STATEMENT OF BASIS
Lee Brass Foundry, LLC
Anniston, AL
Calhoun County
301-0005

This proposed Title V Major Source Operating Permit (MSOP) renewal is issued under provisions of ADEM Admin. Code r. 335-3-16. The above named applicant has requested authorization to perform the work or operate the facility shown on the application and drawings, plans, and other documents attached hereto or on file with the Air Division of the Alabama Department of Environmental Management, in accordance with the terms and conditions of this permit.

Lee Brass Foundry, LLC (Lee Brass) was issued its MSOP on August 15, 2016, with an effective date of October 21, 2016, and an expiration date of October 20, 2021. Per ADEM Admin. Code r. 335-3-16-.12(2), an application for permit renewal shall be submitted at least six (6) months, but no more than eighteen (18) months, before the date of expiration of the permit. Lee Brass' 4th renewal application was due to the Department by April 20, 2021. The renewal application was received by the Department on May 17, 2021, and additional information was received on TBD**.**

Facility Description

Lee Brass owns and operates a brass foundry located in Anniston, Calhoun County, AL. The facility recovers, processes, and re-melts various grades of brass and bronze scrap to produce brass and bronze castings. The significant sources of air pollution at this facility are:

- Didion Metal Recovery System
- Four (4) Metal Cutting Saws
- Pangborn Blast Machine
  - All units controlled by BH2

- Metal Cutting Saws
- Grinding Wheels
  - All units controlled by BH3
- Two (2) Electric Induction Channel Furances
- Four (4) Ajax Coreless Furnaces
- Didion Metal Reclaimer
- Four (4) Ladle Heaters
- One (1) Pouring and Cooling Hood
  - All units controlled by BH4
- Muller Sand Handling System
- Metal Recovery System
  - All units controlled by BH5

- Two (2) Side Draft Pouring Hoods
- Two (2) Travel Vent Hood Systems

- Five (5) Cutoff Saws
- One (1) Wheelabrator Shotblast Machine
- One (1) Sinto Drum Blast
- One (1) Grinder
- One (1) Plasma Cutter
  - All units controlled by BH8
- Muller Sand Handling System
  - Unit controlled by BH9

- South End Cleaning Room (various makes and models of grinding wheels)
  - All units controlled by BH11

- North End Cleaning Room (various makes and models of grinding wheels and metal cutting saws)
  - All units controlled by BH12
- Four (4) Shot Blast Machines

- All units controlled by BH6

- Ten (10) Electric Furnaces
- Seven (7) Ladle Heaters
  - All units controlled by BH7

- Each unit are controlled by separate baghouses (BH13, BH14, BH15, and BH16)

- Core Oven – Core Room
- Compact Attrition Reclamation System
  - Unit controlled by BH18
- Two (2) Emergency Engines

The following is a summary of facility-wide uncontrolled emissions and the reported 2020 actual emissions:

Regulated Pollutant	Potential Emission (TPY)	Actual 2020 Emissions (TPY)
PM_{TOTAL}	1,865.32	3.56
PM_{10}	1,864.55	3.56
$PM_{2.5}$	372.91	0.50
VOC	7.01	5.58
Lead (Pb)	0.034	0.03
Nickel Compounds (NiC)	0.002	0.00
Manganese Compounds (MnC)	0.004	0.00

The facility operates 8,760 hours per year. Lee Brass estimated greenhouse gases (GHG) based on natural gas usage at the plant and were calculated to be 70.62 tons per year (TPY).

Renewal Notes

The Department approved a 502(b)(10) Change to the Title V on December 13, 2017. The 502(b)(10) consisted of removal and replacement of two old Channel Furnaces with two new Ajax Coreless Furnaces controlled by Baghouse #4 (EP004). Also, the 502(b)(10) applied to the removal and replacement of an older Wheelabrator with a newer Drum Blast unit controlled by Baghouse #15 (EP015). The proposed changes decreased loading on Baghouse #4 from the previous 51,084 CFM to 40,816 CFM, which was still below the 63,000 CFM designed rating for Baghouse #4. The other change decreased the loading on Baghouse #15 from 5,360 CFM to 4,500 CFM, which was still below the 5,600 CFM design rating for Baghouse #15.

The Department approved another 502(b)(10) Change to the Title V on July 10, 2020. Lee Brass replaced the Wheelabrator Shotblast with a Sinto Drum Blast controlled by Baghouse #8. The proposed change decreased loading on Baghouse #8 from 15,871 CFM to 15,148 CFM.

Lee Brass also has two existing emergency engines that were previously listed as insignificant sources. However, the units are subject to a federal rule (MACT ZZZZ). Therefore, the emergency engines cannot be considered insignificant per ADEM Admin. Code r. 335-3-16-.01(o). The Department issued Air Permit No. 301-0005-X019 for the engines on July 16, 2021. The requirements included in the Air Permit will be included in the Title V.

On July 16, 2021, Lee Brass informed the Department that the facility is subject to the requirements of 40 CFR Part 63, Subpart ZZZZZZ – National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries. The applicable requirements of this subpart will be included in the Title V.

These changes shall be reflected in the fourth renewal MSOP issued to Lee Brass.

40 CFR Part 60, Subpart M – ***Standards of Performance for Secondary Brass and Bronze Production Plants***

The provisions of this subpart are applicable to affected facilities in secondary brass or bronze production plants: reverberatory and electric furnaces of 1,000 kg (2205 lb) or greater production capacity and blast (cupola) furnaces of 250 kg/hr (550 lb/hr) or greater production capacity. Furnaces from which molten brass or bronze are cast into the shape of finished products, such as foundry furnaces, are not considered to be affected facilities. Therefore, this subpart does not apply to Lee Brass.

40 CFR Part 63, Subpart XXXXXX – ***National Emission Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories***

Facilities are subject to this subpart if they own or operate an area source that is primarily engaged in the operations in one of the nine source categories. These nine source categories are (1) Electrical and Electronic Equipment Finishing Operations; (2) Fabricated Metal Products; (3) Fabricated Plate Work (Boiler Shops); (4) Fabricated Structural Metal Manufacturing; (5) Heating Equipment, except Electric; (6) Industrial Machinery and Equipment Finishing Operations; (7) Iron and Steel Forging; (8) Primary Metal Products Manufacturing; and (9) Valves and Pipe Fittings [§63.11514(a)(1)-(9)]. Based upon Lee Brass Standard Industrial Classification (SIC) and North American Industry Classification System (NAICS) codes, Lee Brass does not meet the definition of any of the nine source categories. Therefore, the facility is not subject to this subpart.

40 CFR Part 63, Subpart ZZZZZZ – ***National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries***

Facilities are subject to this subpart if they own or operate an aluminum foundry, copper foundry, or other nonferrous foundry that is an area source of HAP emissions and meet the criteria specified in §63.11544(a)(1) through (4) [§63.11544(a)]. Lee Brass is classified as an Other Nonferrous Metal Foundry. Lee Brass is an area source for HAP emissions with an estimated annual metal melt of 30,660 TPY. Lee Brass' "melting operations" would be classified as an existing affected source since the "melting operations" were constructed prior to February 9, 2009. Therefore, Lee Brass is subject to this subpart.

Didion Metal Recovery System, Four (4) Metal Cutting Saws, Pangborn Blast Machine w/ BH #2 (EP002) – Foundry 1

Metal containing slags are charged into a metal recovery drum. Gates and risers are removed from castings using abrasive cut-off wheels. Castings are then smoothed using grinding wheels. Castings are cleaned in an abrasive cleaning machine. The Metal Recovery System has a maximum rated process capacity of 4,000 lb/hr.

Applicability

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, *"Major Source Operating Permit"*.

  Rule 335-3-16-.03

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), *"Visible Emissions".*

  Rule 335-3-4-.01(1)

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.02(3), *"Fugitive Dust and Fugitive Emissions"*.

  Rule 335-3-4-.02(3)

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), *"Process Industries – General"*.

  Rule 335-3-4-.04(1)

- These sources have an enforceable limit in place in order to prevent them from being subject to the provisions of ADEM Admin. Code r. 335-3-14-.04, *"Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)"*.

  Rule 335-3-14-.04(Anti-PSD)

Emission Standards

Opacity

- Any source of particulate emission shall not discharge into the atmosphere particulate of an opacity greater than that designated as 20% opacity, as determined by a 6-minute period. During one 6 minute period in any 60 minute period, a source may discharge into the atmosphere from any source of emissions, particulate of an opacity not greater than that designated as 40% opacity.

  Rule 335-3-4-.01(a) & (b)

Particulate Matter

- The particulate matter from these units shall not exceed the lesser of the Anti-PSD limit of 5.5 lb/hr (Air Permit 301-0005-X053 issued November 20, 1987), or the process weight allowable as given by the following equations:

$$E = 3.59P^{0.62} \ (P < 30 \ tons/hr)$$

Or

$$E = 17.31P^{0.16} \ (P \geq 30 \ tons/hr)$$

Where *E* is the emissions in pounds per hour (lb/hr) and *P* is the process weight per hour in tons per hour (tph). At maximum capacity of 2.0 tph, the PM allowable for these units would be 5.52 lb/hr.

Rule 335-3-4-.04(1) & Rule 335-3-14-.04(Anti-PSD)

Expected Emissions

- According to the application, the potential emissions for EP002 were calculated based on a Material Balance.

Pollutant	Controlled Potential Emissions	
	lb/hr	TPY
PM	0.03	0.15
PM_{10}	0.03	0.15
$PM_{2.5}$	0.01	0.03

Table 1. Based on 8,760 hours of operation.

Compliance and Performance Test Methods & Procedures

- Method 5 of 40 CFR 60, Appendix A, shall be used in the determination of particulate emissions.

Rule 335-3-1-.05

- Method 9 of 40 CFR 60, Appendix A, shall be used in the determination of opacity.

Rule 335-3-1-.05

Monitoring

- The permittee shall perform a visual check, once per day, of the baghouse stack associated with these units. The check shall be performed by a person familiar with Method 9. If estimated instantaneous visible emissions in excess of 10% opacity are observed and not corrected within a 1 hour period, then a Method 9 must be performed within 4 hours of the observation. Maintenance shall be performed as needed. Any repairs or observed problems shall be recorded.

Rule 335-3-16-.05(c)1.

- The permittee shall perform a weekly inspection of the baghouse to verify proper operation. The following activities shall be performed:

(a) Check hopper, fan, and cleaning cycle for proper operation.

(b) Check all hoods and ducts.

(c) Record any repairs or observed problems.

Rule 335-3-16-.05(c)1.

- The permittee shall perform an annual inspection of the baghouse to verify proper operation. The following activities shall be performed:

  (a) Once per year, inspect baghouse structure, access doors, door seals, and bags.

  (b) Once per year, perform an internal inspection of the baghouse hoppers.

  (c) Record any repairs or observed problems.

  Rule 335-3-16-.05(c)1.

Reporting and Recordkeeping

- All records shall be maintained in a form suitable for inspection for a period of at least five (5) years.

  Rule 335-3-16-.05(c)2.

- The facility shall maintain a record of all weekly and annual baghouse inspections to satisfy the requirements of periodic monitoring. This shall include all problems observed, excursions, and corrective actions taken.

  Rule 335-3-16-.05(c)2.

- If a visible emission observation is required using the 40 CFR Part 60, Appendix A, Method 9, the results will be documented using an ADEM visible emissions observation report, and the cause and corrective action take will be documented in a logbook.

  Rule 335-3-16-.05(c)2.

- The facility shall maintain a record of all visible emissions readings performed to satisfy monitoring requirements. This shall include all problems observed, excursions, and corrective actions taken.

  Rule 335-3-16-.05(c)2.

Metal Cutting Saws and Grinding Wheels w/ BH3 (EP003)

Gates and risers are removed from casting using abrasive cut-off wheels. Castings are smoothed using grinding wheels.

Applicability

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, *"Major Source Operating Permit"*.

  Rule 335-3-16-.03

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), *"Visible Emissions".*

  Rule 335-3-4-.01(1)

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.02(3), *"Fugitive Dust and Fugitive Emissions"*.

  Rule 335-3-4-.02(3)

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), *"Process Industries – General"*.

  Rule 335-3-4-.04(1)

Emission Standards

Opacity

- Any source of particulate emission shall not discharge into the atmosphere particulate of an opacity greater than that designated as 20% opacity, as determined by a 6-minute period. During one 6 minute period in any 60 minute period a source may discharge into the atmosphere from any source of emissions, particulate of an opacity not greater than that designated as 40% opacity.

  Rule 335-3-4-.01(a) & (b)

Particulate Matter

- The particulate matter from these units shall not exceed the process weight allowable as given by the following equations:

$$E = 3.59P^{0.62} \quad (P < 30 \ tons/hr)$$

Or

$$E = 17.31P^{0.16} \ (P \geq 30 \ tons/hr)$$

Where *E* is the emissions in pounds per hour (lb/hr) and *P* is the process weight per hour in tons per hour (tph). At maximum capacity of 2.5 tph, the PM allowable for these units would be 6.34 lb/hr.

Rule 335-3-4-.04(1)

Expected Emissions

- According to the application, the potential emissions for EP003 were based on a Material Balance.

Pollutant	Controlled Potential Emissions	
	lb/hr	TPY
PM	0.09	0.39
PM_{10}	0.09	0.93
$PM_{2.5}$	0.02	0.08

Table 2. Based on 8,760 hours of operation.

Compliance and Performance Test Methods & Procedures

- Method 5 of 40 CFR 60, Appendix A, shall be used in the determination of particulate emissions.

  Rule 335-3-1-.05

- Method 9 of 40 CFR 60, Appendix A, shall be used in the determination of opacity.

