



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



June 19, 2020

**Federally-Enforceable District-Origin Operating Permit
 (FEDOOP)
 Statement of Basis**

Source: IMI Kentucky, LLC – 832 Outer Loop 2001 Outer Loop Louisville, KY 40219	Owner: IMI Kentucky, LLC 8032 N State Rd 9 Greenfield, IN 46140
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Application Documents:	See Table I-9		
Draft Permit:	06/19/2020		
Permitting Engineer:	Aaron DeWitt	Permit Number:	O-0682-20-F
Plant ID: 0628	SIC: 3273	NAICS:	327320

Introduction:

This permit will be issued pursuant to District Regulation 2.17- Federally Enforceable District Origin Operating Permits. Its purpose is to limit the plant wide potential emission rates from this source to below major source threshold levels and to provide methods of determining continued compliance with all applicable requirements.

Permit renewal and deleting references to greenhouse gases in General Condition G10.

Jefferson County is classified as an attainment area for lead (Pb), nitrogen dioxide (NO₂), carbon monoxide (CO), particulate matter less than 10 microns (PM₁₀), and particulate matter less than 2.5 microns (PM_{2.5}). Jefferson County is classified as a nonattainment area for ozone (O₃). This facility is located in the portion of Jefferson County that is an attainment area for sulfur dioxide (SO₂).

Permit Application Type:

- | | | |
|---|--|--|
| <input type="checkbox"/> Initial issuance | <input type="checkbox"/> Permit Revision | <input checked="" type="checkbox"/> Permit renewal |
| | <input type="checkbox"/> Administrative | |
| | <input type="checkbox"/> Minor | |
| | <input type="checkbox"/> Significant | |

Compliance Summary:

- | | |
|--|---|
| <input type="checkbox"/> Compliance certification signed | <input type="checkbox"/> Compliance schedule included |
| <input type="checkbox"/> Source is out of compliance | <input checked="" type="checkbox"/> Source is operating in compliance |

I Source Information

1. Product Description:

IMI Kentucky, LLC – 832 Outer Loop is a central mix (wet) ready mix concrete production facility, consisting of one (1) central mix (wet) ready mix concrete batch plant utilizing conveyors, aggregate bins, weigh hoppers, cement silo and flyash silo.

2. Process Description:

At the central ready mix plant, the dry components of ready mix concrete (cement, flyash, sand, and aggregate) are measured and loaded with water into a central mixer that mixes the concrete ingredients and discharges the wet mix concrete into ready mix concrete transit trucks that transport the concrete to offsite delivery locations.

3. Site Determination:

There are no other facilities that are contiguous or adjacent to this facility.

4. Emission Unit Summary:

Emission Unit	Equipment Description
U1	One (1) Erie-Strayer, model MG11-C, central mix (wet) ready mix concrete plant, utilizing a combination cement/flyash silo, two (2) outside aggregate/sand conveyors for loading overhead aggregate/sand bins, and a C & W Dust System, model RA-280, baghouse central dust collection system.

5. Fugitive Sources:

The fugitive sources identified by the source are uncontrolled portions of the ready-mix concrete unit.

6. Permit Revisions:

Permit No.	Public Notice Date	Issue Date	Change Type	Description/Scope
0182-01-F	06/17/2001	11/05/2001	Initial	Initial issuance
O-0628-15-F	07/31/2015	09/08/2015	Renew	Renewal Permit Issuance and incorporation of construction permits 313-03-C & 314-03-C
O-0628-20-F	06/19/2020		Renew	Permit renewal, update format, and removed greenhouse gas limit from general condition 10

7. Construction Permit History:

Permit No.	Effective Date	Description
313-03-C	10/31/2004	One (1) Erie Strayer MG11-C portable/mobile central mix concrete batch plant, including one (1) cement silo
314-03-C	10/31/2004	Two (2) baghouse, Griffin Environmental, model 36KS for controlling emissions during loading of cement silos

8. Application and Related Documents

Document Number	Date	Description
131841	2/17/2020	District reminder that application due 6/30/2020
136007	3/30/2020	District email with “starter” applications
139195	4/30/2020	Official reminder letter than applications are due before 6/30/2020
140232	5/11/2020	IMI submitted 100a for name change and change of RO
140244	5/12/2020	IMI submitted 100a and 100b renewal application
142691	6/9/2020	Pre-draft permit sent to company for review
143860	6/17/2020	Company comments on pre-draft permit

9. Emission Summary

Pollutant (ton/yr)	CO	NO _x	SO ₂	PM ₁₀	VOC	Total HAP	Single HAP
Potential Emission	0	0	0	346.71	0	0.33	0.11
Major source trigger (based on PTE)	No	No	No	Yes	No	No	No

10. Applicable Requirements

- | | | | | | |
|--------------------------|-----------|-------------------------------------|-----------------|--------------------------|-----------|
| <input type="checkbox"/> | 40 CFR 60 | <input checked="" type="checkbox"/> | SIP | <input type="checkbox"/> | 40 CFR 63 |
| <input type="checkbox"/> | 40 CFR 61 | <input type="checkbox"/> | District Origin | <input type="checkbox"/> | Other |

11. Referenced Federal Regulations:

The source has no federal requirements.

