W/3)^1.5)-C*		PM-2.5	PM-10	PE
E: particulate emission factor (lb/VMT)	k	0.004	0.016	0.082
k: particle size multiplier (lb/VMT)	C	0.00036	0.00047	0.00047

sL: road surface silt loading (g/m^2)
W: average weight of vehicles (tons)
C: emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear
P: number of "wet" days with at least 0.01 inches of precipitation
N: 365 days

Assumptions

2.0 tons (W) - (employee vehicles)
2.4 g/m^2 (sL) - low end of the Quarry silt loading range per AP-42 Table 13.2.1-4
1.8 miles - (estimated round trip to/from site property boundary from/to employee parking lot) - Refer to Figure 2. While about 10% of employees are expected to use the Administration Building lot, calculations assume 100% of employees use the more distant Switchyard lot.
300 trips per day (assumes 300 employees)
150 days (P) - AP-42 Figure 13.2.1-2

Vehicle Traffic on Paved Roads

Employee Traffic

Predictive Emission Factor
E=(k(sL/2)^0.65)*((W/3)^1.5)-C

	PM-2.5	PM-10	PE
E	0.00209	0.00934	0.04978
VMT/day	540	540	540
lb/day	1.13	5.04	26.88

Precipitation Correction
E=(k(sL/2)^0.65)*((W/3)^1.5)-C)*(1-(P/4N))

	Potential Emissions (Uncontrolled)			Actual Emissions (Controlled - 90% Reduction)		
	PM-2.5	PM-10	PE	PM-2.5	PM-10	PE
E	0.00188	0.00838	0.04467	0.00188	0.00838	0.04467
VMT/day	540	540	540	540	540	540
lbs/day	1.01	4.52	24.12	0.10	0.45	2.41
lbs/hour	**0.04**	**0.19**	**1.00**	**4.22E-03**	**0.02**	**0.10**
lbs/year	369.84	1,650.91	8,803.77	36.98	165.09	880.38
tons/year	**0.18**	**0.83**	**4.40**	**0.02**	**0.08**	**0.44**

Supporting Calculations

Facility-Wide Totals for Fugitive Dust from Vehicular Traffic

Vehicle Traffic on Paved Roads - Emission Summary

	Potential (Uncontrolled)			Actual (Controlled)		
Total PM Emissions (product loadout vehicle traffic)						
	PM-2.5	PM-10	PE	PM-2.5	PM-10	PE
lbs/day	4.80	19.26	98.78	0.48	1.93	9.88
lbs/hour	0.20	0.80	4.12	0.02	0.08	0.41
lbs/year	1,752.87	7,028.51	36,055.10	175.29	702.85	3605.51
tons/year	0.88	3.51	18.03	0.09	0.35	1.80
Total Particulate Emissions (coal + biomass + slag + ash + sulfur traffic)						
	PM-2.5	PM-10	PE	PM-2.5	PM-10	PE
lbs/day	204.73	819.77	4,203.07	20.47	81.98	420.31
lbs/hour	8.53	34.16	175.13	0.85	3.42	17.51
lbs/year	74,726.00	299,217.86	1,534,118.87	7472.60	29921.79	153411.89
tons/year	37.36	149.61	767.06	3.74	14.96	76.71
Total PM Emissions (employee vehicle traffic)						
	PM-2.5	PM-10	PE	PM-2.5	PM-10	PE
lbs/day	1.01	4.52	24.12	0.10	0.45	2.41
lbs/hour	0.04	0.19	1.00	4.22E-03	0.02	0.10
lbs/year	369.84	1,650.91	8,803.77	36.98	165.09	880.38
tons/year	0.18	0.83	4.40	0.02	0.08	0.44
Total Potential PM Emissions (all traffic)						
	PM-2.5	PM-10	PE	PM-2.5	PM-10	PE
lbs/day	210.54	843.55	4,325.97	21.05	84.36	432.60
lbs/hour	**8.77**	**35.15**	**180.25**	**0.88**	**3.51**	**18.02**
lbs/year	76,848.71	307,897.28	1,578,977.74	7,684.87	30,789.73	157,897.77
tons/year	**38.42**	**153.95**	**789.49**	**3.84**	**15.39**	**78.95**

ATTACHMENT 12C
MODULE 12
DOCUMENTATION

LIST OF REFERENCES

- Ohio EPA, Reasonably Available Control Measures (RACM) Guidance Manual, Section 2.1 – *General Fugitive Dust Sources,* Table 2.1.1-3: *Summary of Techniques, Efficiencies and Costs for Controlling Fugitive Dust Emissions from Paved and Unpaved Surfaces.*
- U.S. EPA, AP-42 Section 13.2.1 – *Paved Roads*, November 2006.
- 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 6/11/2007
And Process Type "99.14" Fugitive Dust Sources: Paved Roads
Pollutant: Particulate Matter