  Rule 335-3-1-.05

Monitoring

- The permittee shall perform a visual check, once per day, of the baghouse stack associated with these units. The check shall be performed by a person familiar with Method 9. If estimated instantaneous visible emissions in excess of 10% opacity are observed and not corrected within a 1 hour period, then a Method 9 must be performed within 4 hours of the observation. Maintenance shall be performed as needed. Any repairs or observed problems shall be recorded.

  Rule 335-3-16-.05(c)1.

- The permittee shall perform a weekly inspection of the baghouse to verify proper operation. The following activities shall be performed:

  (a) Check hopper, fan, and cleaning cycle for proper operation.

  (b) Check all hoods and ducts.

  (c) Record any repairs or observed problems.

  Rule 335-3-16-.05(c)1.

- The permittee shall perform an annual inspection of the baghouse to verify proper operation. The following activities shall be performed:

  (a) Once per year, inspect baghouse structure, access doors, door seals, and bags.

  (b) Once per year, perform an internal inspection of the baghouse hoppers.

  (c) Record any repairs or observed problems.

  Rule 335-3-16-.05(c)1.

Reporting and Recordkeeping

- All records shall be maintained in a form suitable for inspection for a period of at least five (5) years.

  Rule 335-3-16-.05(c)2.

- The facility shall maintain a record of all weekly and annual baghouse inspections to satisfy the requirements of periodic monitoring. This shall include all problems observed, excursions, and corrective actions taken.

  Rule 335-3-16-.05(c)2.

- If a visible emission observation is required using the 40 CFR Part 60, Appendix A, Method 9, the results will be documented using an ADEM visible emissions observation report and the cause and corrective action taken will be documented in a logbook.

  Rule 335-3-16-.05(c)2.

- The facility shall maintain a record of all visible emissions readings performed to satisfy monitoring requirements. This shall include all problems observed, excursions, and corrective actions taken.

  Rule 335-3-16-.05(c)2.

Two (2) Electric Induction Channel Furnaces, Four (4) Ajax Coreless Furnaces, One (1) Didion Metal Reclaimer, Four (4) Ladle Heaters and One (1) Pouring and Cooling Hood w/ BH #4 (EP004)

The furnaces are used to melt brass ingot, gates, and risers to provide molten metal to the pouring lines.

Applicability

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, *"Major Source Operating Permit"*.

  Rule 335-3-16-.03

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), *"Visible Emissions".*

  Rule 335-3-4-.01(1)

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.02(3), *"Fugitive Dust and Fugitive Emissions"*.

  Rule 335-3-4-.02(3)

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), *"Process Industries – General"*.

  Rule 335-3-4-.04(1)

- The furnaces are subject to the applicable requirements of 40 CFR Part 63, Subpart ZZZZZZ, *"National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries"*.

  Rule 335-3-11-.06(155) & 40 CFR Part 63 Subpart ZZZZZZ, §63.11544(a)(3)

- The melting operations of this source are subject to the applicable requirements of 40 CFR Part 63 Subpart A, *"General Provisions"*.

  Rule 335-3-11-.06(1) & 40 CFR Part 63 Subpart ZZZZZZ, §63.11555

Emission Standards

Opacity

- Any source of particulate emission shall not discharge into the atmosphere particulate of an opacity greater than that designated as 20% opacity, as determined by a 6-minute period. During one 6 minute period in any 60 minute period a source may discharge into the atmosphere from any source of emissions, particulate of an opacity not greater than that designated as 40% opacity.

  Rule 335-3-4-.01(a) & (b)

Particulate Matter

- The particulate matter from these units shall not exceed the process weight allowable as given by the following equations:

$$E = 3.59P^{0.62} \ (P < 30 \ tons/hr)$$

Or

$$E = 17.31P^{0.16} \ (P \geq 30 \ tons/hr)$$

Where *E* is the emissions in pounds per hour (lb/hr) and *P* is the process weight per hour in tons per hour (tph). At maximum capacity of 3.5 tph, PM allowable for these units would be 7.81 lb/hr.

Rule 335-3-4-.04(1)

- For existing affected sources located at a large foundry, the facility must achieve a particulate matter (PM) control efficiency of at least 95.0 percent or emit no more than an outlet PM concentration of 0.034 gram per dry standard cubic meter (g/dscm) (0.015 grains per dry standard cubic feet (gr/dscf)).

40 CFR Part 63 Subpart ZZZZZZ, §63.11550(b)(1)

- The permittee shall cover or enclose each melting furnace that is equipped with a cover or enclosure during the melting operation to the extent practicable (e.g., except when access is needed; including, but not limited to charging, alloy addition, and tapping).

40 CFR Part 63 Subpart ZZZZZZ, §63.11550(a)(1)

- The permittee shall purchase only metal scrap that has been depleted (to the extent practicable) of other nonferrous foundry HAP in the materials charged to the melting furnace, except metal scrap that is purchased specifically for its HAP metal content for use in alloying or to meet specifications for the casting. This requirement does not apply to material that is not scrap (e.g., ingots, alloys, sows) or to materials that are not purchased (e.g., internal scrap, customer returns).

40 CFR Part 63 Subpart ZZZZZZ, §63.11550(a)(2)

- The permittee shall prepare and operate pursuant to a written management practices plan. The management practices plan must include the required management practices of §63.11550(a)(1) and (2) and may include any other management practices that are implemented at the facility to minimize emissions from melting furnaces. The facility must inform the appropriate employees of the management practices that they must follow. The facility may use the facility standard operating procedures as the management practices plan provided the standard operating procedures include the required management practices in §63.11550(a)(1) and (2).

40 CFR Part 63 Subpart ZZZZZZ, §63.11550(a)(3)

Expected Emissions

- According to the application, the potential emissions for EP004 were based on a Material Balance.

Pollutant	Controlled Potential Emissions	
	lb/hr	TPY
PM	5.56	1.20
PM_{10}	0.31	0.07
$PM_{2.5}$	0.04	0.01

Table 3. Based on 8,760 hours of operation.

Compliance and Performance Test Methods & Procedures

- Method 5 of 40 CFR 60, Appendix A, shall be used in the determination of particulate emissions.

  Rule 335-3-1-.05 & 40 CFR Part 63 Subpart ZZZZZZ, §63.11551(c)(1)(v)

- Method 9 of 40 CFR 60, Appendix A, shall be used in the determination of opacity.

  Rule 335-3-1-.05

Monitoring

- The permittee shall perform a visual check, once per day, of the baghouse stack associated with these units. The check shall be performed by a person familiar with Method 9. If estimated instantaneous visible emissions in excess of 10% opacity are observed and not corrected within a 1 hour period, then a Method 9 must be performed within 4 hours of the observation. Maintenance shall be performed as needed. Any repairs or observed problems shall be recorded.

  Rule 335-3-16-.05(c)1. & 40 CFR Part 63 Subpart ZZZZZZ, §63.11552(b)(1)(i)

- The permittee shall perform a weekly inspection of the baghouse to verify proper operation. The following activities shall be performed:

  (a) Check hopper, fan, and cleaning cycle for proper operation.

  (b) Check all hoods and ducts.

  (c) Record any repairs or observed problems.

  Rule 335-3-16-.05(c)1.

- The permittee shall perform an annual inspection of the baghouse to verify proper operation. The following activities shall be performed:

  (a) Once per year, inspect baghouse structure, access doors, door seals, and bags.

  (b) Once per year, perform an internal inspection of the baghouse hoppers.

  (c) Record any repairs or observed problems.

Rule 335-3-16-.05(c)1.

Reporting and Recordkeeping

- All records shall be maintained in a form suitable for inspection for a period of at least five (5) years.

  Rule 335-3-16-.05(c)2.

- The facility shall maintain a record of all weekly and annual baghouse inspections to satisfy the requirements of periodic monitoring. This shall include all problems observed, excursions, and corrective actions taken.

  Rule 335-3-16-.05(c)2.

- If a visible emission observation is required using the 40 CFR Part 60, Appendix A, Method 9, the results will be documented using an ADEM visible emissions observation report and the cause and corrective action taken will be documented in a logbook.

  Rule 335-3-16-.05(c)2.

- The facility shall maintain a record of all visible emissions readings performed to satisfy monitoring requirements. This shall include all problems observed, excursions, and corrective actions taken

  Rule 335-3-16-.05(c)2.

- The facility must keep the records specified in §63.11553(c)(1) through (5):

  (1) As required in §63.10(b)(2)(xiv), the permittee must keep a copy of each notification that the permittee submitted to comply with this subpart and all documentation supporting any Initial Notification or Notification of Compliance Status that the facility submitted.

  (2) The permittee must keep records to document conformance with the management practices plan required by §63.11550 as specified in §63.11553(c)(2)(i) and (ii).

    (i) For melting furnaces equipped with a cover or enclosure, records must identify each melting furnace equipped with a cover or enclosure and document that the procedures in the management practices plan were followed during the monthly inspections. These records may be in the form of a checklist.

    (ii) Records documenting that the facility purchased only metal scrap that has been depleted of HAP metals (to the extent practicable) charged to the melting furnace. If the facility purchases scrap metal specifically for the HAP metal content for use in alloying or to meet specifications for the casting, the facility must keep records to document that the HAP metal is included in the material specifications for the cast metal product.

  (3) The permittee must keep the records of all performance tests, inspections and monitoring data required by §63.11551 and §63.11552, and the information identified in §63.11553(c)(3)(i) through (vi) for each required inspection or monitoring.

(i) The date, place, and time of the monitoring event;

(ii) Person conducting the monitoring;

(iii) Technique or method used;

(iv) Operating conditions during the activity;

(v) Results, including the date, time, and duration of the period from the time the monitoring indicated a problem (e.g., VE) to the time that monitoring indicated proper operation; and

(vi) Maintenance or corrective action taken (if applicable).

40 CFR Part 63 Subpart ZZZZZZ, §63.11553(c)(1) through (3)

- The records must be in a form suitable and readily available for expeditious review, according to §63.10(b)(1). As specified in §63.10(b)(1), the facility must keep each record for 5 years following the date of each recorded action. For records of annual metal melt production, the permittee must keep the records for 5 years from the end of the calendar year. The permittee must keep each record onsite for at least 2 years after the date of each recorded action according to §63.10(b)(1). The permittee may keep the records offsite for the remaining 3 years.

40 CFR Part 63 Subpart ZZZZZZ, §63.11553(d)

- If a deviation occurs during a semiannual reporting period, the permittee must submit a compliance report according to the requirements in §63.11553(e)(1) and (2).

(1) The first reporting period covers the period beginning on the compliance date specified in §63.11545 and ending on June 30 or December 31, whichever date comes first after the facility compliance date. Each subsequent reporting period covers the semiannual period from January 1 through June 30 or from July 1 through December 31. The permittee compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date comes first after end of the semiannual reporting period.

(2) A compliance report must include the following information:

(i) Company name and address

(ii) Statement by a responsible official, with the official's name, title, and signature, certifying the truth, accuracy and completeness of the content of the report.

(iii) Date of the report and beginning and ending dates of the reporting period.

(iv) Identification of the affected source, the pollutant being monitored, applicable requirement, description of deviation, and corrective action taken.

40 CFR Part 63 Subpart ZZZZZZ, §63.11553(e)

Muller Sand Handling System and Metal Recovery System w/ BH #5 (EP005) – Foundry 1

The Sand Handling system is used for the molding of brass castings. The Metal Recovery system is for the recovering tramp brass metal from used molding sand.

Applicability

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, *"Major Source Operating Permit"*.

  Rule 335-3-16-.03

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), *"Visible Emissions".*

  Rule 335-3-4-.01(1)

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.02(3), *"Fugitive Dust and Fugitive Emissions"*.

  Rule 335-3-4-.02(3)

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), *"Process Industries – General"*.

  Rule 335-3-4-.04(1)

- This unit has an enforceable limit in order to prevent it from being subject to the provisions of ADEM Admin. Code r. 335-3-14-.04, *"Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)"*.

  Rule 335-3-14-.04 (Anti-PSD)

- For particulate matter emissions, these sources are subject to the applicable requirements of 40 CFR Part 64, *"Compliance Assurance Monitoring"*.

  40 CFR Part 64, §64.2

Emission Standards

Opacity

- Any source of particulate emission shall not discharge into the atmosphere particulate of an opacity greater than that designated as 20% opacity, as determined by a 6-minute period. During one 6 minute period in any 60 minute period a source may discharge into the atmosphere from any source of emissions, particulate of an opacity not greater than that designated as 40% opacity.

  Rule 335-3-4-.01(a) & (b)

Particulate Matter

- The particulate matter from these units shall not exceed the process weight allowable as given by the following equations:

$$E = 3.59P^{0.62} \ (P < 30 \ tons/hr)$$

Or

$$E = 17.31P^{0.16} \ (P \geq 30 \ tons/hr)$$

Where *E* is the emissions in pounds per hour (lb/hr) and *P* is the process weight per hour in tons per hour (tph). At maximum capacity of 75 tph, the PM allowable for these units would be 34.54 lb/hr.

Rule 335-3-4-.04(1)

- The hours of operation for the sand handling system shall not exceed 6,000 in any consecutive rolling 12-month period.

Rule 335-3-14-.04 (Anti-PSD)

Expected Emissions

- According to the application, the potential emissions for EP005 were based on a Material Balance.

Pollutant	Controlled Potential Emissions	
	lb/hr	TPY
PM	2.69	8.08
PM_{10}	2.69	8.08
$PM_{2.5}$	0.54	2.36

Table 4. Based on 6,000 hours of operation.

Compliance and Performance Test Methods & Procedures

- Method 5 of 40 CFR 60, Appendix A, shall be used in the determination of particulate emissions.