12. Non-Applicable Regulations:

None

II Regulatory Analysis

1. Stratospheric Ozone Protection Requirements:

Title VI of the CAAA regulates ozone depleting substances and requires a phase-out of their use. This rule applies to any facility that manufactures, sells, distributes, or otherwise uses any of the listed chemicals. IMI South, LLC – Outer Loop does not manufacture, sell, or distribute any of the listed chemicals. The source’s use of listed chemicals is that in fire extinguishers, chillers, air conditioners and other HVAC equipment.

2. Basis of Regulation Applicability

a. Applicable Regulations

Regulation	Title	Basis
2.17	Federally Enforceable District Origin Operating Permit	Regulation 2.17 establishes Federally Enforceable District Origin Operating Permits
7.08	Standards of Performance for New Process Operations	Regulation 7.08 establishes the requirements for PM emissions from new processes that commence construction after September 1, 1976.

b. Plantwide

IMI Kentucky, LLC – 832 Outer Loop is potentially major for PM₁₀. Regulation 2.17 – *Federally Enforceable District Origin Operating Permits* establishes requirements to limit the plant wide potential emission rates to below major source threshold levels and to provide methods of determining continued compliance with all applicable requirements. The source requested limits of the PM₁₀ less than 25 tons per year, to be classified as a synthetic minor (FEDOOP) source.

Regulations 5.00, 5.20, 5.21, and 5.23 (STAR Program) establish requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards. IMI Kentucky, LLC – 832 Outer Loop has requested emission limits of less than 25 tons per year for all regulated air pollutants, to be considered exempt from local TAC (STAR) regulations, as defined by Regulation 5.00, section 1.13.5.

Regulation 2.17, section 5.2, requires monitoring and record keeping to assure ongoing compliance with the terms and conditions of the permit. The owner or operator shall maintain all the required records for a

minimum of 5 years and make the records readily available to the district upon request.

Regulation 2.17, section 7.2, requires stationary sources for which a FEDOOP is issued to submit an Annual Compliance Certification by April 15, of the following calendar year. In addition, as required by Regulation 2.17, section 5.2, the source shall submit regular reports to show compliance with the permit. Compliance reports and compliance certifications shall be signed by a responsible official and shall include a certification statement per Regulation 2.1. The compliance reports are due within 60 days of the end of the reporting period:

<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

c. Emission Unit U1 – Central mix (wet) ready mix concrete batch plant

EP	Description	Applicable Regulations
E1	Aggregate conveyor loading hopper, 329 ton/hr	2.17, 7.08
E2	Sand conveyor loading hopper, 256 ton/hr	
E3	Aggregate bin loading conveyor, 329 ton/hr	
E4	Sand bin loading conveyor, 256 ton/hr	
E5	Cement silo #1, 71 ton capacity	
E6	Flyash silo #1, 36 ton capacity	
E7	Aggregate/sand weigh batcher, 602 ton/hr capacity	
E8	Cement/flyash weigh batcher, 103 ton/hr capacity	
E9	Aggregate/sand transfer conveyor, 602 ton/hr capacity	
E10	Central mixer loading, capacity 736 ton/hr	

i. Standards

- (1) Opacity
 - (a) Regulation 7.08, section 3.1.1 establishes an opacity standard of less than 20%, for processes that commenced construction after September 1, 1976.
- (2) PM/PM₁₀

- (a) Construction permit 313-03-C for the ready mix batch plant limits the pollutant PM plantwide to 13.59 tons per year.
- (b) Construction permit 313-03-C for the ready mix batch plant limits the emissions of the pollutant PM from each emission point E6 to 34.89 lb/hr and emission points E8 & E10 to 49.7 lb/hr.
- (c) The PM emissions for flyash silo filling, emission point E6, and central mixer loading, emission point E10, each exceed the PM lb/hr standard uncontrolled. The source is required to operate the dust collection system at all times the emission points are in operation, in order to show compliance with Construction Permit 313-03-C.
- (d) The emission standard for PM at each emission point with a process throughput of greater than 30 ton/hr is determined in accordance with Regulation 7.08, section 3.1.2 as follows:

$$\text{PM lb/hr limit} = 17.31 (\text{process weight ton/hr})^{0.16}$$
- (e) The PM emissions from cement silo filling, emission point E5, exceed the PM lb/hr standard uncontrolled. The source is required to operate the dust collection system at all times the emission point is in operation, in order to show compliance with Regulation 7.08, 34.89 lb/hr PM standard.

