



Louisville Metro Air Pollution Control District
 701 West Ormsby Avenue, Suite 303
 Louisville, Kentucky 40203-3137



Federally Enforceable District Origin Operating Permit (FEDOOP)

Permit No.: O-0290-21-F

Plant ID: 0290

Effective Date: MM/DD/YYYY

Expiration Date: MM/DD/YYYY

Permission is hereby given by the Louisville Metro Air Pollution Control District to operate the process(es) and equipment described herein which are located at:

Source: Louisville Paving Company, Inc. – **Owner:** Louisville Paving Company, Inc.
 Avoca Asphalt Plant
 13400 Old Henry Road
 Louisville, KY 40223
 15415 Shelbyville Road
 Louisville, KY 40245

The applicable procedures of District Regulation 2.17 regarding review by the U.S. EPA and public participation have been followed in the issuance of this permit. Based on review of the application on file with the District, permission is given to operate under the conditions stipulated herein. If a renewal permit is not issued prior to the expiration date, the owner or operator may continue to operate in accordance with the terms and conditions of this permit beyond the expiration date, provided that a complete renewal application is submitted to the District no earlier than twelve months and no later than ninety days prior to the expiration date.

Emission limitations to qualify for non-major status:

Pollutant:	PM ₁₀	CO	NO _x	VOC
Tons/year:	<50	<50	<50	<50

Application No.: See **Application and Related Documents** table.

Public Notice Date: 10/22/2021

Permit writer: Aaron DeWitt

Air Pollution Control Officer
 {date1}

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Permit Revisions and Changes

Permit No.	Public Notice Date	Issue Date	Change Type	Description/Scope
0195-01-F	07/01/2001	10/16/2001	Initial	Initial Permit Issuance
0195-01-F (R1)	N/A	10/16/2001	Admin.	Name change with no change in ownership
O-0290-16-F	06/07/2016; 07/22/2016	08/24/2016	Renewal	Permit renewal; Incorporation of name change, construction permits and Dust Control Plan parameters
			Admin	Corrected PM and PM10 emission factors for aggregate storage pile. Added footnote #16 to Emission Unit Plantwide to explain that organics TACs did not need limits for STAR compliance. Second public notice is to correct TAC limits for the HMA Emission Unit U4
O-0290-21-F	10/22/2021		Renewal	Permit renewal, updated format, removed greenhouse gas limits from general condition 10

Construction Permit Summary

Permit No.	Issue Date	Description
661-07-C	12/31/2008	RAP (Recycled Asphalt Product) operation including: one aggregate stockpile, two processed stockpiles, two receiving hoppers, one crusher with hopper, two aggregate sorting screens, and six (6) conveyors. Equipped with water suppression system to control dust emissions
56-10-C	07/09/2010	HMA (Hot Mix Asphalt) operation including: one aggregate stockpile, one counterflow drum mixer with burner, one transfer hot oil heater with tank, a cyclone precipitator with miner filler silo and baghouse, seven receiving hoppers, five conveyors, four drag-slat conveyors, one aggregate sorting screen, four product storage silos, one loadout station

Application and Related Documents

Document Number	Date	Description
11277	10/13/2016	Regulation 5.21 BAC changes application MIBK
21042	07/01/2017	STAR analysis
3710	10/12/2017	Regulation 5.21 BAC changes application Toluene Diisocyanate
15870	05/30/2018	Regulation 5.21 BAC changes application MIBK
21446	02/26/2019	Avoca PM 50-ton limit question
21449	02/26/2019	District response to PM limit question. 50-ton limit from construction permit 56-10-C
22542	05/06/2019	Inspection finding. Pressure drop reading on a daily basis
123850	11/01/2019	Portable asphalt plant call request
180196	12/11/2020	District inspection found unpermitted fuel dispensing pumps, permit action required. Avoca response to inspection findings
180197	12/11/2020	Inspection found new fuel pumps. Application requested
192359	02/19/2021	Email renewal application due 5/30/2021
205493	03/30/2021	Email renewal application due 5/30/2021
205601	03/30/2021	Email RO change
205750	03/31/2021	Email applications required for renewal
215267	04/27/2021	Email Avoca application emission calculation question
222391	05/24/2021	FEDOOP Operating Renewal Application
228601	06/15/2021	HMA Baghouse (C-2) exhaust stack test results
234681	07/06/2021	Email Wet Suppression question
255450	09/03/2021	Company comments on pre-draft permit
264930	10/06/2021	District response to company comments on pre-draft permit

Abbreviations and Acronyms

AP-42	- AP-42, <i>Compilation of Air Pollutant Emission Factors, published by U.S.EPA</i>
APCD	- Louisville Metro Air Pollution Control District
BAC	- Benchmark Ambient Concentration
BACT	- Best Available Control Technology
Btu	- British thermal unit
CEMS	- Continuous Emission Monitoring System
CFR	- Code of Federal Regulations
CO	- Carbon monoxide
District	- Louisville Metro Air Pollution Control District
EA	- Environmental Acceptability
gal	- U.S. fluid gallons
GHG	- Greenhouse Gas
HAP	- Hazardous Air Pollutant
Hg	- Mercury
hr	- Hour
in.	- Inches
lbs	- Pounds
l	- Liter
LMAPCD	- Louisville Metro Air Pollution Control District
mmHg	- Millimeters of mercury column height
MM	- Million
(M)SDS	- (Material) Safety Data Sheet
NAICS	- North American Industry Classification System
NO _x	- Nitrogen oxides
PM	- Particulate Matter
PM ₁₀	- Particulate Matter less than 10 microns
PM _{2.5}	- Particulate Matter less than 2.5 microns
ppm	- parts per million
PSD	- Prevention of Significant Deterioration
psia	- Pounds per square inch absolute
QA	- Quality Assurance
RACT	- Reasonably Available Control Technology
SIC	- Standard Industrial Classification
SIP	- State Implementation Plan
SO ₂	- Sulfur dioxide
STAR	- Strategic Toxic Air Reduction
TAC	- Toxic Air Contaminant
UTM	- Universal Transverse Mercator
VOC	- Volatile Organic Compound
w.c.	- Water column
year	- Any period of twelve consecutive months, unless "calendar year" is specified
yr	- Year, or any 12 consecutive-month period, as determined by context

Preamble

This permit covers only the provisions of Kentucky Revised Statutes Chapter 77 Air Pollution Control, the regulations of the Louisville Metro Air Pollution Control District (District) and, where appropriate, certain federal regulations. The issuance of this permit does not exempt any owner or operator to whom it has been issued from prosecution on account of the emission or issuance of any air contaminant caused or permitted by such owner or operator in violation of any of the provisions of KRS 77 or District regulations. Any permit shall be considered invalid if timely payment of annual fees is not made. The permit contains general permit conditions and specific permit conditions. General conditions are applicable unless a more stringent requirement is specified elsewhere in the permit.

General Conditions

- G1. The owner or operator shall comply with all General Conditions herein and all terms and conditions in the referenced process/process equipment list.
- G2. All terms and conditions in this FEDOOP are enforceable by EPA, except those terms and conditions specified as District-only enforceable, and those which are not required pursuant to the Clean Air Act Amendments of 1990 (CAAA) or any of the Act's applicable requirements.
- G3. All application forms, reports, compliance certifications, and other relevant information submitted to the District shall be certified by a responsible official. If a change in the responsible official (RO) occurs during the term of this permit, or if an RO is added, the owner or operator shall provide written notification (Form AP-100A) to the District within 30 calendar days of such change or addition.
- G4. The owner or operator shall submit an annual compliance certification, signed by the responsible official, to the District, on or before April 15 of the year following the year for which the certification applies. This certification shall include completion of District Form 9440-O.
- G5. Periodic testing, instrumental monitoring, or non-instrumental monitoring, which may include record keeping, shall be performed to the extent necessary to yield reliable data for purposes of demonstrating continuing compliance with the terms and conditions of this permit.
- G6. The owner or operator shall retain all records required by the District or any applicable requirement, including all required monitoring data and supporting information, for a period of five years from the date of the monitoring, sampling, measurement, report, or application, unless a longer time period for record retention is required by the District or an applicable requirement. Records shall be retrievable within a reasonable time and made available to the District, Kentucky Division for Air Quality, or the EPA upon request.

- G7. The owner or operator shall provide written notification to the District, and receive approval, prior to making any changes to existing equipment or processes that would result in emissions of any regulated pollutant in excess of the allowable emissions specified in this permit.
- G8. This permit may be reissued, revised, reopened, or revoked pursuant to District Regulation 2.17. Repeated violations of permit conditions are sufficient cause for revocation of this permit. The filing of a request by the owner or operator for any reissuance, revision, revocation, termination, or a notification of planned changes in equipment or processes, or anticipated noncompliance shall not alter any permit requirement.
- G9. Except as otherwise specified or limited herein, the owner or operator shall not allow or cause the emissions to equal or exceed either 10 tons per year, or such lesser quantity as the EPA has established by rule, of any one Hazardous Air Pollutant (HAP) or 25 tons per year of all HAPs combined. Fugitive HAP emissions shall be included in this limit. HAPs are listed in section 112(b) of the CAAA and as amended in 40 CFR 63, Subpart C.
- G10. Except as otherwise specified or limited herein, the owner or operator shall not allow or cause the emissions to equal or exceed 100 tons per year of any regulated pollutant, including particulate matter, PM₁₀, PM_{2.5}, sulfur dioxide, carbon monoxide, nitrogen oxides, lead, hydrogen sulfide, gaseous fluorides, total fluorides, or Volatile Organic Compounds (VOC); any pollutant subject to any standard in District Regulation 7.02; or any substance listed in sections 112(r), 602(a) and 602(b) of the CAAA. Fugitive emissions shall be included in these limits for source categories listed in District Regulation 2.16.
- G11. Unless specified elsewhere in this permit, the owner or operator shall complete required monthly record keeping within 30 days following the end of each calendar month.
- G12. Unless specified elsewhere in this permit, the owner or operator shall submit semi-annual reports demonstrating compliance with the emission limitations specified. The report shall contain monthly and consecutive 12-month totals for each pollutant that has a federally enforceable limitation on the potential to emit. All reports shall include the company name, plant ID number, and the beginning and ending date of the reporting period. The compliance reports shall clearly identify any deviation from a permit requirement or a declaration that there were no such deviations. All compliance reports shall include the following per Regulation 2.17, section 3.5.
 - A certification statement: "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in this document are true, accurate, and complete", and
 - The signature and title of a responsible official of the company.