Rule 335-3-1-.05

- Method 9 of 40 CFR 60, Appendix A, shall be used in the determination of opacity.

Rule 335-3-1-.05

Monitoring

- Compliance Assurance Monitoring shall be conducted.

- The requirements of this part shall apply to a pollutant-specific emissions unit at a major source that is required to obtain a part 70 or 71 permit if the unit satisfies all the following criteria:

  (1) The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or surrogate thereof);

  (2) The unit uses a control device to achieve compliance with any such emission limitation or standard; and

  (3) The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source.

  40 CFR Part 64. §64.2(a)(1) through (3)

- This source has a particulate matter emission limitation set forth by ADEM Administrative Code r. 335-3-4-.04(1) [§64.2(a)(1)].

- This source is controlled by a baghouse to comply with the particulate matter emission limit [§64.2(a)(2)].

- This source has the potential to emit over 100 TPY of particulate matter without a control device [§64.2(a)(3)].

- The application proposes the continued use of visible emissions and pressure drop range as indicators of compliance. Visible emissions from the stack will be monitored daily during operations by someone certified in Method 9 opacity readings. A Method 9 observation will not be performed unless the opacity is 10% or more and is not corrected within one hour of the initial observation. A Method 9 observation, when needed, will be performed within 4 hours of the initial observation. Daily pressure drops will be read from the magnehelic gauge and recorded. Pressure drop across the baghouse will be measured in inches of water column within a range of 1 to 10 inches of water column.

- See Appendix A for the Compliance Assurance Monitoring (CAM) Plan

40 CFR Part 64, §64.2

- The permittee shall perform a visual check, once per day, of the baghouse stack associated with these units. The check shall be performed by a person familiar with Method 9. If estimated instantaneous visible emissions in excess of 10% opacity are observed and not corrected within a 1 hour period, then a Method 9 must be performed within 4 hours of the observation. Maintenance shall be performed as needed. Any repairs or observed problems shall be recorded.

  Rule 335-3-16-.05(c)1.

- The permittee shall perform a weekly inspection of the baghouse to verify proper operation. The following activities shall be performed:

  (a) Check hopper, fan, and cleaning cycle for proper operation.

(b) Check all hoods and ducts.

(c) Record any repairs or observed problems.

Rule 335-3-16-.05(c)1.

- The permittee shall perform an annual inspection of the baghouse to verify proper operation. The following activities shall be performed:

  (a) Once per year, inspect baghouse structure, access doors, door seals, and bags.

  (b) Once per year, perform an internal inspection of the baghouse hoppers.

  (c) Record any repairs or observed problems.

  Rule 335-3-16-.05(c)1.

Reporting and Recordkeeping

- All records shall be maintained in a form suitable for inspection for a period of at least five (5) years.

  Rule 335-3-16-.05(c)2.

- The facility shall maintain a record of monthly and 12-month rolling totals of hours of operation for these units.

  Rule 335-3-16-.05(c)2.

- The facility shall maintain a record of all weekly and annual baghouse inspections to satisfy the requirements of periodic monitoring. This shall include all problems observed, excursions, and corrective actions taken.

  Rule 335-3-16-.05(c)2.

- If a visible emission observation is required using the 40 CFR Part 60, Appendix A, Method 9, the results will be documented using an ADEM visible emissions observation report and the cause and corrective action taken will be documented in a logbook.

  Rule 335-3-16-.05(c)2.

- The facility shall maintain a record of all visible emissions readings performed to satisfy monitoring requirements. This shall include all problems observed, excursions, and corrective actions taken.

  Rule 335-3-16-.05(c)2.

- The facility shall maintain a record of all differential pressure readings performed to satisfy the requirements of Compliance Assurance Monitoring. This shall include all problems observed, excursions, and corrective actions taken.

Rule 335-3-16-.05(c)2. & 40 CFR Part 64

- The facility shall maintain a record of all visual checks and Method 9 tests performed to satisfy the requirements of Compliance Assurance Monitoring. This shall include all problems observed, excursions, and corrective actions taken.

  Rule 335-3-16-.05(c)2. & 40 CFR Part 64

Brass Casting/Pouring Line w/ BH #6 (EP006) – Foundry 3

The Brass Casting/Pouring Line consists of two (2) side draft pouring hoods and two (2) travel vent hood systems. Molten metal is poured from ladles into molds from various molding centers.

Applicability

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, *"Major Source Operating Permit"*.

  Rule 335-3-16-.03

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), *"Visible Emissions".*

  Rule 335-3-4-.01(1)

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.02(3), *"Fugitive Dust and Fugitive Emissions"*.

  Rule 335-3-4-.02(3)

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), *"Process Industries – General"*.

  Rule 335-3-4-.04(1)

- These sources have an enforceable limit in place in order to prevent them from being subject to the provisions of ADEM Admin. Code r. 335-3-14-.04, *"Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)"*.

  Rule 335-3-14-.04(Anti-PSD)

Emission Standards

Opacity

- Any source of particulate emission shall not discharge into the atmosphere particulate of an opacity greater than that designated as 20% opacity, as determined by a 6-minute period. During one 6 minute period in any 60 minute period a source may discharge into the atmosphere from any source of emissions, particulate of an opacity not greater than that designated as 40% opacity.

  Rule 335-3-4-.01(a) & (b)

Particulate Matter

- The particulate matter from these units shall not exceed the lesser of the Anti-PSD limit of 6.18 lb/hr (Air Permit 301-0005-X058 issued on May 15, 1997), or the process weight allowable as given by the following equations:

$$E = 3.59P^{0.62} \ (P < 30 \ tons/hr)$$

Or

$$E = 17.31P^{0.16} \ (P \geq 30 \ tons/hr)$$

Where *E* is the emissions in pounds per hour (lb/hr) and *P* is the process weight per hour in tons per hour (tph). At maximum capacity of 7.22 tph, the PM allowable for these units would be 12.22 lb/hr.

Rule 335-3-4-.04(1) & Rule 335-3-14-.04 (Anti-PSD)

- The hours of operation for the brass casting/pouring line shall not exceed 4,800 hours in any consecutive rolling 12-month period.

Rule 335-3-14-.04 (Anti-PSD)

Expected Emissions

- According to the application, the potential emissions for EP006 were based on a Material Balance.

Pollutant	Controlled Potential Emissions	
	lb/hr	TPY
PM	0.00001	0.06
PM_{10}	0.00001	0.06
$PM_{2.5}$	0.0046	0.02

Table 5. Based on 4,800 hours of operation.

Compliance and Performance Test Methods & Procedures

- Method 5 of 40 CFR 60, Appendix A, shall be used in the determination of particulate emissions.

Rule 335-3-1-.05

- Method 9 of 40 CFR 60, Appendix A, shall be used in the determination of opacity.

Rule 335-3-1-.05

Monitoring

- The permittee shall perform a visual check, once per day, of the baghouse stack associated with these units. The check shall be performed by a person familiar with Method 9. If estimated instantaneous visible emissions in excess of 10% opacity are observed and not corrected within a 1 hour period, then a Method 9 must be performed within 4 hours of the observation. Maintenance shall be performed as needed. Any repairs or observed problems shall be recorded.

Rule 335-3-16-.05(c)1.

- The permittee shall perform a weekly inspection of the baghouse to verify proper operation. The following activities shall be performed:

  (a) Check hopper, fan, and cleaning cycle for proper operation.

  (b) Check all hoods and ducts.

  (c) Record any repairs or observed problems.

  Rule 335-3-16-.05(c)1.

- The permittee shall perform an annual inspection of the baghouse to verify proper operation. The following activities shall be performed:

  (a) Once per year, inspect baghouse structure, access doors, door seals, and bags.

  (b) Once per year, perform an internal inspection of the baghouse hoppers.

  (c) Record any repairs or observed problems.

  Rule 335-3-16-.05(c)1.

Reporting and Recordkeeping

- All records shall be maintained in a form suitable for inspection for a period of at least five (5) years.

  Rule 335-3-16-.05(c)2.

- The facility shall maintain a record of all weekly and annual baghouse inspections to satisfy the requirements of periodic monitoring. This shall include all problems observed, excursions, and corrective actions taken.

  Rule 335-3-16-.05(c)2.

- If a visible emission observation is required using the 40 CFR Part 60, Appendix A, Method 9, the results will be documented using an ADEM visible emissions observation report and the cause and the corrective action taken will be documented in a logbook.

  Rule 335-3-16-.05(c)2.

- The facility shall maintain a record of all Method 9 observations performed to satisfy monitoring requirements. This shall include all problems observed, excursions, and corrective actions taken.

  Rule 335-3-16-.05(c)2.

- The facility shall maintain a record of monthly and 12-month rolling totals of hours of operation for these units.

  Rule 335-3-16-.05(c)2.

Ten (10) Electric Furnaces and Seven (7) Ladle Heaters w/ BH #7 (EP007) – Foundry 3

These furnaces are used to melt brass ingot, gates, and risers to provide molten metal to the pouring lines and consequently to produce castings.

Applicability

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, *"Major Source Operating Permit"*.

  Rule 335-3-16-.03

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), *"Visible Emissions".*

  Rule 335-3-4-.01(1)

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.02(3), *"Fugitive Dust and Fugitive Emissions"*.

  Rule 335-3-4-.02(3)

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), *"Process Industries – General"*.

  Rule 335-3-4-.04(1)

- The furnaces are subject to the applicable requirements of 40 CFR Part 63, Subpart ZZZZZZ, *"National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries"*.

  Rule 335-3-11-.06(155) & 40 CFR Part 63 Subpart ZZZZZZ, §63.11544(a)(3)

- The melting operations of this source are subject to the applicable requirements of 40 CFR Part 63 Subpart A, *"General Provisions"*.

  Rule 335-3-11-.06(1) & 40 CFR Part 63 Subpart ZZZZZZ, §63.11555

Emission Standards

Opacity

- Any source of particulate emission shall not discharge into the atmosphere particulate of an opacity greater than that designated as 20% opacity, as determined by a 6-minute period. During one 6 minute period in any 60 minute period a source may discharge into the atmosphere from any source of emissions, particulate of an opacity not greater than that designated as 40% opacity.

  Rule 335-3-4-.01(a) & (b)

Particulate Matter

- The particulate matter from these units shall not exceed the process weight allowable as given by the following equations:

$$E = 3.59P^{0.62} \ (P < 30 \ tons/hr)$$

Or

$$E = 17.31P^{0.16} \ (P \geq 30 \ tons/hr)$$

Where *E* is the emissions in pounds per hour (lb/hr) and *P* is the process weight per hour in tons per hour (tph). At maximum capacity of 7.22 tph, the PM allowable for these units would be 12.22 lb/hr.

Rule 335-3-4-.04(1)

- For existing affected sources located at a large foundry, the permittee must achieve a particulate matter (PM) control efficiency of at least 95.0 percent or emit no more than an outlet PM concentration of 0.034 gram per dry standard cubic meter (g/dscm) (0.015 grains per dry standard cubic feet(gr/dscf)).

40 CFR Part 63 Subpart ZZZZZZ, §63.11550(b)(1)

- Cover or enclose each melting furnace that is equipped with a cover or enclosure during the melting operation to the extent practicable (e.g., except when access is needed; including, but not limited to charging, alloy addition, and tapping).

40 CFR Part 63 Subpart ZZZZZZ, §63.11550(a)(1)

- Purchase only metal scrap that has been depleted (to the extent practicable) of other nonferrous foundry HAP in the materials charged to the melting furnace, except metal scrap that is purchased specifically for its HAP metal content for use in alloying or to meet specifications for the casting. This requirement does not apply to material that is not scrap (e.g., ingots, alloys, sows) or to materials that are not purchased (e.g., internal scrap, customer returns).

40 CFR Part 63 Subpart ZZZZZZ, §63.11550(a)(2)

- Prepare and operate pursuant to a written management practices plan. The management practices plan must include the required management practices of §63.11550(a)(1) and (2) and may include any other management practices that are implemented at the facility to minimize emissions from melting furnaces. The facility must inform the appropriate employees of the management practices that they must follow. The permittee may use the facility standard operating procedures as the management practices plan provided the standard operating procedures include the required management practices in §63.11550(a)(1) and (2).

40 CFR Part 63 Subpart ZZZZZZ, §63.11550(a)(3)

Expected Emissions

- According to the application, the potential emissions for EP007 were based on a Material Balance.

Pollutant	Controlled Potential Emissions	
	lb/hr	TPY
PM	0.25	1.10
PM_{10}	0.25	1.10
$PM_{2.5}$	0.05	0.22

Table 6. Based on 8,760 hours of operation.

Compliance and Performance Test Methods & Procedures

- Method 5 of 40 CFR 60, Appendix A, shall be used in the determination of particulate emissions.

  Rule 335-3-1-.05 & 40 CFR Part 63 Subpart ZZZZZZ, §63.11551(c)(1)(v)

- Method 9 of 40 CFR 60, Appendix A, shall be used in the determination of opacity.

  Rule 335-3-1-.05

Monitoring

- The permittee shall perform a visual check, once per day, of the baghouse stack associated with these units. The check shall be performed by a person familiar with Method 9. If estimated instantaneous visible emissions in excess of 10% opacity are observed and not corrected within a 1 hour period, then a Method 9 must be performed within 4 hours of the observation. Maintenance shall be performed as needed. Any repairs or observed problems shall be recorded.

  Rule 335-3-16-.05(c)1. & 40 CFR Part 63 Subpart ZZZZZZ, §63.11552(b)(1)(i)

- The permittee shall perform a weekly inspection of the baghouse to verify proper operation. The following activities shall be performed:

  (a) Check hopper, fan, and cleaning cycle for proper operation.

  (b) Check all hoods and ducts.

  (c) Record any repairs or observed problems.