RBLCID	FACILITYNAME	PROCESSNAME	PROC TYPE	CTRLDESC	EMISLIMIT2	EMISLIMIT2UNIT	COSTEFFECT
AR-0077	BLUEWATER PROJECT	ROADWAY EMISSIONS	99.14	APPLICATION OF WETTING AGENT			
IA-0054	BUNGE CORPORATION	ROADWAY AREA SOURCE, PAVED	99.14	HARD SURFACE PAVEMENT	0.24	T/YR	
IA-0054	BUNGE CORPORATION	ROADWAY AREA SOURCE, PAVED	99.14	HARD SURFACE PAVEMENT	0.24	T/YR	
*LA-0203	OAKDALE OSB PLANT	PAVED ROADS	99.14	LIMITED ACCESS			
WI-0228	WPS - WESTON PLANT	F134 ROADWAYS	99.14	PAVE ALL HAUL ROADS WHERE POSSIBLE, FUGITIVE DUST CONTROL PLAN, WATERING ROADWAYS, SWEEPING ROADS, LIMIT ROAD HOURS OF OPERATION			
*IL-0102	AVENTINE RENEWABLE ENERGY, INC.	ROADWAYS AND OTHER FUGITIVE DUST	99.14	PAVE ROADS AND PARKING LOTS; FUGITIVE DUST CONTROL PROGRAM.			
NC-0103	TOBACCOVILLE FACILITY	PAVED ROADS	99.14	PAVING ALL MAIN ROADS AND MOST MAINTENANCE ROADS, INSTALLATION OF CURBS WITH GUTTER,ENCLOSED TRAILERS/TRUCKS.			
*LA-0204	PLAQUEMINE PVC PLANT	ROAD - FUGITIVE DUST	99.14	PAVINGS ROADS AS MUCH AS PRACTICABLE			
IN-0104	CON AGRA SOYBEAN PROCESSING CO.	FUGITIVE DUST	99.14	ROADS ARE PAVED, REGULAR PROGRAM OR ROAD SWEEPING AND/OR ROAD WETTING AS NEEDED.			
WV-0024	WESTERN GREENBRIER CO-GENERATION, LLC	PAVED HAULROADS	99.14	SHALL MAINTAIN PAVEMENT SHALL USE VACUUM SWEEPER AND WATER TRUCKS MAX SPEED 15 MPH			
OH-0297	FDS COKE	ROADWAYS	99.14	TREAT WITH APPROPRIATE MATERIAL (WATER)			
*IA-0067	MIDAMERICAN ENERGY COMPANY	HAUL ROADS	99.14	WATER FLUSHING FOLLOWED BY SWEEPING			
*IA-0067	MIDAMERICAN ENERGY COMPANY	HAUL ROADS	99.14	WATER FLUSHING FOLLOWED BY SWEEPING			
MO-0048	LAFARGE CORPORATION	PAVED HAUL ROADS(EP 95)	99.14	WATER FLUSHING FOLLOWED BY VACUUM SWEEPING	0		
CO-0055	LAMAR LIGHT & POWER POWER PLANT	FUGITIVE PARTICULATE MATTER EMISSIONS SOURCES	99.14	WATER WASH DOWN, DAILY INSPECTION/CLEANING/COVERING OF TRANSPORT VEHICLES, WATERING			

ATTACHMENT 12D
MODULE 12
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): ROADWAYS AND PARKING

2. List all equipment that are part of this air contaminant source: ROADWAYS AND PARKING

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)	180.3	18	79	18	79
PM_{10} (PM < 10 microns in diameter)	35.2	3.5	15.4	3.5	15.4
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)	0	0	0	0	0
Volatile organic compounds (VOC)	0	0	0	0	0
Total HAPs	0	0	0	0	0
Highest single HAP:	0	0	0	0	0
Air Toxics (see instructions):	0	0	0	0	0

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: _____

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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 _____
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 DUST CONTROL PROGRAM - SEE ATTACHED BACT ANALYSIS
Manufacturer: SELECTION PENDING Year installed: SECOND QUARTER 2008
What do you call this control equipment: DUST CONTROL MEASURES
Pollutant(s) controlled: ☒ PE ☐ OC ☐ SO_2 ☐ NOx ☐ CO ☒ Other PM10
Estimated capture efficiency (%):100 Basis for efficiency: ENGINEERING ESTIMATE

Design control efficiency (%): 90 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

Section II - Specific Air Contaminant Source Information

List any other air contaminant sources that are also vented to this control equipment:

_____

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)

*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.

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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)
PAVED ROADWAYS	F	~3 MILES OF ASPHALT-PAVED ROADWAYS	0	0	NA
PLANT PARKING	F	315,000 SQUARE FEET OF PAVED PARKING LOT	0	4,000	NA
ADMIN PARKING	F	65,000 SQUARE FEET OF PAVED PARKING LOT	0	0	NA

*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)

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.

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

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
ROADWAYS AND PARKING AREAS: FUGITIVE DUST EMISSIONS

This form is to be completed for all Roadways and Parking Areas. State/Federal regulations which may apply to Roadways and Parking Areas 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. F001) _____

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 table below for each road segment or parking area.