The semi-annual compliance reports are due on or before the following dates of each calendar year:

<u>Reporting Period</u>	<u>Report Due Date</u>
January 1 - June 30	August 29
July 1 - December 31	March 1 of the following year

- G13. The owner or operator shall comply with all applicable requirements of the following federally enforceable District Regulations:

Regulation	Title
1.01	General Application of Regulations and Standards
1.02	Definitions
1.03	Abbreviations and Acronyms
1.04	Performance Tests
1.05	Compliance With Emissions Standards and Maintenance Requirements
1.06	Source Self-Monitoring, Emission Inventory Development and Reporting
1.07	Excess Emissions During Startups, Shutdowns, and Upset Conditions
1.08	Administrative Procedures
1.09	Prohibition of Air Pollution
1.10	Circumvention
1.11	Control of Open Burning
1.14	Control of Fugitive Particulate Emissions
1.18	Rule Effectiveness
1.19	Administrative Hearings
2.01	General Application (Permit Requirements)
2.02	Air Pollution Regulation Requirements and Exemptions
2.03	Authorization to Construct or Operate; Demolition/Renovation Notices and Permit Requirements
2.06	Permit Requirements – Other Sources
2.09	Causes for Permit Modification, Revocation, or Suspension
2.10	Stack Height Considerations
2.11	Air Quality Model Usage
2.17	Federally Enforceable District Origin Operating Permits
3.01	Ambient Air Quality Standards
4.01	General Provisions for Emergency Episodes
4.02	Episode Criteria
4.03	General Abatement Requirements
4.04	Particulate and Sulfur Dioxide Reduction Requirements
4.05	Hydrocarbon and Nitrogen Oxides Reduction Requirements
4.06	Carbon Monoxide Reduction Requirements
4.07	Episode Reporting Requirements
6.01	General Provisions (Existing Affected Facilities)
6.02	Emission Monitoring for Existing Sources
7.01	General Provisions (New Affected Facilities)

G14. The owner or operator shall comply with all applicable requirements of the following District-only enforceable regulations:

Regulation	Title
1.12	Control of Nuisances
1.13	Control of Objectionable Odors
2.08	Emission Fee, Permit Fees and Permit Renewal Procedures
5.00	Definitions
5.01	General Provisions
5.02	Adoption and Incorporation by Reference of National Emission Standards for Hazardous Air Pollutants
5.14	Hazardous Air Pollutants and Source Categories
5.15	Chemical Accident Prevention Provisions
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant
5.21	Environmental Acceptability for Toxic Air Contaminants
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant
5.23	Categories of Toxic Air Contaminants
7.02	Adoption and Incorporation by Reference of Federal New Source Performance Standards

G15. The owner or operator shall submit emission inventory reports, as required by Regulation 1.06, if so notified by the District.

G16. The owner or operator shall submit timely reports of abnormal conditions or operational changes that may cause excess emissions, as required by Regulation 1.07.

G17. Applications, reports, test data, monitoring data, compliance certifications, and any other document required by this permit shall be submitted to:

***Air Pollution Control District
701 W. Ormsby Avenue, Suite 303
Louisville, Kentucky 40203-3137***

Plantwide Requirements

Facility Description

Louisville Paving Company, Inc. – Avoca Asphalt Plant produces hot mix asphalt utilizing aggregate, and reclaimed asphalt, asphalt tanks, aggregate processing equipment, and hot mix asphalt (HMA) production equipment.

Applicable Regulations

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
1.14	Control of Fugitive Particulate Emissions	2.4
2.17	Federally Enforceable District Origin Operating Permits	5.1, 5.2

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
STAR regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23		

Plantwide Specific Conditions

S1. Standards

[Regulation 2.17, section 5.1]

a. CO

- i. The owner or operator shall not allow the plantwide emissions of the pollutant CO to equal or exceed fifty (50) tons during any twelve (12) consecutive month period.¹ [Regulation 2.17, section 5.1][Permit 56-10-C]

b. NO_x

- i. The owner or operator shall not allow the plantwide emissions of the pollutant NO_x to equal or exceed fifty (50) tons during any twelve (12) consecutive month period.¹ [Regulation 2.17, section 5.1] [Permit 56-10-C]

c. PM/PM₁₀

- i. The owner or operator shall not allow the plantwide emissions of the pollutant PM₁₀ to equal or exceed fifty (50) tons during any consecutive twelve (12) month period.¹ [Regulation 2.17, section 5.1] [Permit 56-10-C]
- ii. The owner or operator shall not allow the plantwide emissions of the pollutant PM to equal or exceed fifty (50) tons during any consecutive twelve (12) month period. [Permit 56-10-C]
- iii. For affected facilities subject to Regulation 1.14, no person shall cause or permit the discharge of fugitive emissions in excess of 20% opacity. [Regulation 1.14, section 2.3]
- iv. For affected facilities subject to Regulation 1.14, no person shall cause or permit the discharge of visible fugitive emissions beyond the lot line of the property on which the emissions originate. [Regulation 1.14, section 2.4]
- v. The owner or operator shall operate and maintain the water suppression system at all locations in the facility as necessary to comply with the PM/PM₁₀ standards specified in this permit.² [Regulation 2.17, section 5.1]

¹ The emissions of the criteria pollutants CO, NO_x, VOC and PM₁₀ should not exceed the 50 tn/yr limit when the source does not exceed the fuel limits required to produce the synthetic limit of 500,000 tn/yr of hot mix asphalt, while using the cyclone collector and baghouse, whether using #2 fuel oil, #4 fuel oil or natural gas in the drum style hot mix asphalt plant and #2 fuel oil in the asphalt tank heater.

² In 2010 construction permit 56-10-C, the criteria pollutant PM/PM₁₀ must be controlled to be less than the 50 tn/yr emission limit through production limitations, water suppression, and PM emission control systems.

- (1) For each operating day, the owner or operator shall daily operate and maintain a water suppression system at all times the process equipment is in operation. If it is determined that weather conditions have contributed to the control of fugitive dust emissions, watering operations may be suspended until such time as it appears necessary for control of fugitive dust emissions.
- vi. The owner or operator shall insure that the process cyclone and baghouse operate as designed, and at all times that the counterflow drum mix asphalt plant is in operation to comply with the PM₁₀ standards specified in this permit.³ [Regulation 2.17, section 5.1]
- (1) The owner or operator shall daily operate and maintain the process cyclone and baghouse at all times counterflow drum mixer (E-18) is in operation, including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice to meet the standards.

d. TAC

- i. The owner or operator shall not allow emissions of any TAC to exceed environmentally acceptable (EA) levels, whether specifically established by modeling or determined by the District to be *de minimis*.³ [Regulation 5.00 and 5.21]
- ii. The owner or operator shall perform a new Environmental Acceptability (EA) Demonstration or *de minimis* determination when any of the following events occurs and submit the EA Demonstration on the schedule noted in the reporting section:
 - (1) An application to construct or modify a process or process equipment is submitted to the District pursuant to Regulation 2.03, 2.04 or 2.05. [Regulation 5.21, section 4.22.1]
 - (2) A modification of any physical modeling parameters such as fence lines or building heights that are not otherwise subject to the requirements in this permit that affects the demonstration of compliance. [Regulation 5.21, section 4.22.2] or
 - (3) A change occurs in the process or process equipment, including raw material or fuel type substitution. [Regulation 5.21, section 4.22.3]

³ In 2010 construction permit 56-10-C, Screen3 modeling confirmed all TACS are below the Environmental Acceptability Goals within 100 ft of stack, when the plant emissions are controlled and #2 fuel oil is used, when the yearly production was based on the synthetic limit of 500,000 tn/yr of hot mix asphalt. Utilizing natural gas fuel will further decrease the emissions, but several AP-42 emission factors are the same for controlled emissions of #2 fuel oil and natural gas.

- iii. When a new TAC is introduced or for any existing TAC which does not have an established BAC or *de minimis* value, the owner or operator shall calculate and report these values as part of any aforementioned EA Demonstration. The form, located in Attachment C, may be used for determining BAC and *de minimis* values.
[Regulation 5.20, sections 3 and 4]

e. Unit Operation

- i. The owner or operator shall not allow the total production of hot mix asphalt to exceed the synthetic limit of five hundred thousand tons (500,000 tons) during any twelve (12) month consecutive period.⁴
[Regulation 2.17, section 5.1] [Permit 56-10-C]
- ii. The owner or operator shall not combust more than any combination of the following quantities of fuel, that would allow the total production of hot mix asphalt to exceed the synthetic limit of five hundred thousand tons (500,000 tons) during any twelve (12) month consecutive period.⁵
[Regulation 2.17, section 5.1] [Permit 56-10-C]
 - (1) The owner or operator shall not combust more than a total of four hundred sixty thousand gallons (460,000 gal.) during any twelve (12) consecutive month period of #2 and #4 fuel oil in the drum mix asphalt plant heater/dryer.⁶ [Regulation 2.17, section 5.1]
 - (2) The owner or operator shall not combust more than sixty-two million cubic feet (62 mmcf) during any twelve (12) consecutive month period of natural gas in the drum mix asphalt plant heater/dryer.⁶ [Regulation 2.17, section 5.1]
 - (3) The owner or operator shall not combust more than one hundred twenty seven thousand nine hundred gallons (127,900 gal.) during any twelve (12) month consecutive period of #2 fuel oil in the asphalt tank heater. [Regulation 2.17, section 5.1]
[Permit 56-10-C]

f. VOC

⁴ In 2010 construction permit 56-10-C, source requested a synthetic minor limit of 500,000 tn/yr of hot mix asphalt produced in letter received by District of August 27, 2008. The synthetic limit reduces the controlled emissions of each criteria pollutant to less than fifty (50) tons during any twelve (12) consecutive month period standards.