  Rule 335-3-16-.05(c)1.

- The permittee shall perform an annual inspection of the baghouse to verify proper operation. The following activities shall be performed:

  (a) Once per year, inspect baghouse structure, access doors, door seals, and bags.

  (b) Once per year, perform an internal inspection of the baghouse hoppers.

  (c) Record any repairs or observed problems.

Rule 335-3-16-.05(c)1.

Reporting and Recordkeeping

- All records shall be maintained in a form suitable for inspection for a period of at least five (5) years.

  Rule 335-3-16-.05(c)2 & 40 CFR Part 63 Subpart ZZZZZZ, §63.11553(d).

- The facility shall maintain a record of all weekly and annual baghouse inspections to satisfy the requirements of periodic monitoring. This shall include all problems observed, excursions, and corrective actions taken.

  Rule 335-3-16-.05(c)2.

- If a visible emission observation is required using the 40 CFR Part 60, Appendix A, Method 9, the results will be documented using an ADEM visible emissions observation report and the cause and the corrective action taken will be documented in a logbook.

  Rule 335-3-16-.05(c)2.

- The facility shall maintain a record of all Method 9 observations performed to satisfy monitoring requirements. This shall include all problems observed, excursions, and corrective actions taken.

  Rule 335-3-16-.05(c)2.

- The permittee must keep the records specified in §63.11553(c)(1) through (5)

  (1) As required in §63.10(b)(2)(xiv), the facility must keep a copy of each notification that the permittee submitted to comply with this subpart and all documentation supporting any Initial Notification or Notification of Compliance Status that the permittee submitted.

  (2) The permittee must keep records to document conformance with the management practices plan required by §63.11550 as specified in §63.11553(c)(2)(i) and (ii).

    (i) For melting furnaces equipped with a cover or enclosure, records must identify each melting furnace equipped with a cover or enclosure and document that the procedures in the management practices plan were followed during the monthly inspections. These records may be in the form of a checklist.

    (ii) Records documenting that the permittee purchased only metal scrap that has been depleted of HAP metals (to the extent practicable) charged to the melting furnace. If the permittee purchases scrap metal specifically for the HAP metal content for use in alloying or to meet specifications for the casting, the permittee must keep records to document that the HAP metal is included in the material specifications for the cast metal product.

  (3) The facility must keep the records of all performance tests, inspections and monitoring data required by §63.11551 and §63.11552, and the information identified in §63.11553(c)(3)(i) through (vi) for each required inspection or monitoring.

(i) The date, place, and time of the monitoring event;

(ii) Person conducting the monitoring;

(iii) Technique or method used;

(iv) Operating conditions during the activity;

(v) Results, including the date, time, and duration of the period from the time the monitoring indicated a problem (e.g., VE) to the time that monitoring indicated proper operation; and

(vi) Maintenance or corrective action taken (if applicable).

40 CFR Part 63 Subpart ZZZZZZ, §63.11553(c)(1) through (3)

- The records must be in a form suitable and readily available for expeditious review, according to §63.10(b)(1). As specified in §63.10(b)(1), the permittee must keep each record for 5 years following the date of each recorded action. For records of annual metal melt production, the permittee must keep the records for 5 years from the end of the calendar year. The permittee must keep each record onsite for at least 2 years after the date of each recorded action according to §63.10(b)(1). The permittee may keep the records offsite for the remaining 3 years.

40 CFR Part 63 Subpart ZZZZZZ, §63.11553(d)

- If a deviation occurs during a semiannual reporting period, the permittee must submit a compliance report according to the requirements in §63.11553(e)(1) and (2).

(1) The first reporting period covers the period beginning on the compliance date specified in §63.11545 and ending on June 30 or December 31, whichever date comes first after the compliance date. Each subsequent reporting period covers the semiannual period from January 1 through June 30 or from July 1 through December 31. The permittee compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date comes first after end of the semiannual reporting period.

(2) A compliance report must include the information §63.11553(e)(2)(i) through (iv).

(i) Company name and address

(ii) Statement by a responsible official, with the official's name, title, and signature, certifying the truth, accuracy and completeness of the content of the report.

(iii) Date of the report and beginning and ending dates of the reporting period.

(iv) Identification of the affected source, the pollutant being monitored, applicable requirement, description of deviation, and corrective action taken.

Five (5) Cutoff Saws, One (1) Wheelabrator Shotblast Machine, One (1) Sinto Drum Blast, One (1) Grinder and One (1) Plasma Cutter w/ BH #8 (EP008) – Foundry 3

The metal cutting saws are used to remove gates and risers. The grinder is used to smooth the castings. The plasma cutter is used to remove gates and risers. And the shot blasting machines are used to clean castings.

Applicability

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, *"Major Source Operating Permit"*.

  Rule 335-3-16-.03

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), *"Visible Emissions".*

  Rule 335-3-4-.01(1)

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.02(3), *"Fugitive Dust and Fugitive Emissions"*.

  Rule 335-3-4-.02(3)

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), *"Process Industries – General"*.

  Rule 335-3-4-.04(1)

- For particulate matter emissions, these sources are subject to the applicable requirements of 40 CFR Part 64, *"Compliance Assurance Monitoring"*.

  40 CFR Part 64, §64.2

Emission Standards

Opacity

- Any source of particulate emission shall not discharge into the atmosphere particulate of an opacity greater than that designated as 20% opacity, as determined by a 6-minute period. During one 6 minute period in any 60 minute period a source may discharge into the atmosphere from any source of emissions, particulate of an opacity not greater than that designated as 40% opacity.

  Rule 335-3-4-.01(a) & (b)

Particulate Matter

- The particulate matter from these units shall not exceed the process weight allowable as given by the following equations:

$$E = 3.59P^{0.62} \ (P < 30 \ tons/hr)$$

Or

$$E = 17.31P^{0.16} \ (P \geq 30 \ tons/hr)$$

Where *E* is the emissions in pounds per hour (lb/hr) and *P* is the process weight per hour in tons per hour (tph). At maximum capacity of 12.5 tph, the PM allowable for these units would be 17.19 lb/hr.

Rule 335-3-4-.04(1)

Expected Emissions

- According to the application, the potential emissions for EP008 were based on a Material Balance.

Pollutant	Controlled Potential Emissions	
	lb/hr	TPY
PM	0.46	2.01
PM_{10}	0.46	2.01
$PM_{2.5}$	0.09	0.40

Table 7. Based on 8,760 hours of operation.

Compliance and Performance Test Methods & Procedures

- Method 5 of 40 CFR 60, Appendix A, shall be used in the determination of particulate emissions.

  Rule 335-3-1-.05

- Method 9 of 40 CFR 60, Appendix A, shall be used in the determination of opacity.

  Rule 335-3-1-.05

Monitoring

- Compliance Assurance Monitoring shall be conducted.

  - The requirements of this part shall apply to a pollutant-specific emissions unit at a major source that is required to obtain a part 70 or 71 permit if the unit satisfies all the following criteria:

    (1) The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or surrogate thereof);

    (2) The unit uses a control device to achieve compliance with any such emission limitation or standard; and

    (3) The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source.

40 CFR Part 64. §64.2(a)(1) through (3)

- This source has a particulate matter emission limitation set forth by ADEM Administrative Code r. 335-3-4-.04(1) [§64.2(a)(1)].

- This source is controlled by a baghouse to comply with the particulate matter emission limit [§64.2(a)(2)].

  This source has the potential to emit over 100 TPY of particulate matter without a control device [§64.2(a)(3)].

- The application stated that the visible emissions and pressure drop range that had been established based on historical data collected for the past five (5) years as the indicators. Visible emissions from the stack will be monitored daily during operations by someone certified in Method 9 opacity readings. Method 9 will not be performed unless the opacity is 10% or more and is not corrected within one hour of the initial observation. Method 9, when needed, will be performed within 4 hours of the initial observation. Visible emissions were selected as an indicator because it indicates the proper operation of the pulse jet cleaning baghouse. Daily pressure drops will be read from the magnehelic gauge and recorded. Pressure drop across the baghouse will be measured in inches of water column within a range of 1 to 5 inches of water column. Pressure drop was selected as an indicator because it is indicative of the efficiency of the hoods and associated emission collection equipment inside Foundry 3.

- See Appendix A for the Compliance Assurance Monitoring (CAM) Plan

40 CFR Part 64, §64.2

- The permittee shall perform a visual check, once per day, of the baghouse stack associated with these units. The check shall be performed by a person familiar with Method 9. If estimated instantaneous visible emissions in excess of 10% opacity are observed and not corrected within a 1 hour period, then a Method 9 must be performed within 4 hours of the observation. Maintenance shall be performed as needed. Any repairs or observed problems shall be recorded.

  Rule 335-3-16-.05(c)1.

- The permittee shall perform a weekly inspection of the baghouse to verify proper operation. The following activities shall be performed:

  (a) Check hopper, fan, and cleaning cycle for proper operation.

  (b) Check all hoods and ducts.

  (c) Record any repairs or observed problems.

  Rule 335-3-16-.05(c)1.

- The permittee shall perform an annual inspection of the baghouse to verify proper operation. The following activities shall be performed:

  (a) Once per year, inspect baghouse structure, access doors, door seals, and bags.

  (b) Once per year, perform an internal inspection of the baghouse hoppers.

  (c) Record any repairs or observed problems.

  Rule 335-3-16-.05(c)1.

Reporting and Recordkeeping

- All records shall be maintained in a form suitable for inspection for a period of at least five (5) years.

  Rule 335-3-16-.05(c)

- The facility shall maintain a record of all weekly and annual baghouse inspections to satisfy the requirements of periodic monitoring. This shall include all problems observed, excursions, and corrective actions taken.

  Rule 335-3-16-.05(c)2.

- If a visible emission observation is required using the 40 CFR Part 60, Appendix A, Method 9, the results will be documented using an ADEM visible emissions observation report and the cause and the corrective action taken will be documented in a logbook.

  Rule 335-3-16-.05(c)2.

- The facility shall maintain a record of all Method 9 observations performed to satisfy monitoring requirements. This shall include all problems observed, excursions, and corrective actions taken.

  Rule 335-3-16-.05(c)2.

- The facility shall maintain a record of all differential pressure readings performed to satisfy the requirements of Compliance Assurance Monitoring. This shall include all problems observed, excursions, and corrective actions taken. Each record shall be maintained for a period of 5 years.

  Rule 335-3-16-.05(c)2. & 40 CFR Part 64

- The facility shall maintain a record of all visual checks and Method 9 tests performed to satisfy the requirements of Compliance Assurance Monitoring. This shall include all problems observed, excursions, and corrective actions taken. Each record shall be maintained for a period of 5 years.

  Rule 335-3-16-.05(c)2. & 40 CFR Part 64

Muller Sand Handling System w/ BH #9 (EP009) – Foundry 3

The Sand Handling system is for molding of brass castings.

Applicability

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, *"Major Source Operating Permit"*.

  Rule 335-3-16-.03

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), *"Visible Emissions".*

  Rule 335-3-4-.01(1)

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.02(3), *"Fugitive Dust and Fugitive Emissions"*.

  Rule 335-3-4-.02(3)

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), *"Process Industries – General"*.

  Rule 335-3-4-.04(1)

- This source has an enforceable limit in order to prevent it from being subject to the provisions of ADEM Admin. Code r. 335-3-14-.04, "*Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)"*.

  Rule 335-3-14-.04 (Anti-PSD)

- For particulate matter emissions, this source is subject to the applicable requirements of 40 CFR Part 64, *"Compliance Assurance Monitoring"*.

  40 CFR Part 64, §64.2

Emission Standards

Opacity

- Any source of particulate emission shall not discharge into the atmosphere particulate of an opacity greater than that designated as 20% opacity, as determined by a 6-minute period. During one 6 minute period in any 60 minute period a source may discharge into the atmosphere from any source of emissions, particulate of an opacity not greater than that designated as 40% opacity.

  Rule 335-3-4-.01(a) & (b)

Particulate Matter

- The particulate matter from these units shall not exceed the process weight allowable as given by the following equations:

$$E = 3.59P^{0.62} \ (P < 30 \ tons/hr)$$

Or

$$E = 17.31P^{0.16} \ (P \geq 30 \ tons/hr)$$

Where *E* is the emissions in pounds per hour (lb/hr) and *P* is the process weight per hour in tons per hour (tph). At maximum capacity of 25 tph, the PM allowable for these units would be 26.41 lb/hr.

Rule 335-3-4-.04(1)

- The hours of operation for this source shall not exceed 6,000 hours in any consecutive rolling 12-month period.

Rule 335-3-14-.04 (Anti-PSD)

Expected Emissions

- According to the application, the potential emissions for EP009 were based on a Material Balance.

Pollutant	Controlled Potential Emissions	
	lb/hr	TPY
PM	2.81	8.43
PM_{10}	2.81	8.43
$PM_{2.5}$	0.56	1.69

Table 8. Based on 6,000 hours of operation.

Compliance and Performance Test Methods & Procedures

- Method 5 of 40 CFR 60, Appendix A, shall be used in the determination of particulate emissions.

Rule 335-3-1-.05

- Method 9 of 40 CFR 60, Appendix A, shall be used in the determination of opacity.

Rule 335-3-1-.05

Monitoring

- Compliance Assurance Monitoring shall be conducted.

- The requirements of this part shall apply to a pollutant-specific emissions unit at a major source that is required to obtain a part 70 or 71 permit if the unit satisfies all the following criteria:

  (1) The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or surrogate thereof);

  (2) The unit uses a control device to achieve compliance with any such emission limitation or standard; and

  (3) The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source.