ID	Road Segment or Parking Area Description	Length (miles) or Area (ft^2)	Year Installed	Surface Type (check one)	Surface Composition (check one)
A	PLANT ROADWAYS	3 MILES	2008	☒ paved ☐ unpaved	☒ asphalt ☐ gravel ☐ concrete ☐ dirt ☐ chip & seal ☐ other_____
B	PLANT PARKING	315,000 FT2	2008	☒ paved ☐ unpaved	☒ asphalt ☐ gravel ☐ concrete ☐ dirt ☐ chip & seal ☐ other_____
C	ADMINISTRATIVE PARKING	65,000 FT2	2008	☒ paved ☐ unpaved	☒ asphalt ☐ gravel ☐ concrete ☐ dirt ☐ chip & seal ☐ other_____
D				☐ paved ☐ unpaved	☐ asphalt ☐ gravel ☐ concrete ☐ dirt ☐ chip & seal ☐ other_____
E				☐ paved ☐ unpaved	☐ asphalt ☐ gravel ☐ concrete ☐ dirt ☐ chip & seal ☐ other_____
F				☐ paved ☐ unpaved	☐ asphalt ☐ gravel ☐ concrete ☐ dirt ☐ chip & seal ☐ other_____

4. Complete the table below for each paved road segment or parking area.

ID	Silt Loading (g/m^2)	Vehicle Type	Avg. Weight (tons)	Avg. Speed (mph)	Vehicle Miles Traveled (vmt/yr)	Control Method(s)	Application or Usage Frequency
A	5	TANKER AND HAUL TRUCKS (HEAVY-DUTY DIESEL)	29	10	539,105	☒ sweeping ☐ flushing ☒ watering ☒ good housekeeping ☒ other: COVERED TRUCK BEDS	AS NEEDED
B	5	EMPLOYEE VEHICLES (LIGHT-DUTY GASOLINE)	2	25	177,390	☒ sweeping ☐ flushing ☒ watering ☒ good housekeeping ☐ other: _____	AS NEEDED
C	5	EMPLOYEE VEHICLES (LIGHT-DUTY GASOLINE)	2	25	19,710	☒ sweeping ☐ flushing ☒ watering ☒ good housekeeping ☐ other: _____	AS NEEDED
D						☐ sweeping ☐ flushing ☐ watering ☐ good housekeeping ☐ other: _____	
E						☐ sweeping ☐ flushing ☐ watering ☐ good housekeeping ☐ other: _____	
F						☐ sweeping ☐ flushing ☐ watering ☐ good housekeeping - ☐ other: _____	

5. Identify all the places that the permittee's roadways and parking lots meet a public road. Use the Road Segment or Parking Area ID from the table above to identify the permittee's roadway and parking lots that are involved.

ROAD SEGMENT ID A BEGINS AS SIXTEEN SCHOOL ROAD AT THE SITE BOUNDARY AND CONTINUES THROUGHOUT THE FACILITY, ROAD SEGMENT ID A ALSO CONNECTS TO THE PLANT PARKING LOT (AREA ID B) AND MULTIPLE SHIPPING AND/OR RECEIVING LOCATIONS. THE ADMINISTRATIVE PARKING LOT (AREA ID C) WILL BE ACCESSED VIA SIXTEEN SCHOOL ROAD AT THE SITE BOUNDARY.

Describe how any foreign materials deposited on public paved roadways will be removed.

☐ Flushing with water ☐ Wet sweeping ☐ Sweeping with vacuum truck ☒ Other. Describe DUST CONTROL PROGRAM TO BE DEVELOPED

6. Complete the table below for each unpaved road segment or parking area.

ID	Silt Content (%)	Surface Material Moisture Content (%)	Vehicle Type	Avg. Weight (tons)	Avg. Speed (mph)	Vehicle Miles Traveled (vmt/yr)	Control Method(s)	Application or Usage Frequency
A							☐ oiling ☐ watering ☐ surface improvement ☐ chemical stabilization	
B							☐ oiling ☐ watering ☐ surface improvement ☐ chemical stabilization	
C							☐ oiling ☐ watering ☐ surface improvement ☐ chemical stabilization	
D							☐ oiling ☐ watering ☐ surface improvement ☐ chemical stabilization	
E							☐ oiling ☐ watering ☐ surface improvement ☐ chemical stabilization	
F							☐ oiling ☐ watering ☐ surface improvement ☐ chemical stabilization	

7. The use of used oil for dust suppression is prohibited. Used oil is any oil that has been refined from crude oil, or any synthetic oil, that has been used, and, as a result of that use, is contaminated by physical or chemical impurities. See OAC rule 3745-279-01. Used oil does not include oils that have been refined from crude oil that have not been used or any synthetic oil that has not been used.
If oiling is being used for dust suppression, is only virgin oil being used?
☐ Yes ☐ No ☒ Not using oil