⁵ The emissions of the criteria pollutants CO, NO_x, VOC and PM₁₀ should not exceed the 50 tn/yr limit when the source does not exceed the fuel limits required to produce the synthetic limit of 500,000 tn/yr of hot mix asphalt, while using the cyclone collector and baghouse, whether using #2 fuel oil, #4 fuel oil or natural gas in the drum style hot mix asphalt plant and #2 fuel oil in the asphalt tank heater.

⁶ The quantities of fuel are the fuel quantities necessary to produce 250,000 tons of HMA each, for a combined total of 500,000 ton per twelve (12) consecutive month period total production. Source did not have an estimate of the amounts of each type of fuel that would be consumed each year at the time Permit 56-10-C was applied for.

- i. The owner or operator shall not allow the plantwide emissions of the pollutant VOC to equal or exceed fifty (50) tons during any twelve (12) consecutive month period.⁴ [Regulation 2.17, section 5.1] [Permit 56-10-C]

S2. Monitoring and Record Keeping

[Regulation 2.17, section 5.2]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. CO

- i. The owner or operator shall monthly maintain records, including calculations, which show the plantwide total CO emissions during each calendar month and consecutive 12-month period.
- ii. See Appendix A for emission factors.

b. NO_x

- i. The owner or operator shall monthly maintain records, including calculations, which show the plantwide total NO_x emissions during each calendar month and consecutive 12-month period.
- ii. See Appendix A for emission factors.

c. PM/PM₁₀

- i. The owner or operator shall monthly maintain records, including calculations, which show the plantwide total PM/PM₁₀ emissions during each calendar month and consecutive 12-month period.
- ii. For each operating day the owner or operator shall record whether the water suppression system was not in operation when associated processing equipment was active. Records shall be made that day and include:
 - (1) Date and duration of bypass;
 - (2) A calculated estimation of the uncontrolled PM/PM₁₀ emissions during the bypass event using the uncontrolled emission factors in the tables above.
- iii. For each operating week the owner or operator shall monitor and record the results of the weekly visual inspection of the water suppression system. Records shall be made the day of the inspection and include:
 - (1) Date of inspection;
 - (2) Name of the person that performed the inspection;

- (3) Description of any equipment defects observed including damages, leakage, corrosion, or other defects that would cause a reduction on the control efficiency;
 - (4) Description of any repairs made or replacement of system components.
- iv. For each operating day the owner or operator shall record whether the process cyclone collector and baghouse were bypassed or not in operation when the counterflow drum mix asphalt plant was in operation. Records shall be made that day and include:
 - (1) Date and duration of bypass;
 - (2) A calculated estimation of the uncontrolled PM/PM₁₀ emissions during the bypass event using the uncontrolled emission factors in the tables above.
- v. The owner or operator shall monthly keep records of the visual inspection of the structural and mechanical integrity of the process cyclone and baghouse. Records shall be made the day of the inspection and include:
 - (1) Date of inspection;
 - (2) Name of the person that performed the inspection;
 - (3) Description of any equipment defects observed including damages, leakage, corrosion, or other defects that would cause a reduction on the control efficiency;
 - (4) Description of any repairs made or replacement of system components; and
 - (5) Description of all corrective actions taken to abate the situation.
- vi. See Attachment A for emission factors.

d. TAC

- i. The owner or operator shall maintain records sufficient to demonstrate environmental acceptability, including, but not limited to (M)SDS, analysis of emissions, and/or modeling results.⁷
- ii. See Appendix A for emission factors.

e. Unit Operation

⁷ The TAC emissions from the combustion of natural gas are considered to be “*de minimis* emissions” by the District. This includes all of the emissions from a process or process equipment for which the only emissions are the products of combustion of natural gas, such as from a natural gas-fired boiler or turbine, but does not include the other emissions from a process or process equipment that are not the products of the combustion of natural gas.

- i. The owner or operator shall monthly maintain records of the totals of the amounts of HMA produced during each month and consecutive twelve (12) month period.
- ii. The owner or operator shall monthly maintain records of the totals of the amounts and types of fuel combusted by each affected facility, during each month and consecutive twelve (12) month period.
 - (1) The owner or operator shall maintain a record of the fuel oil certifications.
 - (2) The owner or operator shall keep receipts of each shipment of fuel oil received. The receipts shall include the date of delivery, the quantity of fuel oil received, the grade of fuel oil received and an analysis of the sulfur content of the fuel oil.
 - (3) The owner or operator shall maintain a record of the amount of fuel oil used each month, as follows: fuel oil usage expressed in gallons and identified by number (i.e., #2, #4, etc.).
 - (4) The owner or operator shall maintain a record of the amount of natural gas used each month.

f. VOC

- i. The owner or operator shall monthly maintain records, including calculations, which show the plantwide VOC emissions during each calendar month and consecutive 12-month period.
- ii. See Appendix A for emission factors.

S3. Reporting

[Regulation 2.17, section 5.2]

The owner or operator shall report the following information, as required by General Condition G12:

a. CO

- i. The owner or operator shall report the following plantwide CO emissions records:
 - (1) The beginning and end dates of the reporting period.
 - (2) The owner or operator shall report the monthly and twelve (12) consecutive month period totals of the CO plantwide emissions emitted each month during the reporting period.

b. NO_x

- i. The owner or operator shall report the following plantwide NO_x emissions records:
 - (1) The beginning and end dates of the reporting period.
 - (2) The owner or operator shall report the monthly and twelve (12) consecutive month period totals of the NO_x plantwide emissions emitted each month during the reporting period.

c. PM/PM₁₀

- i. The owner or operator shall report the following plantwide PM/PM₁₀ emissions records:
 - (1) The beginning and end date of the reporting period.
 - (2) The monthly and twelve (12) consecutive month period totals of PM/PM₁₀ plantwide emissions emitted each month during the reporting period.
- ii. The owner or operator shall report the following water suppression system records:
 - (1) The beginning and end dates of the reporting period;
 - (2) Any deviation from the requirement to conduct or maintain records of the weekly visual inspection of the structural and mechanical integrity of the water dust suppression system.
 - (3) Any failure to operate or maintain the water suppression system which would have resulted in reduced control performance;
 - (4) The calculated lb/operational error event PM/PM₁₀ emissions for each excursion; or
 - (5) A negative declaration if no excursion occurred.
- iii. The owner or operator shall report the following process cyclone and baghouse records:
 - (1) The beginning and end dates of the reporting period;
 - (2) Any deviation from the requirement to conduct or maintain records of the weekly visual inspection of the structural and mechanical integrity of the process cyclone and baghouse.
 - (3) All periods in the reporting period when the process cyclone and baghouse were offline and the counterflow drum mixer was in operation.
 - (4) A calculated quantity of PM/PM₁₀ emitted in tons for each by-pass event.
 - (5) A negative declaration if no by-passes occurred.

d. TAC

- i. The owner or operator shall submit new EA Demonstrations involving applications to construct or modify with the construction permit application. [Regulation 5.21, section 4.22.1]
- ii. The owner or operator shall submit new EA Demonstrations involving modification of any physical modeling parameter, such as fence lines or building heights, that are not otherwise subject to the permit requirements for that facility that affects the demonstration of compliance with the operating permit renewal application. [Regulation 5.21, section 4.22.2]
- iii. The owner or operator shall submit new EA Demonstrations involving a change in a process or process equipment, including raw material or fuel type substitution before making the change. [Regulation 5.21, section 4.22.3]
 - (1) Prior approval by the District is not required if the change does not result in emissions that exceed an EA goal, does not cause emissions of a TAC to no longer be *de minimis*, and a permit modification is not required. In this case, the new EA Demonstration shall be submitted within 6 months of the change.

e. Unit Operation

- i. The owner or operator shall report the following plantwide Unit Operation records:
 - (1) The beginning and end dates of the reporting period;
 - (2) Any failure to monitor or record fuel oil certifications or fuel oil shipment receipts;
 - (3) The monthly and twelve (12) consecutive month period totals of hot mix asphalt produced during each month of the reporting period.
 - (4) The monthly and twelve (12) consecutive month total of natural gas usage, per process, for each month of the reporting period.
 - (5) The monthly and twelve (12) consecutive month total of No. 2 and No 4 fuel oil usage, per process, for each month of the reporting period.

f. VOC

- i. The owner or operator shall report the following plantwide VOC emissions records:
 - (1) The beginning and end dates of the reporting period.

- (2) The owner or operator shall report the monthly and twelve (12) consecutive month period totals of the VOC plantwide emissions emitted each month during the reporting period.

Comments for Plantwide Requirements

1. Louisville Paving Company, Inc. – Avoca Asphalt Plant submitted a TAC Environmental Acceptability Demonstration to the District on 9/30/2008. Compliance with the STAR EA Goals was demonstrated in the source's revised EA Demonstrations submitted in April 2009. The District reviewed the EA Demonstrations submitted by the source. The following table demonstrates that the plantwide risk values presented in the source's EA Demonstration comply with the STAR EA goals required in Regulation 5.21.