  40 CFR Part 64. §64.2(a)(1) through (3)

- This source has a particulate matter emission limitation set forth by ADEM Administrative Code r. 335-3-4-.04(1) [§64.2(a)(1)].

- This source is controlled by a baghouse to comply with the particulate matter emission limit [§64.2(a)(2)].

- This source has the potential to emit over 100 TPY of particulate matter without a control device [§64.2(a)(3)].

- The application stated that the visible emissions and pressure drop range that had been established based on historical data collected for the past five (5) years as the indicators. Visible emissions from the stack will be monitored daily during operations by someone certified in Method 9 opacity readings. Method 9 will not be performed unless the opacity is 10% or more and is not corrected within one hour of the initial observation. Method 9, when needed, will be performed within 4 hours of the initial observation. Visible emissions were selected as an indicator because it indicates the proper operation of the pulse jet cleaning baghouse. Daily pressure drops will be read from the magnehelic gauge and recorded. Pressure drop across the baghouse will be measured in inches of water column within a range of 1 to 10 inches of water column. Pressure drop was selected as an indicator because it is indicative of the efficiency of the hoods and associated emission collection equipment inside Foundry 3.

- See Appendix A for the Compliance Assurance Monitoring (CAM) Plan

40 CFR Part 64, §64.2

- The permittee shall perform a visual check, once per day, of the baghouse stack associated with these units. The check shall be performed by a person familiar with Method 9. If estimated instantaneous visible emissions in excess of 10% opacity are observed and not corrected within a 1 hour period, then a Method 9 must be performed within 4 hours of the observation. Maintenance shall be performed as needed. Any repairs or observed problems shall be recorded.

  Rule 335-3-16-.05(c)1.

- The permittee shall perform a weekly inspection of the baghouse to verify proper operation. The following activities shall be performed:

  (a) Check hopper, fan, and cleaning cycle for proper operation.

  (b) Check all hoods and ducts.

  (c) Record any repairs or observed problems.

  Rule 335-3-16-.05(c)1.

- The permittee shall perform an annual inspection of the baghouse to verify proper operation. The following activities shall be performed:

  (a) Once per year, inspect baghouse structure, access doors, door seals, and bags.

  (b) Once per year, perform an internal inspection of the baghouse hoppers.

  (c) Record any repairs or observed problems.

  Rule 335-3-16-.05(c)1.

Reporting and Recordkeeping

- All records shall be maintained in a form suitable for inspection for a period of at least five (5) years.

  Rule 335-3-16-.05(c)2.

- The facility shall maintain a record of monthly and 12-month rolling totals of hours of operation for this source.

  Rule 335-3-16-.05(c)2.

- The facility shall maintain a record of all weekly and annual baghouse inspections to satisfy the requirements of periodic monitoring. This shall include all problems observed, excursions, and corrective actions taken.

  Rule 335-3-16-.05(c)2.

- If a visible emission observation is required using the 40 CFR Part 60, Appendix A, Method 9, the results will be documented using an ADEM visible emissions observation report and the cause and the corrective action taken will be documented in a logbook.

  Rule 335-3-16-.05(c)2.

- The facility shall maintain a record of all differential pressure readings performed to satisfy the requirements of Compliance Assurance Monitoring. This shall include all problems observed, excursions, and corrective actions taken.

  Rule 335-3-16-.05(c)2. & 40 CFR Part 64, §64.2

- The facility shall maintain a record of all Method 9 observations performed to satisfy monitoring requirements. This shall include all problems observed, excursions, and corrective actions taken.

  Rule 335-3-16-.05(c)2. & 40 CFR Part 64, §64.2

South End Cleaning Room w/ BH #11 (EP011)

Castings are smoothed using various grinding wheels. According to the application, the grinding wheels are various makes and models.

Applicability

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, *"Major Source Operating Permit"*.

  Rule 335-3-16-.03

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), *"Visible Emissions".*

  Rule 335-3-4-.01(1)

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.02(3), *"Fugitive Dust and Fugitive Emissions"*.

  Rule 335-3-4-.02(3)

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), *"Process Industries – General"*.

  Rule 335-3-4-.04(1)

Emission Standards

Opacity

- Any source of particulate emission shall not discharge into the atmosphere particulate of an opacity greater than that designated as 20% opacity, as determined by a 6-minute period. During one 6 minute period in any 60 minute period a source may discharge into the atmosphere from any source of emissions, particulate of an opacity not greater than that designated as 40% opacity.

  Rule 335-3-4-.01(a) & (b)

Particulate Matter

- The particulate matter from these units shall not exceed the process weight allowable as given by the following equations:

$$E = 3.59P^{0.62} \ (P < 30 \ tons/hr)$$

Or

$$E = 17.31P^{0.16} \ (P \geq 30 \ tons/hr)$$

Where *E* is the emissions in pounds per hour (lb/hr) and *P* is the process weight per hour in tons per hour (tph). At maximum capacity of 1.6 tph, the PM allowable for these units would be 4.80 lb/hr.

Rule 335-3-4-.04(1)

Expected Emissions

- According to the application, the potential emissions for EP011 were based on a Material Balance.

Pollutant	Controlled Potential Emissions	
	lb/hr	TPY
PM	0.09	0.37
PM_{10}	0.09	0.37
$PM_{2.5}$	0.02	0.07

Table 9. Based on 8,760 hours of operation.

Compliance and Performance Test Methods & Procedures

- Method 5 of 40 CFR 60, Appendix A, shall be used in the determination of particulate emissions.

  Rule 335-3-1-.05

- Method 9 of 40 CFR 60, Appendix A, shall be used in the determination of opacity.

  Rule 335-3-1-.05

Monitoring

- The permittee shall perform a visual check, once per day, of the baghouse stack associated with these units. The check shall be performed by a person familiar with Method 9. If estimated instantaneous visible emissions in excess of 10% opacity are observed and not corrected within a 1 hour period, then a Method 9 must be performed within 4 hours of the observation. Maintenance shall be performed as needed. Any repairs or observed problems shall be recorded.

  Rule 335-3-16-.05(c)1.

- The permittee shall perform a weekly inspection of the baghouse to verify proper operation. The following activities shall be performed:

  (a) Check hopper, fan, and cleaning cycle for proper operation.

  (b) Check all hoods and ducts.

  (c) Record any repairs or observed problems.

  Rule 335-3-16-.05(c)1.

- The permittee shall perform an annual inspection of the baghouse to verify proper operation. The following activities shall be performed:

  (a) Once per year, inspect baghouse structure, access doors, door seals, and bags.

  (b) Once per year, perform an internal inspection of the baghouse hoppers.

  (c) Record any repairs or observed problems.

  Rule 335-3-16-.05(c)1.

Reporting and Recordkeeping

- All records shall be maintained in a form suitable for inspection for a period of at least five (5) years.

  Rule 335-3-16-.05(c)2.

- The facility shall maintain a record of all weekly and annual baghouse inspections to satisfy the requirements of periodic monitoring. This shall include all problems observed, excursions, and corrective actions taken.

  Rule 335-3-16-.05(c)2.

- If a visible emission observation is required using the 40 CFR Part 60, Appendix A, Method 9, the results will be documented using an ADEM visible emissions observation report and the cause and the corrective action taken will be documented in a logbook.

  Rule 335-3-16-.05(c)2.

- The facility shall maintain a record of all Method 9 observations performed to satisfy monitoring requirements. This shall include all problems observed, excursions, and corrective actions taken.

  Rule 335-3-16-.05(c)2.

North End Cleaning Room w/ BH #12 (EP012)

Castings are smoothed using various grinding wheels. Gates and risers are then removed from castings using abrasive cut-off wheels. According to the application, the grinding wheels and saws are various makes and models.

Applicability

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, *"Major Source Operating Permit"*.

  Rule 335-3-16-.03

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), *"Visible Emissions".*

  Rule 335-3-4-.01(1)

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.02(3), *"Fugitive Dust and Fugitive Emissions"*.

  Rule 335-3-4-.02(3)

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), *"Process Industries – General"*.

  Rule 335-3-4-.04(1)

- For particulate matter emissions, these sources are subject to the applicable requirements of 40 CFR Part 64, *"Compliance Assurance Monitoring"*.

  40 CFR Part 64, §64.2

Emission Standards

Opacity

- Any source of particulate emission shall not discharge into the atmosphere particulate of an opacity greater than that designated as 20% opacity, as determined by a 6-minute period. During one 6 minute period in any 60 minute period a source may discharge into the atmosphere from any source of emissions, particulate of an opacity not greater than that designated as 40% opacity.

  Rule 335-3-4-.01(a) & (b)

Particulate Matter

- The particulate matter from these units shall not exceed the process weight allowable as given by the following equations:

$$E = 3.59P^{0.62} \ (P < 30 \ tons/hr)$$

Or

$$E = 17.31P^{0.16} \ (P \geq 30 \ tons/hr)$$

Where *E* is the emissions in pounds per hour (lb/hr) and *P* is the process weight per hour in tons per hour (tph). At maximum capacity of 2.3 tph, the PM allowable for these units would be 6.02 lb/hr.

Rule 335-3-4-.04(1)

Expected Emissions

- According to the application, the potential emissions for EP012 were based on a Material Balance.

Pollutant	Controlled Potential Emissions	
	lb/hr	TPY
PM	0.61	2.67
PM_{10}	0.61	2.67
$PM_{2.5}$	0.12	0.53

Table 10. Based on 8,760 hours of operation.

Compliance and Performance Test Methods & Procedures

- Method 5 of 40 CFR 60, Appendix A, shall be used in the determination of particulate emissions.

  Rule 335-3-1-.05

- Method 9 of 40 CFR 60, Appendix A, shall be used in the determination of opacity.

  Rule 335-3-1-.05

Monitoring

- Compliance Assurance Monitoring shall be conducted.

  - The requirements of this part shall apply to a pollutant-specific emissions unit at a major source that is required to obtain a part 70 or 71 permit if the unit satisfies all the following criteria:

    (1) The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or surrogate thereof);

    (2) The unit uses a control device to achieve compliance with any such emission limitation or standard; and

    (3) The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source.

40 CFR Part 64. §64.2(a)(1) through (3)

- This source has a particulate matter emission limitation set forth by ADEM Administrative Code r. 335-3-4-.04(1) [§64.2(a)(1)].

- This source is controlled by a baghouse to comply with the particulate matter emission limit [§64.2(a)(2)].

  This source has the potential to emit over 100 TPY of particulate matter without a control device [§64.2(a)(3)].

- The application stated that the visible emissions and pressure drop range that had been established based on historical data collected for the past five (5) years as the indicators. Visible emissions from the stack will be monitored daily during operations by someone certified in Method 9 opacity readings. Method 9 will not be performed unless the opacity is 10% or more and is not corrected within one hour of the initial observation. Method 9, when needed, will be performed within 4 hours of the initial observation. Visible emissions were selected as an indicator because it indicates the proper operation of the pulse jet cleaning baghouse. Daily pressure drops will be read from the magnehelic gauge and recorded. Pressure drop across the baghouse will be measured in inches of water column within a range of 1 to 5 inches of water column. Pressure drop was selected as an indicator because it is indicative of the efficiency of the hoods and associated emission collection equipment inside Foundry 2.

- See Appendix A for the Compliance Assurance Monitoring (CAM) Plan

40 CFR Part 64, §64.2

- The permittee shall perform a visual check, once per day, of the baghouse stack associated with these units. The check shall be performed by a person familiar with Method 9. If estimated instantaneous visible emissions in excess of 10% opacity are observed and not corrected within a 1 hour period, then a Method 9 must be performed within 4 hours of the observation. Maintenance shall be performed as needed. Any repairs or observed problems shall be recorded.

  Rule 335-3-16-.05(c)1.

- The permittee shall perform a weekly inspection of the baghouse to verify proper operation. The following activities shall be performed:

  (a) Check hopper, fan, and cleaning cycle for proper operation.

  (b) Check all hoods and ducts.

  (c) Record any repairs or observed problems.

  Rule 335-3-16-.05(c)1.

- The permittee shall perform an annual inspection of the baghouse to verify proper operation. The following activities shall be performed:

(a) Once per year, inspect baghouse structure, access doors, door seals, and bags.

(b) Once per year, perform an internal inspection of the baghouse hoppers.

(c) Record any repairs or observed problems.

Rule 335-3-16-.05(c)1.

Reporting and Recordkeeping

- All records shall be maintained in a form suitable for inspection for a period of at least five (5) years.

  Rule 335-3-16-.05(c)

- The facility shall maintain a record of all weekly and annual baghouse inspections to satisfy the requirements of periodic monitoring. This shall include all problems observed, excursions, and corrective actions taken.

  Rule 335-3-16-.05(c)2.

- If a visible emission observation is required using the 40 CFR Part 60, Appendix A, Method 9, the results will be documented using an ADEM visible emissions observation report and the cause and the corrective action taken will be documented in a logbook.

  Rule 335-3-16-.05(c)2.

- The facility shall maintain a record of all differential pressure readings performed to satisfy the requirements of Compliance Assurance Monitoring. This shall include all problems observed, excursions, and corrective actions taken. Each record shall be maintained for a period of 5 years.

  Rule 335-3-16-.05(c)2. & 40 CFR Part 64

- The facility shall maintain a record of all visual checks and Method 9 tests performed to satisfy the requirements of Compliance Assurance Monitoring. This shall include all problems observed, excursions, and corrective actions taken.

  Rule 335-3-16-.05(c)2. & 40 CFR Part 64

Four (4) Wheelabrator Shotblast Machines w/ BH #13, #14, #15, & #16 (EP013, EP014, EP015, and EP016)

The shotblast machines are used for cleaning brass castings.

Applicability

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, *"Major Source Operating Permit"*.