III Other Requirements

1. Temporary Sources:

The source did not request to operate any temporary facilities.

2. Short Term Activities:

The source did not report any short term activities.

3. Emissions Trading:

The source is not subject to emission trading.

4. Alternative Operating Scenarios:

The source did not request any alternative operating scenarios.

5. Compliance History:

There are no records of any violations of the terms of the present or prior construction or operating permits.

6. Calculation Methodology or Other Approved Method:

Concrete Batch Plants (U1): Emission factors from AP-42, Chapter 11.12, Concrete Batching, were used to determine Potential to Emit and confirm limits requested by the source.

Table 1 AP-42 Controlled Emission Factors

Equipment	AP-42 Emission Factor, Controlled lb PM ₁₀ /ton	Controlled PM ₁₀ Emission Factor converted to lb PM ₁₀ /yd ³ dry concrete
Aggregate Transfer	0.0033	0.0031
Sand Transfer	0.00099	0.0007
Weigh hopper (Agg+Sand) ^a	0.00014	0.00023
Mixer loading (cem+cem supply) ^b	0.0055	0.0016
Cement silo filling	0.00034	0.00008
Cement supplement silo filling	0.0049	0.0002
Aggregate ground storage	N/A	0.0031
Sand ground storage	N/A	0.0007
Aggregate hopper loading	N/A	0.0031
Sand hopper loading	N/A	0.0007

Table 2 AP-42 Uncontrolled Emission Factors

Equipment	AP-42 Emission Factor, Uncontrolled lb PM ₁₀ /ton	Uncontrolled PM ₁₀ Emission Factor converted to lb PM ₁₀ /yd ³ dry concrete
Aggregate Transfer	0.0033	0.0031
Sand Transfer	0.00099	0.0007
Weigh hopper (Agg+Sand) ^a	0.0028	0.0046
Mixer loading (cem+cem supply) ^b	0.156	0.044
Cement silo filling	0.47	0.1152
Cement supplement silo filling	1.10	0.0402
Aggregate ground storage	N/A	0.0031
Sand ground storage	N/A	0.0007
Aggregate hopper loading	N/A	0.0031
Sand hopper loading	N/A	0.0007

^a The unit for weigh hopper emission factor is lb of pollutant per ton of aggregate and sand, AP-42, table 11.12-2, footnote e.

^b The unit for central mixer loading emission factor is lb of pollutant per ton of cement and flyash, AP-42, table 11.12-2, footnote f.

Table 3 AP-42 Controlled Emission Factors

Equipment	AP-42 Emission Factor, Controlled lb PM/ton	Controlled PM Emission Factor converted to lb PM/yd³ dry concrete
Aggregate Transfer	0.0069	0.0063
Sand Transfer	0.00021	0.0015
Weigh hopper (Agg+Sand) ^a	0.00024	0.0004
Mixer loading (cem+cem suppl) ^b	0.0184	0.0052
Cement silo filling	0.00099	0.00024
Cement supplement silo filling	0.0089	0.0003
Aggregate ground storage	N/A	0.0064
Sand ground storage	N/A	0.0015
Aggregate hopper loading	N/A	0.0064
Sand hopper loading	N/A	0.0015

Table 4 AP-42 Uncontrolled Emission Factors

Equipment	AP-42 Emission Factor, Uncontrolled lb PM/ton	Uncontrolled PM Emission Factor converted to lb PM/yd³ dry concrete
Aggregate Transfer	0.0069	0.0063
Sand Transfer	0.00021	0.0015
Weigh hopper (Agg+Sand) ^a	0.0048	0.0079
Mixer loading (cem+cem supply) ^b	0.572	0.161
Cement silo filling	0.73	0.179
Cement supplement silo filling	3.14	0.116
Aggregate ground storage	N/A	0.0064
Sand ground storage	N/A	0.0015
Aggregate hopper loading	N/A	0.0064
Sand hopper loading	N/A	0.0015

^a The unit for weigh hopper emission factor is lb of pollutant per ton of aggregate and sand, AP-42, table 11.12-2, footnote e.

^b The unit for central mixer loading emission factor is lb of pollutant per ton of cement and flyash, AP-42, table 11.12-2, footnote f.