Plantwide Sum	Plantwide	
Industrial Total RC	25.32	< 75
Non-Ind. Total Rc	4.66	<7.5
Industrial Total RNC (max)	2.52	< 3.0
Non-Ind. Total RNC (max)	0.46	< 1.0

TAC^{8,9}	CAS #	Industrial		Non-Industrial		EA Demo
		Rc	RNC	Rc	RNC	
Arsenic	7440-38-2	0.83	0.01	0.15	0.00	Meet
Benzene	71-42-2	0.13	0.00	0.02	0.00	Meet
Cadmium	7440-43-9	1.10	0.03	0.20	0.01	Meet
Chromium VI	7440-47-3	5.42	0.06	1.00	0.01	Meet
Formaldehyde	50-00-0	5.44	0.05	1.00	0.01	Meet
Nickel	7440-02-0	5.43	1.47	1.00	0.27	Meet
Cobalt	7440-48-4	5.43	0.24	1.00	0.04	Meet
Lead	7439-92-1	0.99	0.00	0.18	0.00	Meet
Naphthalene	91-20-3	0.46	0.00	0.08	0.00	Meet
Ethylbenzene	100-41-4	0.09	0.00	0.02	0.00	Meet

⁸ The organic TAC Formaldehyde is controlled via HMA production limit.

⁹ The metallic TAC (Cobalt, Chromium VI and Nickel) are controlled via fabric filter associated with the HMA unit.

Emission Unit U1: Aggregate Stockpiles**Applicable Regulations¹⁰**

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
7.08	Standards of Performance for New Process Operations	3.1.1, 3.1.2

Equipment

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
E-1 (IA)	Virgin aggregate stockpiles, 39,000 ft ³	1991	7.08	C-3	N/A
R-1 (IA)	Virgin RAP stockpiles, 52,000 ft ³	1991		C-3	N/A
R-10 (IA)	Processed RAP stockpile #1, 52,000 ft ³	1991		C-3	N/A
R-14 (IA)	Processed RAP stockpile #2, 52,000 ft ³	1991		C-3	N/A

Control Devices

Control ID	Description	Control Efficiency
C-3	Water suppression system	50%

¹⁰ The District STAR regulations are not applicable to this unit because this unit does not emit any TACs.

U1 Specific Conditions

S1. Standards

[Regulation 2.17, section 5.1]

a. Opacity

- i. The owner or operator of E-1, R-1, R-10, and R-14 shall not allow or cause visible emissions to equal or exceed 20% opacity.
[Regulation 7.08, section 3.1.1]

b. PM/PM₁₀

- i. The owner or operator shall not allow the PM emissions from E-1, R-1, R-10, and R-14 to exceed the following limits based on actual operating hours in a calendar day: [Regulation 7.08, section 3.1.2]

Table 1 PM Emission Limits

Emission Point	Equipment	Capacity	PM Limit (lb/hr)
E-1	Virgin aggregate stockpiles	39,000 ft ³	37.5
R-1	Virgin RAP stockpile	52,000 ft ³	37.5
R-10	Processed RAP stockpile #1	52,000 ft ³	37.5
R-14	Processed RAP stockpile #2	52,000 ft ³	37.5

- ii. For additional PM/PM₁₀ standards see Emission Unit Plantwide.

S2. Monitoring and Record Keeping

[Regulation 2.17, section 5.2]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. Opacity

- i. The owner or operator shall, monthly, conduct a one-minute visible emissions survey, during normal operation, of the emission points. No more than four emission points shall be observed simultaneously. The opacity surveys may be performed on the building exhaust points if the process is inside an enclosure.
- ii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation.

- iii. The owner or operator shall, monthly, maintain records of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include the date of the survey, the name of the person conducting the survey, whether or not visible emissions were observed, and what if any corrective action was performed. If an emission point is not being operated during a given month, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.
- b. PM/PM₁₀**
 - i. There are no monitoring or record keeping requirements related to the lb/hr emission standard for this emission unit to comply with Regulation 7.08.¹¹
 - ii. For additional PM/PM₁₀ monitoring and record keeping requirements see Emission Unit Plantwide.

S3. Reporting

[Regulation 2.17, section 5.2]

The owner or operator shall report the following information, as required by General Condition G12:

- a. Opacity**
 - i. There are no compliance reporting requirements for this equipment.
- b. PM/PM₁₀**
 - i. There are no compliance reporting requirements for this equipment.
 - ii. See Plantwide emission unit.

¹¹ The District has determined that the stockpiles under standard conditions and stated production limits should meet the hourly PM lb/hr limits uncontrolled.

Emission Unit U2: Storage Tanks

Applicable Regulations

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
STAR regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23		

Equipment

Emission Point	Description	Install Date	Applicable Regulations¹²	Control ID	Release ID
T-6 (IA)	Hot oil tank (50 gallons) with 2 MMBtu/hr heater/burner ¹³	2006	STAR	N/A	N/A

Control Devices

There are no control devices associated with this equipment.

Equipment Not Regulated

Emission Point	Description
T-1 (IA)	Asphalt tank #1, 25,000-gallon
T-2 (IA)	Asphalt tank #2, 22,000-gallon
T-3 (IA)	Asphalt tank #3, 22,000-gallon ¹⁴

¹² This source is subject to 40 CFR 60. Subpart I, however, the regulations stipulated do not apply to the equipment because it is not associated with an emission control system.

¹³ This 2 MMBtu heater/burner is not subject to 7.06 because it is not an indirect heat exchanger.

¹⁴ The tanks are not subject 40 CFR 60, Subpart Kb because the vapor pressure is less than the required 1.5 kPa.

Emission Point	Description
T-4 (IA)	No. 4 fuel oil tank, 15,000-gallon ¹⁵
T-5 (IA)	Asphalt additive tank, 7,500-gallon ¹⁵
T-7 (IA)	No. 2 diesel fuel tank, 2,500-gallon ¹⁵

¹⁵ Tanks T-4, T-5, and T-7 (IA) is not subject to Regulation 7.12 because the vapor pressure is less than 1.5 psia.

U2 Specific Conditions

S1. Standards

[Regulation 2.17, section 5.1]

a. SO₂

- i. The owner or operator shall limit the sulfur content of the #2 fuel oil combusted in the asphalt tank heater (T-6) to contain less than 0.5% sulfur by weight. [Regulation 2.17, section 5.1] [Permit 56-10-C]

b. TAC

- i. See Plantwide emission unit.¹⁶

c. Unit Operation

- i. For Transfer Hot Oil heater (T-6) asphalt production limitations and fuel combustion standards and limitations see Plantwide emission unit.

S2. Monitoring and Record Keeping

[Regulation 2.17, section 5.2]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. SO₂

- i. The owner or operator shall monthly maintain records of the shipment certification provided by the supplier upon delivery.

b. TAC

- i. See Plantwide emission unit.

c. Unit Operation

- i. For fuel combustion monitoring and record keeping requirements for the asphalt tank heater (T-6) see Plantwide emission unit.
- ii. The owner or operator of the storage vessel(s) shall maintain records of the material stored and the vapor pressure in each storage vessel and if the contents of the storage vessel(s) are changed a record shall be made of the new contents, the date of the change, and the new vapor pressure in order to demonstrate compliance with VOC standards.

¹⁶ It has been demonstrated that the TAC emissions from the heater/burner (T-6) are *de minimis* uncontrolled.

- iii. The owner or operator shall keep a record that shows if the storage vessel is equipped with a submerged fill pipe. Submerged fill pipe means any fill pipe the discharge of which is entirely submerged when the liquid level is 6 inches above the bottom of the tank; or when applied to a tank which is loaded from the side, shall mean every fill pipe the discharge opening of which is entirely submerged when the liquid level is 2 times the fill pipe diameter above the bottom of the tank.
- iv. See Plantwide emission unit.

S3. Reporting

[Regulation 2.17, section 5.2]

The owner or operator shall report the following information, as required by General Condition G12:

a. SO₂

- i. The owner or operator shall report the following emission unit SO₂ records:
 - (1) The beginning and end date of the reporting period.
 - (2) If an accepted fuel shipment exceeds the sulfur content limit.
 - (3) Any failure to monitor or record fuel shipment certifications.
 - (4) A negative declaration if no standards or monitoring and recording excursions occurred.

b. TAC

- i. See Plantwide emission unit.

c. Unit Operation

- i. For additional Unit Operation reporting requirements for the asphalt tank heater (T-6) see Plantwide emission unit.

Emission Unit U3: RAP Operation**Applicable Regulations¹⁷**

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
7.08	Standards of Performance for New Process Operations	3.11, 3.12

Equipment

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
E-9	RAP bin #1, make Reliable Asphalt, model 3 BRS	2015	7.08	C-3	N/A
E-10	RAP bin #2, make Reliable Asphalt, model 3 BRS	2015		C-3	N/A
R-3	RAP bin #3, make Reliable Asphalt, model 3 BRS	2000		C-3	N/A
R-12	RAP conveyor #1, make Reliable Asphalt, model 3 BRS	2000		C-3	N/A
R-7	RAP conveyor #2, make Reliable Asphalt, model 3 BRS	2000		C-3	N/A
R-5	RAP conveyor #3, make Reliable Asphalt, model 3 BRS	2000		C-3	N/A
R-8	RAP conveyor #4, make Reliable Asphalt, model 3 BRS	2000		C-3	N/A
R-9	RAP conveyor #5, make Reliable Asphalt, model 3 BRS	2000		C-3	N/A
R-13	RAP conveyor #6, make Reliable Asphalt, model 3 BRS	2000		C-3	N/A
R-15	RAP conveyor #7, make Reliable Asphalt, model 3 BRS	2005		C-3	N/A
R-16	RAP conveyor #8, make Reliable Asphalt, model 3 BRS	2005		C-3	N/A
R-17	RAP conveyor #9, make Reliable Asphalt, model 3 BRS	2005		C-3	N/A
E-12	RAP screen #1, make Deister, 5' by 12'	2006		C-3	N/A

¹⁷ The District STAR regulations are not applicable to this unit because this unit does emit any TACs.