  Rule 335-3-16-.03

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), *"Visible Emissions".*

  Rule 335-3-4-.01(1)

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.02(3), *"Fugitive Dust and Fugitive Emissions"*.

  Rule 335-3-4-.02(3)

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), *"Process Industries – General"*.

  Rule 335-3-4-.04(1)

Emission Standards

Opacity

- Any source of particulate emission shall not discharge into the atmosphere particulate of an opacity greater than that designated as 20% opacity, as determined by a 6-minute period. During one 6 minute period in any 60 minute period a source may discharge into the atmosphere from any source of emissions, particulate of an opacity not greater than that designated as 40% opacity.

  Rule 335-3-4-.01(a) & (b)

Particulate Matter

- The particulate matter from these units shall not exceed the process weight allowable as given by the following equations:

$$E = 3.59P^{0.62} \quad (P < 30 \ tons/hr)$$

Or

$$E = 17.31P^{0.16} \quad (P \geq 30 \ tons/hr)$$

Where *E* is the emissions in pounds per hour (lb/hr) and *P* is the process weight per hour in tons per hour (tph). At maximum capacity of 2.6 tph for EP013, 1.65 tph for EP014, 2.8 tph for EP015, and 1.2 tph for EP016; the PM allowable for these units would be 6.49 lb/hr for EP013, 4.90 lb/hr for EP014, 6.80 lb/hr for EP015, and 4.02 lb/hr for EP016.

Rule 335-3-4-.04(1)

Expected Emissions

- According to the application, the potential emissions for EP013, EP014, EP015, and EP016 were based on a Material Balance.

Pollutant	Controlled Potential Emissions (EP013)		Controlled Potential Emissions (EP014)		Controlled Potential Emissions (EP015)		Controlled Potential Emissions (EP016)	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
PM	0.05	0.22	0.14	0.62	0.20	0.89	0.25	1.10
PM_{10}	0.05	0.22	0.14	0.62	0.20	0.89	0.25	1.10
$PM_{2.5}$	0.01	0.04	0.03	0.12	0.04	0.18	0.05	0.22

Table 11. Based on 8,760 hours of operation.

Compliance and Performance Test Methods & Procedures

- Method 5 of 40 CFR 60, Appendix A, shall be used in the determination of particulate emissions.

  Rule 335-3-1-.05

- Method 9 of 40 CFR 60, Appendix A, shall be used in the determination of opacity.

  Rule 335-3-1-.05

Monitoring

- The permittee shall perform a visual check, once per day, of the baghouse stack associated with these units. The check shall be performed by a person familiar with Method 9. If estimated instantaneous visible emissions in excess of 10% opacity are observed and not corrected within a 1 hour period, then a Method 9 must be performed within 4 hours of the observation. Maintenance shall be performed as needed. Any repairs or observed problems shall be recorded.

  Rule 335-3-16-.05(c)1.

- The permittee shall perform a weekly inspection of the baghouse to verify proper operation. The following activities shall be performed:

  (a) Check hopper, fan, and cleaning cycle for proper operation.

  (b) Check all hoods and ducts.

(c) Record any repairs or observed problems.

Rule 335-3-16-.05(c)1.

- The permittee shall perform an annual inspection of the baghouse to verify proper operation. The following activities shall be performed:

  (a) Once per year, inspect baghouse structure, access doors, door seals, and bags.

  (b) Once per year, perform an internal inspection of the baghouse hoppers.

  (c) Record any repairs or observed problems.

  Rule 335-3-16-.05(c)1.

Reporting and Recordkeeping

- All records shall be maintained in a form suitable for inspection for a period of at least five (5) years.

  Rule 335-3-16-.05(c)2.

- The facility shall maintain a record of all weekly and annual baghouse inspections to satisfy the requirements of periodic monitoring. This shall include all problems observed, excursions, and corrective actions taken.

  Rule 335-3-16-.05(c)2.

- If a visible emission observation is required using the 40 CFR Part 60, Appendix A, Method 9, the results will be documented using an ADEM visible emissions observation report and the cause and the corrective action taken will be documented in a logbook.

  Rule 335-3-16-.05(c)2.

- The facility shall maintain a record of all Method 9 observations performed to satisfy monitoring requirements. This shall include all problems observed, excursions, and corrective actions taken.

  Rule 335-3-16-.05(c)2.

Core Oven – Core Room (EP017)

The core oven (core room) is used to dry sand molds for castings.

Applicability

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, *"Major Source Operating Permit"*.

  Rule 335-3-16-.03

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), *"Visible Emissions".*

  Rule 335-3-4-.01(1)

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.02(3), *"Fugitive Dust and Fugitive Emissions"*.

  Rule 335-3-4-.02(3)

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), *"Process Industries – General"*.

  Rule 335-3-4-.04(1)

Emission Standards

Opacity

- Any source of particulate emission shall not discharge into the atmosphere particulate of an opacity greater than that designated as 20% opacity, as determined by a 6-minute period. During one 6 minute period in any 60 minute period a source may discharge into the atmosphere from any source of emissions, particulate of an opacity not greater than that designated as 40% opacity.

  Rule 335-3-4-.01(a) & (b)

Particulate Matter

- The particulate matter from these units shall not exceed the process weight allowable as given by the following equations:

$$E = 3.59P^{0.62} \quad (P < 30 \ tons/hr)$$

Or

$$E = 17.31P^{0.16} \quad (P \geq 30 \ tons/hr)$$

Where *E* is the emissions in pounds per hour (lb/hr) and *P* is the process weight per hour in tons per hour (tph). At maximum capacity of 0.05 tph, the PM allowable for these units would be 0.56 lb/hr.

Rule 335-3-4-.04(1)

Expected Emissions

- According to the application, the potential emissions for EP017 were based on Southern Research Center testing conducted in 1971 and previous emission estimates.

Pollutant	Controlled Potential Emissions	
	lb/hr	TPY
PM	0.18	0.78
PM_{10}	-	-
$PM_{2.5}$	-	-

Table 12. Based on 8,760 hours of operation.

Compliance and Performance Test Methods & Procedures

- Method 5 of 40 CFR 60, Appendix A, shall be used in the determination of particulate emissions.

  Rule 335-3-1-.05

- Method 9 of 40 CFR 60, Appendix A, shall be used in the determination of opacity.

  Rule 335-3-1-.05

Monitoring

- The permittee shall perform a visual check, once per day, of the baghouse stack associated with these units. The check shall be performed by a person familiar with Method 9. If estimated instantaneous visible emissions in excess of 10% opacity are observed and not corrected within a 1 hour period, then a Method 9 must be performed within 4 hours of the observation. Maintenance shall be performed as needed. Any repairs or observed problems shall be recorded.

  Rule 335-3-16-.05(c)1.

Reporting and Recordkeeping

- All records shall be maintained in a form suitable for inspection for a period of at least five (5) years.

  Rule 335-3-16-.05(c)2.

- If a visible emission observation is required using the 40 CFR Part 60, Appendix A, Method 9, the results will be documented using an ADEM visible emissions observation report and the cause and the corrective action taken will be documented in a logbook.

  Rule 335-3-16-.05(c)2.

- The facility shall maintain a record of all visible emissions readings performed to satisfy monitoring requirements. This shall include all problems observed, excursions, and corrective actions taken. Each record shall be maintained for a period of 5 years.

  Rule 335-3-16-.05(c)2.

Compact Attrition Reclamation System w/ BH #18 (EP018) – Foundry 3

The compact attrition reclamation system is used to reduce molds back to original sand through a process of lump breaking, screening, and air classification.

Applicability

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, *"Major Source Operating Permit"*.

  Rule 335-3-16-.03

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), *"Visible Emissions".*

  Rule 335-3-4-.01(1)

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.02(3), *"Fugitive Dust and Fugitive Emissions"*.

  Rule 335-3-4-.02(3)

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), *"Process Industries – General"*.

  Rule 335-3-4-.04(1)

- These sources have an enforceable limit in place in order to prevent them from being subject to the provisions of ADEM Admin. Code r. 335-3-14-.04, *"Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)"*.

  Rule 335-3-14-.04 (Anti-PSD)

Emission Standards

Opacity

- Any source of particulate emission shall not discharge into the atmosphere particulate of an opacity greater than that designated as 20% opacity, as determined by a 6-minute period. During one 6 minute period in any 60 minute period a source may discharge into the atmosphere from any source of emissions, particulate of an opacity not greater than that designated as 40% opacity.

  Rule 335-3-4-.01(a) & (b)

Particulate Matter

- The particulate matter from these units shall not exceed the lesser of the Anti-PSD limit of 3.4 lb/hr (Air Permit 301-0005-X065 issued December 1, 2008), or the process weight allowable as given by the following equations:

$$E = 3.59P^{0.62} \ (P < 30 \ tons/hr)$$

Or

$$E = 17.31P^{0.16} \ (P \geq 30 \ tons/hr)$$

Where *E* is the emissions in pounds per hour (lb/hr) and *P* is the process weight per hour in tons per hour (tph). At maximum capacity of 3.0 tph, the PM allowable for these units would be 7.09 lb/hr.

Rule 335-3-4-.04(1) & Rule 335-3-14-.04(Anti-PSD)

Expected Emissions

- According to the application, the potential emissions for EP018 were based on a Material Balance.

Pollutant	Controlled Potential Emissions	
	lb/hr	TPY
PM	1.20	5.26
PM_{10}	-	-
$PM_{2.5}$	-	-

Table 13. Based on 8,760 hours of operation.

Compliance and Performance Test Methods & Procedures

- Method 5 of 40 CFR 60, Appendix A, shall be used in the determination of particulate emissions.

  Rule 335-3-1-.05

- Method 9 of 40 CFR 60, Appendix A, shall be used in the determination of opacity.

  Rule 335-3-1-.05

Monitoring

- The permittee shall perform a visual check, once per day, of the baghouse stack associated with these units. The check shall be performed by a person familiar with Method 9. If estimated instantaneous visible emissions in excess of 10% opacity are observed and not corrected within a 1 hour period, then a Method 9 must be performed within 4 hours of the observation. Maintenance shall be performed as needed. Any repairs or observed problems shall be recorded.

  Rule 335-3-16-.05(c)1.

- The permittee shall perform a weekly inspection of the baghouse to verify proper operation. The following activities shall be performed:

  (a) Check hopper, fan, and cleaning cycle for proper operation.

(b) Check all hoods and ducts.

(c) Record any repairs or observed problems.

Rule 335-3-16-.05(c)1.

- The permittee shall perform an annual inspection of the baghouse to verify proper operation. The following activities shall be performed:

  (a) Once per year, inspect baghouse structure, access doors, door seals, and bags.

  (b) Once per year, perform an internal inspection of the baghouse hoppers.

  (c) Record any repairs or observed problems.

  Rule 335-3-16-.05(c)1.

Reporting and Recordkeeping

- All records shall be maintained in a form suitable for inspection for a period of at least five (5) years.

  Rule 335-3-16-.05(c)2.

- The facility shall maintain a record of all weekly and annual baghouse inspections to satisfy the requirements of periodic monitoring. This shall include all problems observed, excursions, and corrective actions taken.

  Rule 335-3-16-.05(c)2.

- If a visible emission observation is required using the 40 CFR Part 60, Appendix A, Method 9, the results will be documented using an ADEM visible emissions observation report and the cause and the corrective action taken will be documented in a logbook.

  Rule 335-3-16-.05(c)2.

- The facility shall maintain a record of all Method 9 observations performed to satisfy monitoring requirements. This shall include all problems observed, excursions, and corrective actions taken.

  Rule 335-3-16-.05(c)2.

Foundry 2 Backup Generator & Foundry 3 Backup Generator (EP019)

Lee Brass Foundry, LLC (Lee Brass) currently has two existing emergency engines (Foundry 2 Backup Generator and Foundry 3 Backup Generator). Foundry 2 Backup Generator (ENG-2) is a 127 kW (170 bhp) 4 – stroke, compression ignition (CI), reciprocating 1972 Caterpillar model number SR-4 diesel engine and has a displacement of 10.5 liter per cylinder. ENG-2 was installed at Lee Brass in 1972. Foundry 3 Backup Generator (ENG-3) is a 170 kW (127 bhp) 4 – stroke, spark ignition (SI), reciprocating 1974 Caterpillar model number SRCR natural-gas engine. ENG-3 was installed at Lee Brass in 1974.

Applicability

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, *"Major Source Operating Permit"*.

  Rule 335-3-16-.03

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), *"Visible Emissions".*

  Rule 335-3-4-.01(1)

- These sources are subject to the applicable requirements of 40 CFR Part 63 Subpart ZZZZ, *"National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines"*.

  40 CFR Part 63, Subpart ZZZZ, §63.6585(b)

- These sources are subject to the applicable requirements of 40 CFR Part 63, Subpart A, "*General Provisions"*, as listed in Table 8 of 40 CFR Part 63, Subpart ZZZZ.

  40 CFR Part 63, Subpart ZZZZ, §63.6665

Emission Standards

Opacity

- Any source of particulate emission shall not discharge into the atmosphere particulate of an opacity greater than that designated as 20% opacity, as determined by a 6-minute period. During one 6 minute period in any 60 minute period a source may discharge into the atmosphere from any source of emissions, particulate of an opacity not greater than that designated as 40% opacity.

  Rule 335-3-4-.01(a) & (b)

- The facility must comply with the requirements in Table 2d and the operating limitations in Table 2b to this subpart that apply.