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
R-6	RAP screen #2, make Deister, 5' by 12'	2000		C-3	N/A
R-4	RAP crusher ¹⁸ , make Eagle Crusher, model 62D290	2000		C-3	N/A

Control Devices

Control ID	Description	Control Efficiency
C-3	Water suppression system	50%

¹⁸ The District has determined that the Recycled Asphalt Product (RAP) crusher is not subject to 40 CFR Part 60, OOO. "Nonmetallic mineral" means any of the minerals or any mixture of which the majority is any of the minerals listed in section 60.671(a) to (r) of Subject OOO. Generally, both concrete and asphaltic concrete are composed mostly of minerals covered in section 60.671. Given the RAP crusher will reduce the material to one-half inch in size or larger, the District has determined that the RAP crusher does not meet the definition of crushing or grinding as defined in Subpart OOO.

U3 Specific Conditions

S1. Standards

[Regulation 2.17, section 5.1]

a. Opacity

- i. The owner or operator shall not allow or cause visible emissions to equal or exceed twenty percent (20%) opacity from any PM emission point of the RAP process operation including the crusher, hopper, screener, and conveyors. [Regulation 7.08, section 3.1.1]

b. PM/PM₁₀

- i. The owner or operator shall not allow the PM emissions from E-9, E-10, R-3, and R-13 to exceed 46.79 lb/hr from the Recycle Asphalt Product (RAP) process which includes the crusher, hopper, screener and conveyor systems combined based on actual operating hours in a calendar day.¹⁹ [Regulation 7.08, section 3.1.2]
- ii. The owner or operator shall not allow the PM emissions from E-12, R-4, R-5, R-6, R-7, R-8, R-9, R-12, R-15, R-16, and R-17 to exceed 43.12 lb/hr from the Recycle Asphalt Product (RAP) process which includes the crusher, hopper, screener and conveyor systems combined based on actual operating hours in a calendar day.¹⁹ [Regulation 7.08, section 3.1.2]
- iii. See Plantwide emission unit.

S2. Monitoring and Record Keeping

[Regulation 2.17, section 5.2]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. Opacity

- i. The owner or operator shall, monthly, conduct a one-minute visible emissions survey, during normal operation, of the emission points. No more than four emission points shall be observed simultaneously. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.
- ii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial

¹⁹ A compliance demonstration for PM has been performed for this equipment and the standard should be met uncontrolled.

observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation.

- iii. The owner or operator shall monthly maintain records that show the results of all visible emissions surveys and Method 9 tests performed. The records shall include the date of the survey, the name of the person conducting the survey, whether or not visible emissions were observed, and what is any corrective action was taken to minimize visible emissions. If the RAP process operation is not being operated during a given day, then no visible emission survey is required to be performed and a negative declaration shall be entered in the record.

b. PM/PM₁₀

- i. There are no monitoring or record keeping requirements for this emission unit.
- ii. See Plantwide emission unit.

S3. Reporting

[Regulation 2.17, section 5.2]

The owner or operator shall report the following information, as required by General Condition G12:

a. Opacity

- i. The owner or operator shall report the following opacity records:
 - (1) The beginning and end date of the reporting period.
 - (2) The date, time and results of each visible emissions survey conducted that resulted in visible emissions being observed. If not visible emissions were observed during the reporting period, the owner or operator shall submit a negative declaration.
 - (3) The date, time and results of each Method 9 conducted. If there were no Method 9 tests performed during the reporting period, the owner or operator shall submit a negative declaration.
 - (4) A description of any corrective action taken for each exceedance of the opacity standard.
 - (5) A negative declaration if no exceedances occurred.

b. PM/PM₁₀

- i. See Plantwide emission unit.

Emission Unit U4: HMA Operation

Applicable Regulations

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
7.08	Standards of Performance for New Process Operations	3.11, 3.12
7.09	Standard of Performance for New Process Gas Streams	4, 5
7.11	Standard of Performance for New Asphalt Paving Operations	3.1.1
40 CFR 60 Subpart I	Standards of Performance for Hot Mix Asphalt Facilities	60.90 – 60.93

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
7.02	Adoption of Federal New Source Performance Standards	All
STAR regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23		

Equipment

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
E-3(a)	Aggregate bin #1, make Cedar Rapids, model E500	2006	7.08	C-3	N/A
E-3(b)	Aggregate bin #2, make Cedar Rapids, model E500	2006		C-3	N/A
E-3(c)	Aggregate bin #3, make Cedar Rapids, model E500	2006		C-3	N/A
E-3(d)	Aggregate bin #4, make Cedar Rapids, model E500	2006		C-3	N/A
E-3(e)	Aggregate bin #5, make Cedar Rapids, model E500	2006		C-3	N/A
E-3(f)	Aggregate bin #6, make Cedar Rapids, model E500	2006		C-3	N/A
E-3(g)	Aggregate bin #7, make Cedar Rapids, model E500	2006		C-3	N/A
E-3(h)	Aggregate bin #8, make Cedar Rapids, model E500	2020		C-3	N/A
E-4	Aggregate conveyor #1, make Cedar Rapids, model E500	2006	7.08	C-3	N/A
E-7	Aggregate conveyor #2, make Cedar Rapids, model E500	2006		C-3	N/A
E-8	Aggregate conveyor #3, make Cedar Rapids, model E500	2006		C-3	N/A
E-15	Drag slat conveyor, make Cedar Rapids, model Magnum 300	2006		N/A ₂₀	N/A
E-16	Transverse conveyor #1, make Cedar Rapids, model Magnum 300	2006		N/A ₂₀	N/A
E-17	Transverse conveyor #2, make Cedar Rapids, model Magnum 300	2006		N/A ₂₀	N/A
E-18	Transverse conveyor #3, make Cedar Rapids, model Magnum 300	2006		N/A ₂₀	N/A
E-5	Aggregate screen, make Deister, 5' by 12'	2006		C-3	N/A
E-14	Counterflow drum mixer/burner, make Cedar Rapids, model Magnum E500	2010	STAR, 7.02, 7.09, 7.11, 40 CFR 60 Subpart I	C-1, C-2	S-1

²⁰ Enclosed conveyors, therefore, they are not fugitive emission points.

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
E-19 (IA)	HMA silo #1, make Cedar Rapids, model 300 Magnum	2006	7.08	N/A ₂₁	N/A
E-20 (IA)	HMA silo #2, make Cedar Rapids, model 300 Magnum	2006		N/A ₂₁	N/A
E-21 (IA)	HMA silo #3, make CMI, model HMS 320	2006		N/A ₂₁	N/A
E-22 (IA)	HMA silo #4, make CMI, model HMS 320	2006		N/A ₂₁	N/A
E-23 (IA)	Load-out station	2006		N/A	N/A

Control Devices

Control ID	Description	Control Efficiency
C-1	Process cyclone precipitator with mineral filler silo	90%
C-2	Baghouse	98%
C-3	Water suppression system	50%

²¹ HMA silos are sealed and therefore are not fugitive emission points.

U4 Specific Conditions

S1. Standards

[Regulation 2.17, section 5.1]

a. CO

- i. The owner or operator of a facility shall not emit carbon monoxide gasses from the HMA process (E-14) unless they are burned at 1,300 °F for 0.5 seconds or greater in a direct flame afterburner or equivalent device equipped with a pyrometer that is positioned in the working area at the operator's eye level.²² [Regulation 7.09, section 5.1]
- ii. See Plantwide emission unit.

b. NO_x

- i. The owner or operator shall not discharge or cause to be discharged into the atmosphere from E-14 any gases that contain the pollutant NO_x in excess of three hundred parts per million (300 ppm) by volume, expressed as NO₂.²³ [Regulation 7.08, section 4.1]
- ii. See Plantwide emission unit.

c. Opacity

- i. The owner or operator shall not discharge or cause to be discharged in to the atmosphere from E-14 any gasses that exhibit twenty percent (20%) opacity or greater. Where the presence of uncombined water is the only reason for failure to meet the requirements of this section, such failure shall not be a violation. [Regulation 7.11, section 3.1.2]
[40 CFR 60.92(a)(2)]
- ii. For emission points E-3 (a thru h), E-4, E-7, E-8, E-13, E-11, E-15, E-16, E-17, E-18, E-5, and E-19 through E-23: The owner or operator shall not allow visible emissions to equal or exceed 20% opacity.
[Regulation 7.08, section 3.1.1]

²² The CO emissions from the process are created by the combustion of fuel oil or natural gas to generate heat required for removing moisture from aggregate and heating the aggregate for the production of hot mix asphalt. The nominal flame temperature of greater than 2,000 °F exceeds the 1,300 °F temperature requirement of Regulation 7.09, Section 5.1.

²³ Manufacturer's data states worst case NO_x emissions using #2 fuel oil at less than 170 ppm, corrected to 3% O₂ dry, therefore the NO_x standard should be met.

d. PM/PM₁₀

- i. The owner or operator shall not discharge or cause to be discharged into the atmosphere from E-14 any gasses that contain particulate matter in excess of 90 mg/dscm (0.040 gr/dscf) based on one calendar day. [Regulation 7.11, section 3.1.1][40 CFR 60.92(a)(1)]
- ii. The owner or operator shall not allow the PM emissions from E-3(a thru h), E-4, E-7, E-8, E-15 through E-23 to exceed 46.79 lb/hr from the Recycle Asphalt Product (RAP) process which includes the crusher, hopper, screener, and conveyor systems individually and the Hot Mix Asphalt (HMA) production which includes conveyors, silos, and load-out station individually based on actual operating hours in a calendar day.²⁴ [Regulation 7.08, section 3.1.2]
- iii. The owner or operator shall not allow the PM emissions from E-5 to exceed 43.12 lb/hr from the Recycle Asphalt Product (RAP) process which includes the crusher, hopper, screener and conveyor systems individually based on actual operating hours in a calendar day.²⁴ [Regulation 7.08, section 3.1.2]
- iv. For the emission point E-14 control devices: At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. [Regulation 1.05, section 5]
- v. See Plantwide emission unit.

e. SO₂

- i. The owner or operator shall not allow the emissions from the HMA Drum Mixer (E-14) of the pollutant SO₂ to equal or exceed forty (40) tons during any twelve (12) consecutive month period.²⁵ [Regulation 7.09, section 4]
- ii. The owner or operator shall limit the sulfur content of the #4 fuel oil combusted by the hot mix asphalt plant drier/heater to contain less than 0.5% sulfur by weight.²⁶ [Regulation 2.17, section 5.1] [Permit 56-10-C]

f. TAC

²⁴ A compliance demonstration for PM has been performed for this equipment and the standard should be met uncontrolled.

²⁵ The source cannot exceed the forty (40) ton SO₂ limit during any twelve (12) consecutive month period uncontrolled.

²⁶ Source provided laboratory results for #4 fuel oil, received on Sept. 2, 2008, showing sulfur content of 0.4169%.

- i. The owner or operator shall not allow TAC emissions for the counterflow drum mixer with burner (E-14) to exceed the TAC emission standards listed in the following table.²⁷
[Regulation 5.21, section 4.2 and section 4.3]

Table 2 TAC Emission Standards

Emission Point	TAC	CAS #	TAC Limits Determination ²⁸	
			(lb/12-consecutive month period)	Basis of Limits
E-14	Formaldehyde	50-00-0	12,467	Controlled PTE
	Chromium VI	7440-47-3	2.75	Controlled PTE
	Cobalt	7440-48-4	0.013	Controlled PTE
	Nickel	7440-02-0	650.00	Controlled PTE

- ii. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment (C-1 & C-2) in a manner consistent with good air pollution control practice for minimizing emissions.
[Regulation 5.21, section 4.2 and section 4.3] [Regulation 1.05, section 5]
- iii. See Plantwide emission unit.

g. Unit Operation

- i. For Counterflow Drum Mixer (E-14) asphalt production limitations and fuel combustion standards and limitations see Plantwide Emission Unit.

h. VOC

- i. The owner or operator shall not use, sell for use, manufacture, mix or store cutback asphalts or unacceptable emulsion asphalts for asphalt paving operations, except as exempted in Regulation 7.11, section 5.
[Regulation 7.11, section 4]
- ii. See Plantwide emission unit.

²⁷ This unit has TAC emission standards since its EA Demonstration was based on controlled PTE. If the controlled PTE for the TAC is less than de minimis level, use De Minimis as limit. If the controlled PTE for the TAC is greater than de minimis level, modeling results were used to calculate risk value to compare to the EA Goals and controlled PTE is used as limit.

²⁸ The owner or operator may comply with these emission limits through production limits and fabric filter controls.

S2. Monitoring and Record Keeping

[Regulation 2.17, section 5.2]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. CO

- i. No monitoring or record keeping is required to show compliance with the process burn temperatures related to Regulation 7.09.
- ii. See Plantwide emission unit.

b. NO_x

- i. No monitoring or record keeping is required to show compliance with the parts-per-million discharge standard related to Regulation 7.08.
- ii. See Plantwide emission unit.

c. Opacity

- i. For the baghouse (C-2), the owner or operator shall:²⁹
 - (1) The owner or operator shall, monthly, conduct a one-minute visible emissions survey, during normal operation, of the emission points. No more than four emission points shall be observed simultaneously. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.
 - (2) At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight (8) hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation.
 - (3) The owner or operator shall maintain records, monthly, of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include the date of the survey, the name of the person conducting the survey, whether or not visible emissions were observed, and what if any corrective action was performed. If an emission point is not being operated during a given month, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

d. PM/PM₁₀

²⁹ Perform visible emissions surveys as required to be used as an indicator of performance in addition to verifying compliance with the opacity standard.

- i. The owner or operator shall, daily, monitor and record the pressure drop across the baghouse tube sheet (C-2) and note if the differential pressure is out of the range of 2-6” W.C.
- ii. If there is any time that the control device (C-1, C-2) is bypassed or not in operation, or the pressure drop is out of range when the associated HMA production equipment (E-14) is operating, then the owner or operator shall keep a record of the following for each excursion event:
 - (1) Date;
 - (2) Start time and stop time;
 - (3) Identification of the control device and process equipment;
 - (4) PM emissions during the bypass in mg/dscm (gr/dscf);
 - (5) Summary of the cause or reason for each bypass event;
 - (6) Corrective action taken to minimize the extent or duration of the bypass event; and
 - (7) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.
 - (8) If this event is due to an upset condition, you must report as specified in District regulation 1.07, section 4.
 - (9) A negative declaration if no excursions were experienced during the reporting period.
- iii. The owner or operator shall monthly keep records of the visual inspection of the structural and mechanical integrity of the process cyclone and baghouse. Records shall include:
 - (1) Date of the inspection;
 - (2) Name of the person that performed the inspection;
 - (3) Description of any equipment defects observed including damages, leakage, corrosion, or other defects that would cause a reduction on the control efficiency;
 - (4) Description of any repairs made or replacement of system components; and
 - (5) Description of all corrective actions taken to abate the situation.
- iv. The owner or operator shall keep records of the preventative maintenance performed on the baghouse and be made available to the District upon request.
- v. To monitor ongoing compliance with the PM emissions standard, the owner or operator of the baghouse shall comply with the following:

- (1) The condition of the bags shall be checked on a bi-monthly basis and the bags shall be replaced as needed.
 - (2) A bi-monthly log of visual baghouse inspections shall be maintained.
 - (3) A bi-monthly log of bag replacements shall be maintained.
 - (4) A bi-monthly log of baghouse dust removal shall be maintained.
 - (5) A weekly log book of daily pressure drop gauge readings across the baghouse shall be maintained.
 - (6) Each baghouse shall be checked on an annual basis for ruptured bags, using fluorescent dye; the results of these tests shall be noted in the log book.
- vi. See Plantwide emission unit.
- e. SO₂**
- i. The owner or operator shall monthly maintain records of the shipment certification provided by the supplier upon delivery.
 - ii. The owner or operator shall daily maintain records of the amount of product (HMA) produced.
- f. TAC**
- i. The owner or operator shall monthly maintain records, including calculations, which show the emission unit TAC emissions during each calendar month and consecutive 12-month period.
 - ii. If there is any time that the Cyclone Precipitator (C-1) and Baghouse (C-2) are bypassed or not in operation when the HMA operation (E-18) is in production, then the owner or operator shall keep a record of the following for each bypass event:
 - (1) Date;
 - (2) Start time and stop time;
 - (3) Identification of the control device and process equipment;
 - (4) TAC emissions during the bypass, in lb/12 consecutive month period;
 - (5) Summary of the cause or reason for each bypass event;
 - (6) Corrective action taken to minimize the extent or duration of the bypass event; and
 - (7) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

(8) If this event is due to an upset condition, you must report as specified in District regulation 1.07, section 4.

iii. See Plantwide emission unit.

g. Unit Operation

i. For fuel combustion monitoring and record keeping requirements for the Counterflow Drum Mixer (E-14) see Plantwide emission unit.

h. VOC

i. See Plantwide emission unit.

S3. Reporting

[Regulation 2.17, section 5.2]

The owner or operator shall report the following information, as required by General Condition G12:

a. CO

i. There are no CO emissions reporting requirements for this emission unit related to Regulation 7.09.

ii. See Plantwide emission unit.

b. NO_x

i. There are no additional NO_x reporting requirements for this emission unit related to Regulation 7.08.

ii. See Plantwide emission unit.

c. Opacity

i. The owner or operator shall report the following opacity records:

(1) The beginning and end date of the reporting period.

(2) The date, time and results of each visible emissions survey conducted that resulted in visible emissions being observed. If not visible emissions were observed during the reporting period, the owner or operator shall submit a negative declaration.

(3) The date, time and results of each Method 9 conducted. If there were no Method 9 tests performed during the reporting period, the owner or operator shall submit a negative declaration.

- (4) A description of any corrective action taken for each exceedance of the opacity standard.
- (5) A negative declaration if no exceedances occurred.

d. PM/PM₁₀

- i. The owner or operator shall report the following baghouse monitoring records:
 - (1) The beginning and end dates of the reporting period;
 - (2) Any failure to daily monitor or record the pressure drop for the baghouse;
 - (3) Any excursions from the stipulated pressure drop that would indicate an interruption of baghouse performance;
 - (4) A negative declaration if no excursions occurred.
- ii. The owner or operator shall report the following stack emission records:
 - (1) The beginning and end dates of the reporting period;
 - (2) The number of times the baghouse operated uncontrolled;
 - (3) The calculated gr/cf emissions during the uncontrolled event;
 - (4) The number of times the gr/cf standard was exceeded;
 - (5) The calculated gr/cf emissions during the exceedance;
 - (6) The reason for the exceedance
 - (7) A negative declaration if no uncontrolled or limit exceedances occurred.
- iii. The owner or operator shall report the following visual inspection records:
 - (1) Date of the inspection;
 - (2) Name of the person that performed the inspection;
 - (3) Description of any equipment defects observed including damages, leakage, corrosion, or other defects that would cause a reduction on the control efficiency;
 - (4) Description of any repairs made or replacement of system components; and
 - (5) Description of all corrective actions taken to abate the situation.
- iv. See Plantwide emission unit.

e. SO₂

- i. The owner or operator shall report the following SO₂ records:

- (1) The beginning and end date of the reporting period.
- (2) Any exceedances of the fuel sulfur content standard
- (3) Any failure to monitor or record fuel shipment certifications
- (4) A negative declaration if no excursions occurred.

f. TAC

- i. The owner or operator shall report the following information regarding bypass activity.
 - (1) The beginning and end date of the reporting period.
 - (2) Number of times the vent stream bypasses the Baghouse (C-2) and is vented to the atmosphere when the HMA Operation is in production;
 - (3) The duration of each bypass to the atmosphere;
 - (4) The calculated TAC emissions, in lb/12 consecutive month period, for each bypass and identification of any exceedance of the TAC standards; or
 - (5) A negative declaration if no bypasses occurred.
- ii. See Plantwide emission unit.

g. Unit Operation

- i. For additional Unit Operation reporting requirements for the counterflow drum mixer (E-14) see Plantwide Emission unit.

h. VOC

- i. There are no additional VOC reporting requirements for this emission unit related to Regulation 7.11.
- ii. See Plantwide emission unit.