  40 CFR Part 63 Subpart ZZZZ, §63.6603(a)

- If the permittee owns or operates an existing emergency CI (compression ignition) stationary RICE with a site rating of more than 100 brake HP and a displacement of less than 30 liters per cylinder that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2(ii) and (iii) or that operates for the purpose specified in §63.6640(f)(4)(ii) must use diesel fuel that meets the requirements in 40 CFR §1090.305 for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

  40 CFR Part 63 Subpart ZZZZ, §63.6604(b)

- ENG-2 and ENG-3 shall meet the following requirements, except during periods of startup:

  (a) Change oil and filter every 500 hours of operation or annually, whichever comes first

  (b) Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and

  (c) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary

  40 CFR Part 63 Subpart ZZZZ, §63.6603(a) & 40 CFR Part 63 Subpart ZZZZ Table 2d

- The facility must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to 40 CFR Part 63, Subpart ZZZZ.

  40 CFR Part 63 Subpart ZZZZ, §63.6625(h)

- If the permittee owns or operates a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, the permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

  40 CFR Part 63 Subpart ZZZZ, §63.6625(i)

- At all times the facility must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the facility to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

  40 CFR Part 63 Subpart ZZZZ, §63.6605(b)

- The facility shall comply with the following for each engine:

  (a) Work or Management practices

  (i) Operate and maintain the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or

  (ii) Develop and follow the facility's own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

  40 CFR Part 63 Subpart ZZZZ, §63.6640(a) Table 6

- The facility must operate the emergency stationary RICE according to the requirements in §63.6640(f)(1) through (4). In order for the engine to be considered an emergency stationary RICE under 40 CFR Part 63, Subpart ZZZZ, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in §63.6640(f)(1) through (4), is prohibited. If the facility does not operate the engine according to the requirements in §63.6640(f)(1) through (4), the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

  (1) There is no time limit on the use of emergency stationary RICE in emergency situations.

  (2) The facility may operate the emergency stationary for any combination of the purposes specified in paragraphs (f)(2)(i) through (ii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

  (i) Emergency stationary RICE may be operated for maintenance check and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The facility may petition the Administrator for approval of additional hours for maintenance checks and readiness testing, but a petition is not required if the facility maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(ii) Emergency stationary RICE be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies, or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(4) Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provide in §63.6640(f)(4)(i) and (ii), the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

40 CFR Part 63 Subpart ZZZZ, §63.6640(f)(1) through (2) and (4)

Expected Emissions

According to the application, ENG-2 potential emissions were based on AP-42 Ch. 3.3, Table 3.3-1. ENG-3 potential emissions were based on AP-42 Ch. 3.3, Table 3.3-2.

Pollutant	ENG-2 Uncontrolled Potential Emissions		ENG-3 Uncontrolled Potential Emissions	
	lb/hr	TPY	lb/hr	TPY
PM	0.032	0.008	0.00	0.00
NO_X	0.182	0.05	0.182	0.046
SO_2	0.00	0.00	0.00	0.00
CO	14.803	3.70	14.803	3.701
VOC	0.036	0.01	0.014	0.003
Total HAPs	0.00	0.00	0.009	0.002

Table 14. Based on 500 hours of operation.

Compliance and Performance Test Methods & Procedure

- If testing is required, Method 5 of 40 CFR Part 60, Appendix A, shall be used in the determination of particulate matter (PM).

  Rule 335-3-1-.05

- If testing is required, Method 6 or 6A or 6C of 40 CFR Part 60, Appendix A, shall be used in the determination of sulfur dioxide (SO_2).

  Rule 335-3-1-.05

- If testing is required, Method 7E of 40 CFR Part 60, Appendix A, shall be used in the determination of nitrogen oxide (NO_X).

  Rule 335-3-1-.05

- If testing is required, Method 9 of 40 CFR Part 60, Appendix A, shall be used in the determination of opacity.

  Rule 335-3-1-.05

- If testing is required, Method 10 of 40 CFR Part 60, Appendix A, shall be used in the determination of carbon monoxide (CO).

  Rule 335-3-1-.05

- If testing is required, Method 25A of 40 CFR Part 60, Appendix A, shall be used in the determination of total hydrocarbons (THC).

  Rule 335-3-1-.05

- If testing is required, Method 320 or 323 of 40 CFR Part 63, Appendix A, shall be used in the determination of formaldehyde.

  Rule 335-3-1-.05

Monitoring

- Provided that visible emissions, in excess of the opacity standards, are observed from the engines at any time that the units are operating, a visible emission observation shall be conducted.

  Rule 335-3-4-.01(2) & Rule 335-3-16-.05(c)(1)(i)

- For an existing emergency stationary RICE located at an area source of HAP emissions, the facility must install a non-resettable hour meter if one is not already installed.

  40 CFR Part 63 Subpart ZZZZ, §63.6625(f)

Recordkeeping and Report Requirements

- All records shall be maintained in a form suitable for inspection for a period of at least five (5) years.

  Rule 335-3-16-.05(c)2.

- If a visible emission observation is required using the 40 CFR Part 60, Appendix A, Method 9, the results will be documented using an ADEM visible emissions observation report and the cause and the corrective action taken will be documented in a logbook.

Rule 335-3-16-.05(c)2.

- The facility shall maintain a record of all Method 9 observations performed to satisfy monitoring requirements. This shall include all problems observed, excursions, and corrective actions taken.

Rule 335-3-16-.05(c)2.

- The facility must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that it operated and maintained the stationary RICE and after treatment control device (if any) according to the maintenance plan.

40 CFR Part 63 Subpart ZZZZ, §63.6655(e)

- The facility must keep records of hours of operation of the engine that is recorded through the non-resettable hour meter. The facility must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purposes specified in §63.6640(f)(2)(ii) or (iii) or §63.6640(f)(4)(ii), the facility must keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes.

  (1) An existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines.

40 CFR Part 63 Subpart ZZZZ, §63.6655(f)(2)

- Records must be kept based on the requirements in §63.6660.

  (a) Records must be in a form suitable and readily available for expeditious review according to §63.10(b)(1).

  (b) As specified in §63.10(b)(1), each record shall be kept for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

  (c) Each record must be kept readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record.

40 CFR Part 63 Subpart ZZZZ, §63.6660(a) through (c)

Environmental Justice

ADEM utilized the EJSCREEN screening tool to perform an analysis of the area. Please refer to Appendix B.

Recommendation

Based on the above analysis and pending the resolution of any comments received during the 30 day public comment period and 45 day EPA review, I recommend issuing Lee Brass Foundry LLC's MSOP renewal.

Douglas Curtis
Industrial Minerals Section
Energy Branch
Air Division

Date

APPENDIX A

Compliance Assurance Monitoring (CAM) Requirements

Compliance Assurance Monitoring (CAM) Plan for Emission Point (EP) 005 with Baghouse #5
(Muller Sand Handling System – Foundry 1)

	Indicator 1	Indicator 2
I. Indicator	Visible Emissions	Pressure Drop
Measurement Approach	Visual emissions will be observed daily.	A reading of the magnehelic gauge to determine pressure drop will be performed and recorded once per day.
II. Indicator Range	Visible emissions shall be < 10%. An excursion exists when any visual check results in instantaneous visible emissions greater than 10% opacity. If visible emissions in excess of 10% opacity are noted, and are not corrected within a period of 1 hour, a Method 9 must be performed (for at least twelve minutes) within 4 hours of the initial check.	Pressure drop should be maintained at $1 \leq P \leq 10$ inches of water. An excursion is any value less than 1 and greater than 10 inches of water.
III. Performance Criteria A. Data Representativeness	Measurement are being made at the emission point. (Baghouse Exhaust)	Measurements are being made at the baghouse inlet and outlet.
B. Verification of Operation Status	N/A	N/A
C. QA/QC Practices and Criteria	The observer will be a Method 9 trained observed certified every 6 months.	Zero check magnehelics once a week. A weekly blow back purge of magnehelic lines.
D. Monitoring Frequency	Visual checks shall be performed at least once per day.	The pressure drop will be monitored at least daily.
Data Collection Procedures	A visible emissions assessment of the baghouse stack and/or a Method 9 will be recorded with the time, date, and name of the observer.	The pressure differential will be recorded with the time, date, and name of the observer.
Averaging Period	Visual Check: Instantaneous Method 9: 6-Minute Average	Instantaneous

Compliance Assurance Monitoring (CAM) Plan for Emission Point (EP) 008 with Baghouse #8
(Five Cutoff Saws and Shotblasts – Foundry 3)

	Indicator 1	Indicator 2
I. Indicator	Visible Emissions	Pressure Drop
Measurement Approach	Visual emissions will be observed daily.	A reading of the magnehelic gauge to determine pressure drop will be performed and recorded once per day.
II. Indicator Range	Visible emissions shall be < 10%. An excursion exists when any visual check results in instantaneous visible emissions greater than 10% opacity. If visible emissions in excess of 10% opacity are noted, and are not corrected within a period of 1 hour, a Method 9 must be performed (for at least twelve minutes) within 4 hours of the initial check.	Pressure drop should be maintained at $1 \leq P \leq 5$ inches of water. An excursion is any value less than 1 and greater than 5 inches of water.
III. Performance Criteria A. Data Representativeness	Measurement are being made at the emission point. (Baghouse Exhaust)	Measurements are being made at the baghouse inlet and outlet.
B. Verification of Operation Status	N/A	N/A
C. QA/QC Practices and Criteria	The observer will be a Method 9 trained observed certified every 6 months.	Zero check magnehelics once a week. A weekly blow back purge of magnehelic lines.
D. Monitoring Frequency	Visual checks shall be performed at least once per day.	The pressure drop will be monitored at least daily.
Data Collection Procedures	A visible emissions assessment of the baghouse stack and/or a Method 9 will be recorded with the time, date, and name of the observer.	The pressure differential will be recorded with the time, date, and name of the observer.
Averaging Period	Visual Check: Instantaneous Method 9: 6-Minute Average	Instantaneous

Compliance Assurance Monitoring (CAM) Plan for Emission Point (EP) 009 with Baghouse #9
(Casting Cleaning & Muller Sand Handling System – Foundry 3)

	Indicator 1	Indicator 2
I. Indicator	Visible Emissions	Pressure Drop
Measurement Approach	Visual emissions will be observed daily.	A reading of the magnehelic gauge to determine pressure drop will be performed and recorded once per day.
II. Indicator Range	Visible emissions shall be < 10%. An excursion exists when any visual check results in instantaneous visible emissions greater than 10% opacity. If visible emissions in excess of 10% opacity are noted, and are not corrected within a period of 1 hour, a Method 9 must be performed (for at least twelve minutes) within 4 hours of the initial check.	Pressure drop should be maintained at $1 \leq P \leq 10$ inches of water. An excursion is any value less than 1 and greater than 10 inches of water.
III. Performance Criteria A. Data Representativeness	Measurement are being made at the emission point. (Baghouse Exhaust)	Measurements are being made at the baghouse inlet and outlet.
B. Verification of Operation Status	N/A	N/A
C. QA/QC Practices and Criteria	The observer will be a Method 9 trained observed certified every 6 months.	Zero check magnehelics once a week. A weekly blow back purge of magnehelic lines.
D. Monitoring Frequency	Visual checks shall be performed at least once per day.	The pressure drop will be monitored at least daily.
Data Collection Procedures	A visible emissions assessment of the baghouse stack and/or a Method 9 will be recorded with the time, date, and name of the observer.	The pressure differential will be recorded with the time, date, and name of the observer.
Averaging Period	Visual Check: Instantaneous Method 9: 6-Minute Average	Instantaneous

Compliance Assurance Monitoring (CAM) Plan for Emission Point (EP) 012 with Baghouse #12 (North End Cleaning Room)

	Indicator 1	Indicator 2
I. Indicator	Visible Emissions	Pressure Drop
Measurement Approach	Visual emissions will be observed daily.	A reading of the magnehelic gauge to determine pressure drop will be performed and recorded once per day.
II. Indicator Range	Visible emissions shall be < 10%. An excursion exists when any visual check results in instantaneous visible emissions greater than 10% opacity. If visible emissions in excess of 10% opacity are noted, and are not corrected within a period of 1 hour, a Method 9 must be performed (for at least twelve minutes) within 4 hours of the initial check.	Pressure drop should be maintained at $1 \leq P \leq 5$ inches of water. An excursion is any value less than 1 and greater than 5 inches of water.
III. Performance Criteria A. Data Representativeness	Measurement are being made at the emission point. (Baghouse Exhaust)	Measurements are being made at the baghouse inlet and outlet.
B. Verification of Operation Status	N/A	N/A
C. QA/QC Practices and Criteria	The observer will be a Method 9 trained observed certified every 6 months.	Zero check magnehelics once a week. A weekly blow back purge of magnehelic lines.
D. Monitoring Frequency	Visual checks shall be performed at least once per day.	The pressure drop will be monitored at least daily.
Data Collection Procedures	A visible emissions assessment of the baghouse stack and/or a Method 9 will be recorded with the time, date, and name of the observer.	The pressure differential will be recorded with the time, date, and name of the observer.
Averaging Period	Visual Check: Instantaneous Method 9: 6-Minute Average	Instantaneous

APPENDIX B

ENVIRONMENTAL JUSTICE

EJSCREEN Report (Version 2020)