S4. Testing

[Regulation 2.17, section 5.2]

a. General Requirements

- i. Devices of adequately similar design may be represented by a common performance test contingent upon review and approval of the testing protocol by the District.
- ii. Before conducting a performance test, the owner or operator shall submit a written test plan (protocol). The plan shall include the EPA test methods that will be used for testing, the process operating parameters that will be monitored during the performance test, and the control device performance indicators that will be monitored during the performance test. The test plans shall be furnished to the District at least 30 calendar days prior to the actual date of the performance test. Appendix B - Protocol Checklist for a Performance Test to this permit provides information that must be submitted in the protocol.
- iii. The owner or operator shall be responsible for obtaining and analyzing audit samples when the EPA Reference Method is used to analyze samples, to demonstrate compliance with the source's emission regulation. The audit samples shall be available for verification by the District during the on-site testing.
- iv. The owner or operator shall provide the District at least 10 working days prior notice of any performance test to afford the District the opportunity to have an observer present.
- v. The owner or operator shall furnish the District with a written report of the results of the performance test within 60 calendar days following the actual date of completion of the performance test.

b. Opacity

- i. The owner or operator shall demonstrate compliance with the opacity limit by initially conducting a test in accordance with Method 9 of 40 CFR 60 Appendix A at the same time as the Method 5 PM performance test. The test shall be performed at maximum capacity or allowable/permitted capacity or at a level of capacity which results in the greatest emissions and is representative of the operations. Failure to perform the test at these conditions may necessitate a re-test. The maximum 6-minute average opacity exhibited during the test period shall be used to determine whether the affected source is in initial compliance with the standard. The duration of the Method 9 performance test shall be 3 hours (30 6-minute averages).
- ii. The owner or operator shall perform an EPA Method 9 performance test within ten (10) years of the last successful stack test of E-14 counterflow drum mixer/burner.

c. PM/PM₁₀

- i. The owner or operator shall perform an EPA Reference Method 5 PM performance test on the inlet and outlet of the control device or emission point to determine the emission rate and control efficiency. The test shall be performed at 90% or higher of maximum capacity, or allowable/permitted capacity, or at a level of capacity which results in the greatest emissions and is representative of the operations. Failure to perform the test, at maximum capacity, allowable/permitted capacity, or at a level of capacity which resulted in the greatest emissions, may necessitate a re-test or necessitate a revision of the allowable/permitted capacity of the process equipment depending upon the difference between the testing results and the limit.
- ii. The owner or operator shall perform an EPA Method 5 performance test within ten (10) years of the last successful stack test of E-14 counterflow drum mixer/burner.³⁰

³⁰ Louisville Paving Company, Inc – Avoca Asphalt Plant will conduct a performance test in the second half of 2021. An attempt was made to conduct a stack test on May 20, 2021, but due to equipment and operational problems, the test resulted in failure to achieve the particulate matter standard of 0.04 gr/dscf. The re-test will commence upon correction of equipment and operational issues.

Insignificant Activities

Equipment	Qty.	PTE (ton/yr)	Regulation Basis
Aggregate Stockpile, see U1 E-1	1	PM ₁₀ 0.53 PM 1.13	Regulation 1.02, section 1.38
Aggregate Stockpile, see U1 R-1	1	PM ₁₀ 0.53 PM 1.13	Regulation 1.02, section 1.38
Aggregate Stockpile, see U1 R-10 & R-14	2	PM ₁₀ 0.53 PM 1.13	Regulation 1.02, section 1.38
Asphalt Storage Tank, see U2 T1	1	VOC 0.06	Regulation 1.02, section 1.38
Asphalt Storage Tank, see U2 T-2 & T-3	2	VOC 0.06	Regulation 1.02, section 1.38
Asphalt Storage Tank, see U2 T-4	1	VOC 0.06	Regulation 1.02, section 1.38
Asphalt Storage Tank, see U2 T-5	1	VOC 0.06	Regulation 1.02, section 1.38
Hot Oil Transfer Heater*, see U2 T-6	1	PM ₁₀ 0.13 PM 0.13 VOC 0.036 NO _x 1.28 CO 0.077 SO ₂ 4.54	Regulation 1.02, section 1.38
No. 2 diesel fuel tank, see U2 T-7	1	VOC 0.0004	Regulation 1.02, section 1.38
HMA Silo, see U4 E-19 thru E-22	4	VOC 1.52	Regulation 1.02, section 1.38
Load-out Station, see U4 E-23	1	PM ₁₀ 1.14 PM 1.14 VOC 2.27 CO 0.73	Regulation 1.02, section 1.38

*Emissions included as part of the Drum Mix emissions

1. Insignificant activities identified in District Regulation 1.02, Appendix A, may be subject to size or production rate disclosure requirements.
2. Insignificant activities identified in District Regulation 1.02, Appendix A shall comply with generally applicable requirements.
3. The owner or operator shall annually submit an updated list of insignificant activities that occurred during the preceding year, with the compliance certification due April 15th.
4. Emissions from Insignificant Activities shall be reported in conjunction with the reporting of annual emissions of the facility as required by the District.

5. The owner or operator may elect to monitor actual throughputs for each of the insignificant activities and calculate actual annual emissions, or use Potential to Emit (PTE) as the annual emissions for each piece of equipment.
6. The District has determined that no monitoring, recordkeeping, or reporting requirements apply to the insignificant activities listed, except for the equipment that has an applicable regulation and permitted under an insignificant activity (IA) unit.

Attachment A - Default Emission Factors, & Calculation Methodologies³¹

Emissions are calculated by multiplying the throughput (ton, MMCF, gallons, etc) or hours of operation of the equipment by the appropriate emission factor and 1 minus any control device’s efficiency. The following emission factors and calculation methodology shall be used unless other methods or emission factors are approved in writing by the District.

Table 3 U1 Calculation Methodology

Unit ID	Emission Point Description	Pollutants	Emission Factors Unit	Uncontrolled Emission Factors	Controlled Emission Factors	Emission Factor Source
U1*	E1 Limestone and Sand Piles	PM	lb/ton	0.0017	0.0008 ³²	AP-42 13.2.1 AP-42 13.2.2 AP-42 13.2.4 EPA-450/3-88-008
	R-1 Virgin RAP stockpiles					
	R-10 Processed RAP stockpile #1					
	R-14 Processed RAP stockpile #2					
	E1 Limestone and Sand Piles	PM ₁₀	lb/ton	0.0008	0.0004 ³²	AP-42 13.2.1 AP-42 13.2.2 AP-42 13.2.4 EPA-450/3-88-008
	R-1 Virgin RAP stockpiles					
	R-10 Processed RAP stockpile #1					
	R-14 Processed RAP stockpile #2					

*This emission factor includes loading, unloading, transport, and wind action on a sitting storage pile.

Table 4 U3 Calculation Methodology

Unit ID	Emission Point Description	Pollutants	Emission Factors Unit	Uncontrolled Emission Factors	Controlled Emission Factors	Emission Factor Source
U3	R-4 RAP crusher	PM	Lb/ton	0.0054	0.0012	AP-42 11.19.2-2
	E-12, R-6 RAP Screen #1 and #2		Lb/ton	0.0025	0.0022	AP-42 11.19.2-2
	E-9, E-10, R-3, R-12, R-7, R-5, R-8, R-9, R-13, R-15, R-16, R-		Lb/ton	0.0069	0.0035 ³³	AP-42 11.12-2

³¹ The pollutants covered in this attachment do not have limits to avoid being a major source, but the emission factors and methodology are to be used when calculating emissions for these pollutants to report to the District as required.

³² Controlled emission factor for Aggregate Storage, Aggregate transfer, and Sand transfer derived from District estimated 50% control efficiency for water suppression.

³³ Controlled emission factor for Aggregate transfer and Sand transfer derived from District estimated 50% control efficiency for water suppression.

Unit ID	Emission Point Description	Pollutants	Emission Factors Unit	Uncontrolled Emission Factors	Controlled Emission Factors	Emission Factor Source
	17 Aggregate transfer					
	E-9, E-10, R-3, R-12, R-7, R-5, R-8, R-9, R-13, R-15, R-16, R-17 Sand transfer		Lb/ton	0.0021	0.0011	AP-42 11.12-2
	R-4 RAP crusher		Lb/ton	0.0024	0.00054	AP-42 11.19.2-2
	E-12, R-6 RAP Screen #1 and #2		Lb/ton	0.0087	0.00074	AP-42 11.19.2-2
	E-9, E-10, R-3, R-12, R-7, R-5, R-8, R-9, R-13, R-15, R-16, R-17 Aggregate transfer	PM ₁₀	Lb/ton	0.0033	0.0017	AP-42 11.12-2
	E-9, E-10, R-3, R-12, R-7, R-5, R-8, R-9, R-13, R-15, R-16, R-17 Sand transfer		Lb/ton	0.00099	0.000495	AP-42 11.12-2

Table 5 U4 Calculation Methodology

Unit ID	Emission Point Description	Pollutants	Emission Factors Unit	Uncontrolled Emission Factors	Controlled Emission Factors	Emission Factor Source
	E-14 Drum Mixer/Dryer		lb/ton	0.13	N/A	AP-42 11.1-3
	E-19, E-20, E-21, E-22 Silo filling*	CO	lb/ton	0.00118	N/A	AP-42 11.1-14
	E-23 load-out station		lb/ton	0.00134	N/A	AP-42 11.1-14
U4	E-14 Drum mixer burning No. 2 fuel oil	HAP	lb/ton	0.0087	N/A	AP-42 11.1-10
	E-14 Drum mixer burning natural gas		lb/ton	0.0053	N/A	AP-42 11.1-10
	E-12 Drum mixer burning No. 2 fuel oil	NO _x	lb/ton	0.055	N/A	AP-42 11.1-7
	E-12 Drum mixer burning natural gas		lb/ton	0.026	N/A	AP-42 11.1-7
	E-3(a thru h), E-4, E-7, E-8, E-15, E-16, E-17, E-18 Aggregate transfer	PM	Lb/ton	0.0069	0.0035 ³⁴	AP-42 11.12-2
	E-3(a thru h), E-4, E-		Lb/ton	0.0021	0.0011	AP-42 11.12-2

³⁴ Controlled emission factor for Aggregate transfer and Sand transfer derived from District estimated 50% control efficiency for water suppression.

Unit ID	Emission Point Description	Pollutants	Emission Factors Unit	Uncontrolled Emission Factors	Controlled Emission Factors	Emission Factor Source
	7, E-8, E-15, E-16, E-17, E-18 Sand transfer					
	E-5 Aggregate screen		Lb/ton	0.0025	0.0022	AP-42 11.19.2-2
	E-14 Drum Mixer/Dryer		Lb/ton	28	0.033	AP-42 11.1-3
	E-19, E-20, E-21, E-22 Silo filling		Lb/ton	0.000585	0.000585	AP-42 11.1-14
	E-23 load-out station		Lb/ton	0.000521	0.000521	AP-42 11.1-14
	E-3(a thru h), E-4, E-7, E-8, E-15, E-16, E-17, E-18 Aggregate transfer	PM ₁₀	Lb/ton	0.0033	0.0017	AP-42 11.12-2
	E-3(a thru h), E-4, E-7, E-8, E-15, E-16, E-17, E-18 Sand transfer		Lb/ton	0.00099	0.000495	AP-42 11.12-2
	E-5 Aggregate screen		Lb/ton	0.0087	0.00074	AP-42 11.19.2-2
	E-14 Drum Mixer/Dryer		Lb/ton	6.5	0.023	AP-42 11.1-3
	E-19, E-20, E-21, E-22 Silo filling		Lb/ton	0.000585	0.000585	AP-42 11.1-14
	E-23 load-out station	Lb/ton	0.000521	0.000521	AP-42 11.1-14	
	E-14 Drum mixer burning No. 2 fuel oil	SO ₂	lb/ton	0.011	N/A	AP-42 11.1-7
	E-14 Drum mixer burning natural gas		lb/ton	0.003	N/A	AP-42 11.1-7
	E-14 Drum Mixer/Dryer	Arsenic	Lb/ton	1.30E-06	5.60E-07	AP-42 11.1-12
		Benzene	Lb/ton	3.90E-04	3.90E-04	
		Cadmium	Lb/ton	4.20E-06	4.10E-07	
		Chromium III	Lb/ton	5.05E-04	5.05E-06	
		Copper	Lb/ton	1.70E-04	3.10E-06	
		Lead	Lb/ton	5.40E-04	6.20E-07	
		Manganese	Lb/ton	6.50E-04	7.70E-06	
		Naphthalene	Lb/ton	9.00E-05	9.00E-05	
		Ethylbenzene	Lb/ton	2.40E-04	2.40E-04	
		Phosphorous	Lb/ton	1.20E-03	2.80E-05	
	E-14 Drum Mixer/Dryer	VOC	Lb/ton	0.032	N/A	AP-42 11.1-7
	E-19, E-20, E-21, E-		Lb/ton	0.01214	N/A	AP-42 11.1-7

Unit ID	Emission Point Description	Pollutants	Emission Factors Unit	Uncontrolled Emission Factors	Controlled Emission Factors	Emission Factor Source
	22 Silo filling*					
	E-23 load-out station		Lb/ton	0.004144	N/A	AP-42 11.1-14

*"Silo Filling" includes emissions from drag-slat conveyors and storage silos

Emission calculations for CO, HAP, NO_x, PM₁₀, SO₂, TACs, and VOC:

$$E = (X)(EF \text{ lb/ton})(1 \text{ ton}/2000 \text{ lb})$$

Where: E = Emissions (tons) during a 12-consecutive month period

X = the amount of HMA produced (tons), during a 12-consecutive month period

Emission calculations for PM₁₀ for aggregate handling:

$$E_{PM10} = (X)(EF \text{ lb/ton})(1 \text{ ton}/2000 \text{ lb})$$

Where: E_{PM10} = controlled or uncontrolled PM₁₀ emissions (tons) a month

X = the amount of aggregate throughput (tons) processed during a month

The owner or operator shall account for the insignificant activity emissions from aggregate processing and HMA production when totaling the monthly plantwide emissions. Since the emissions are minor the owner or operator may use the potential emissions as the monthly emissions. District approved PTE is as follows:

Table 6 Insignificant Activity PTE

Unit ID	Emission Point Description	Pollutants	Emission Factors Unit	Emission Calculation
U4	E-12 Drag slat conveyor	CO	lb/month	215.35
	E-13 & E-14 Silo filling*		lb/month	215.35
	E-23 Load-out station		ton/month	0.24
U1	E-1, R-1, R-10, R-14 Aggregate storage piles	PM	Ton/month	0.09
U4	E-23 load-out station		ton/month	0.38
U1	E-1, R-1, R-10, R-14 Aggregate storage piles	PM ₁₀	Ton/month	0.04
	E-23 Plant load-out		ton/month	0.38
U2	T-1, T-2, T-3 Asphalt storage tanks	VOC	lb/month/tank	10
U4	E-23 load-out station		ton/month	0.76

Attachment B - Protocol Checklist for a Performance Test

A complete protocol must include the following information

1. Facility name, location, and Plant ID number.
2. Responsible Official and environmental contact names.
3. Permit numbers that are requiring the test to be conducted.
4. Test methods to be used (*i.e.* EPA Method 1, 2, 3, 4, and 5).
5. Alternative test methods or description of modifications to the test methods to be used.
6. Purpose of the test including equipment and pollutant to be tested. (The purpose may be described in the permit that requires the test to be conducted or it may be to show compliance with a federal regulation or emission standard.)
7. Tentative test dates. (These may change but final notice is required at least 10 days in advance of the actual test dates in order to arrange for observation.)
8. Maximum rated production capacity of the system.
9. Production-rate goal planned during the performance test for demonstration of compliance (if appropriate, based on limits) and justification of the planned production rate, if less than the maximum rate.
10. Method to be used for determining rate of production during the performance test.
11. Method to be used for determining rate of production during subsequent operations of the process equipment to demonstrate compliance.
12. Description of normal operation cycles, if applicable.
13. Discussion of operating conditions that tend to cause worse case emissions. This is especially important to clarify if worst case emissions do not result from the maximum production rate.
14. Process flow diagram.
15. The type and manufacturer of the control equipment, if any.
16. The process and/or control equipment parameters to be monitored and recorded during the performance test. These parameters may include pressure drops, flow rates, pH, temperature, *etc.* The values achieved during the test may be required during subsequent operations to describe the operating parameters that are indicative of good operating performance.
17. How quality assurance and accuracy of the data will be maintained, including sample identification and chain-of-custody procedures, audit sample provider, and number of audit samples to be used, if applicable.
18. Diameter of the pipe, duct, stack, or flue to be tested.
19. Distances from the testing sample ports to the nearest upstream and downstream flow disturbances such as bends, valves, constrictions, expansions, and exit points for outlet and additionally for inlet.
20. The number of traverse points to be tested for the outlet and the inlet if required, using Method 1 in Appendix A-1 to 40 CFR Part 60.

The Stack Test Review fee must be submitted with each stack test protocol.

The current fee is listed on the APCD website (louisvilleky.gov/APCD)

Attachment C – Determination of Benchmark Ambient Concentration (BAC)

Category _____ Number _____

Compound name _____ CAS No. _____

Molecular weight _____

BAC_C = _____ μg/m³, annual BAC_{NC} = _____ μg/m³, _____ (avg period)
de minimis _____ lb/hr; _____ lb/_____; _____ lb/year

I. Carcinogen Risk - BAC_C (annual averaging period)

Carcinogen YES NO

1. IRIS 10⁻⁶ risk = _____ μg/m³ URE = _____ (μg/m³)⁻¹ Date _____
2. Cal 10⁻⁶ risk = _____ μg/m³ IUR = _____ (μg/m³)⁻¹ Date _____
3. Mich 10⁻⁶ risk = _____ μg/m³ Date _____
4. NTP Part A YES NO Part B YES NO
5. IARC Group 1 YES NO Group 2A YES NO Group 2B YES NO
6. ATSDR
7. Sec. 3.3.4 Method # _____ 10⁻⁶ risk = _____ μg/m³ Date _____
8. Default 0.0004 μg/m³

II. Chronic Noncancer Risk - BAC_{NC} (averaging period as specified)

1. IRIS RfC = _____ μg/m³, annual Date _____
2. Cal REL = _____ μg/m³, annual Date _____
3. IRIS [1] RfD = _____ μg/kg/day × (70/20) = _____ μg/m³, annual Date _____
4. Mich ITSL = _____ μg/m³, _____ averaging period Date _____
5. TLV NIOSH = _____ μg/m³ × 0.01 = _____ μg/m³, 8-hour Date _____
6. RTECS [1] _____ = _____ μg/m³, annual Date _____
 (describe calculation from Reg 5.20, sections 4.6 - 4.10)
7. Default 0.004 μg/m³

[1] To use data based upon an oral route of exposure, the District must make an affirmative determination that data are not available to indicate that oral-route to inhalation-route extrapolation is inappropriate.

III. De minimis calculations

1. Carcinogen BAC_C _____ μg/m³ × 0.54 = _____ lb/hour
 BAC_C _____ μg/m³ × 480 = _____ lb/year
2. Chronic Noncancer Risk _____ (averaging period)
 BAC_{NC} _____ μg/m³ × F factor = _____ lb/(avg period)

BAC averaging period	F factor for avg period			
	Annual	24 hour	8 hour	1 hour
Annual	480			0.54
24 hours		0.12		0.05
8 hours			0.02	0.02
1 hour				0.001

[Regulation 5.22, table 1]

Prepared by _____ Date _____