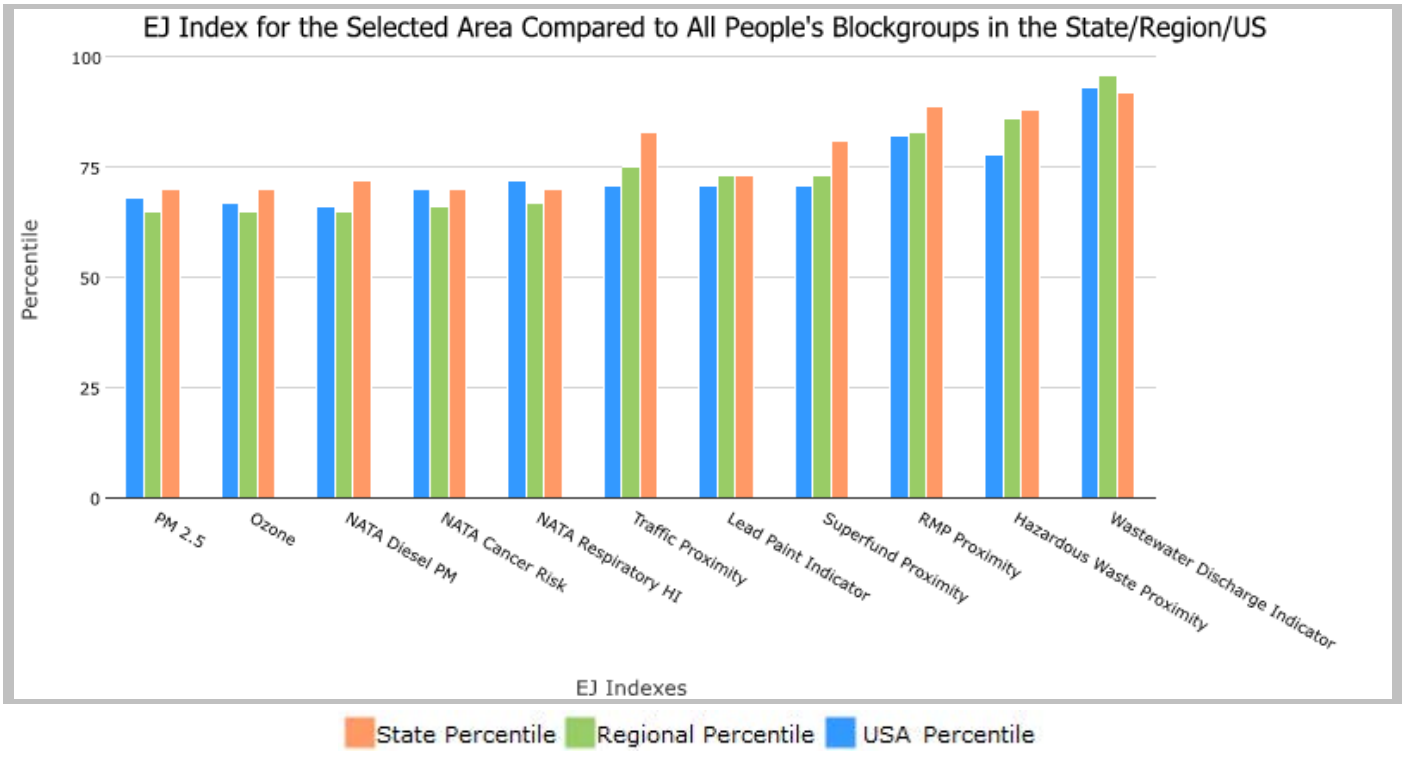
1 mile Ring Centered at 33.620540,-85.793246, ALABAMA, EPA Region 4

Approximate Population: 2,059

Input Area (sq. miles): 3.14

Lee Brass 1 Mile Ring

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	70	65	68
EJ Index for Ozone	70	65	67
EJ Index for NATA* Diesel PM	72	65	66
EJ Index for NATA* Air Toxics Cancer Risk	70	66	70
EJ Index for NATA* Respiratory Hazard Index	70	67	72
EJ Index for Traffic Proximity and Volume	83	75	71
EJ Index for Lead Paint Indicator	73	73	71
EJ Index for Superfund Proximity	81	73	71
EJ Index for RMP Proximity	89	83	82
EJ Index for Hazardous Waste Proximity	88	86	78
EJ Index for Wastewater Discharge Indicator	92	96	93



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

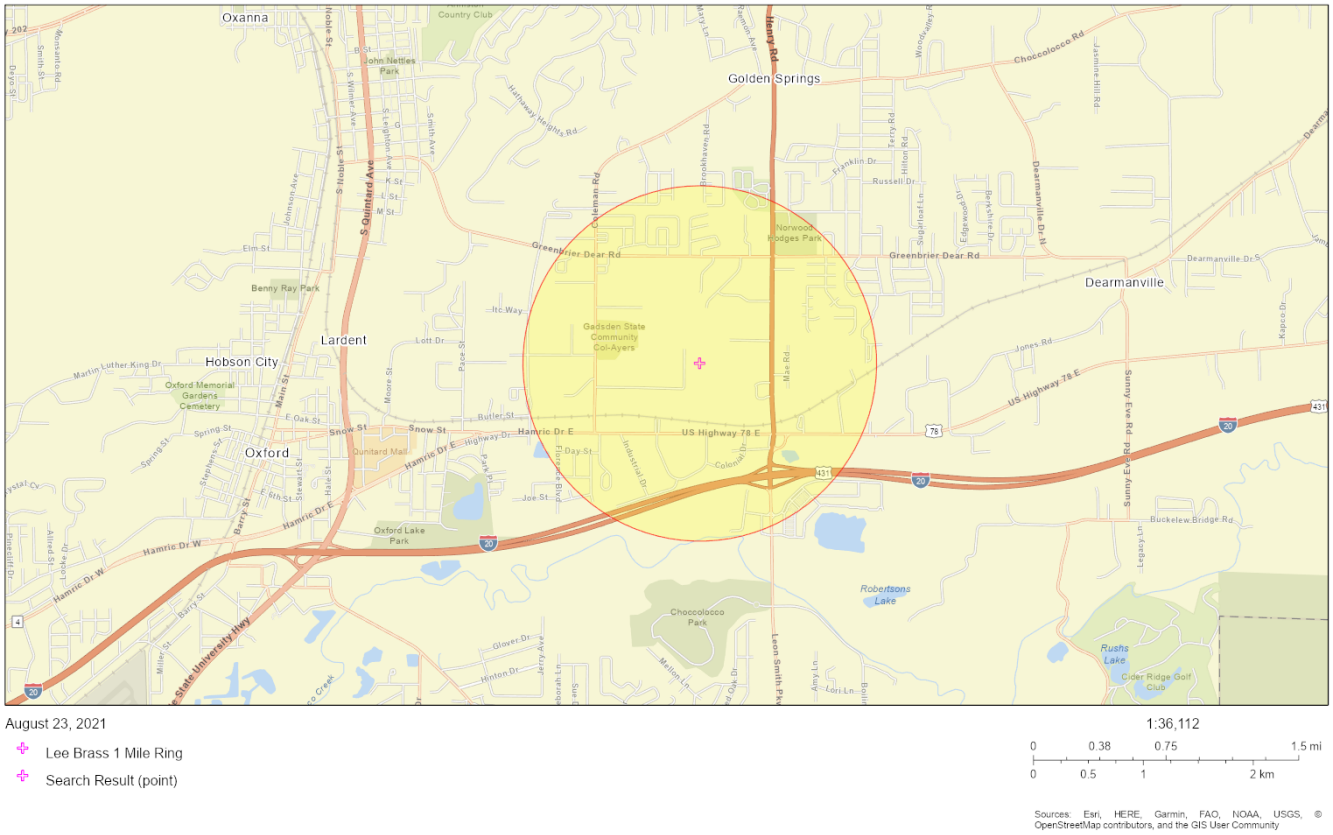
EJSCREEN Report (Version 2020)

1 mile Ring Centered at 33.620540,-85.793246, ALABAMA, EPA Region 4

Approximate Population: 2,059

Input Area (sq. miles): 3.14

Lee Brass 1 Mile Ring



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	5

EJSCREEN Report (Version 2020)

1 mile Ring Centered at 33.620540,-85.793246, ALABAMA, EPA Region 4

Approximate Population: 2,059

Input Area (sq. miles): 3.14

Lee Brass 1 Mile Ring

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m^3)	9.29	9.31	57	8.57	83	8.55	74
Ozone (ppb)	39.2	38	67	38	52	42.9	24
NATA* Diesel PM (µg/m^3)	0.313	0.346	55	0.417	<50th	0.478	<50th
NATA* Cancer Risk (lifetime risk per million)	43	43	50	36	80-90th	32	90-95th
NATA* Respiratory Hazard Index	0.69	0.65	56	0.52	90-95th	0.44	90-95th
Traffic Proximity and Volume (daily traffic count/distance to road)	210	220	75	350	63	750	49
Lead Paint Indicator (% Pre-1960 Housing)	0.059	0.18	32	0.15	44	0.28	30
Superfund Proximity (site count/km distance)	0.062	0.054	76	0.083	66	0.13	50
RMP Proximity (facility count/km distance)	1.6	0.41	95	0.6	90	0.74	86
Hazardous Waste Proximity (facility count/km distance)	4.4	0.82	98	0.91	97	5	82
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	0.047	1.2	85	0.65	91	9.4	86
Demographic Indicators							
Demographic Index	41%	36%	66	37%	62	36%	64
People of Color Population	47%	34%	72	39%	64	39%	64
Low Income Population	36%	38%	47	36%	51	33%	61
Linguistically Isolated Population	3%	1%	88	3%	73	4%	65
Population With Less Than High School Education	11%	14%	45	13%	51	13%	58
Population Under 5 years of age	10%	6%	87	6%	88	6%	87
Population over 64 years of age	14%	16%	42	17%	47	15%	52

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: https://www.epa.gov/national-air-toxics-assessment.

For additional information, see: www.epa.gov/environmentaljustice

EJSCREEN Report (Version 2020)

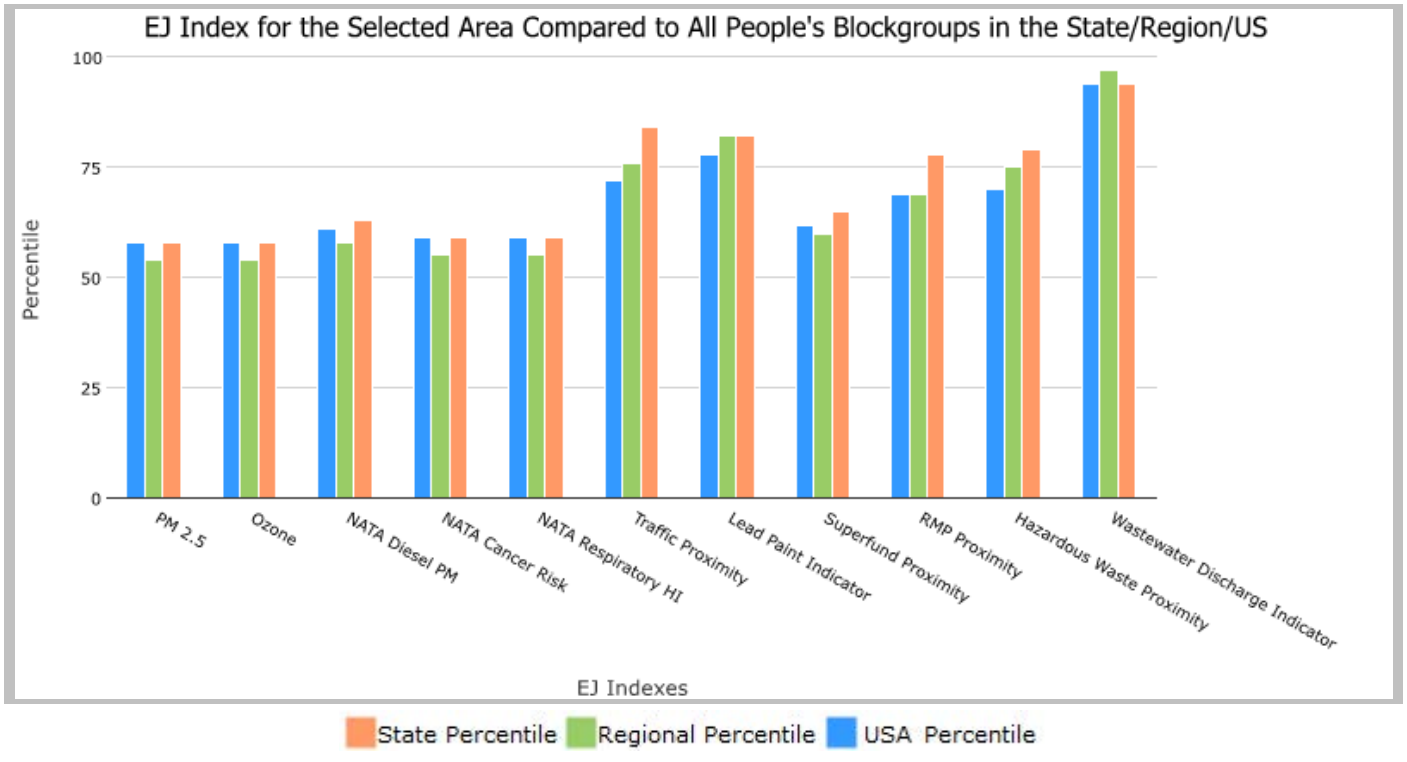
3 miles Ring Centered at 33.620540,-85.793241, ALABAMA, EPA Region 4

Approximate Population: 20,503

Input Area (sq. miles): 28.27

Lee Brass 3 Mile Ring (The study area contains 1 blockgroup(s) with zero population.)

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	58	54	58
EJ Index for Ozone	58	54	58
EJ Index for NATA* Diesel PM	63	58	61
EJ Index for NATA* Air Toxics Cancer Risk	59	55	59
EJ Index for NATA* Respiratory Hazard Index	59	55	59
EJ Index for Traffic Proximity and Volume	84	76	72
EJ Index for Lead Paint Indicator	82	82	78
EJ Index for Superfund Proximity	65	60	62
EJ Index for RMP Proximity	78	69	69
EJ Index for Hazardous Waste Proximity	79	75	70
EJ Index for Wastewater Discharge Indicator	94	97	94



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

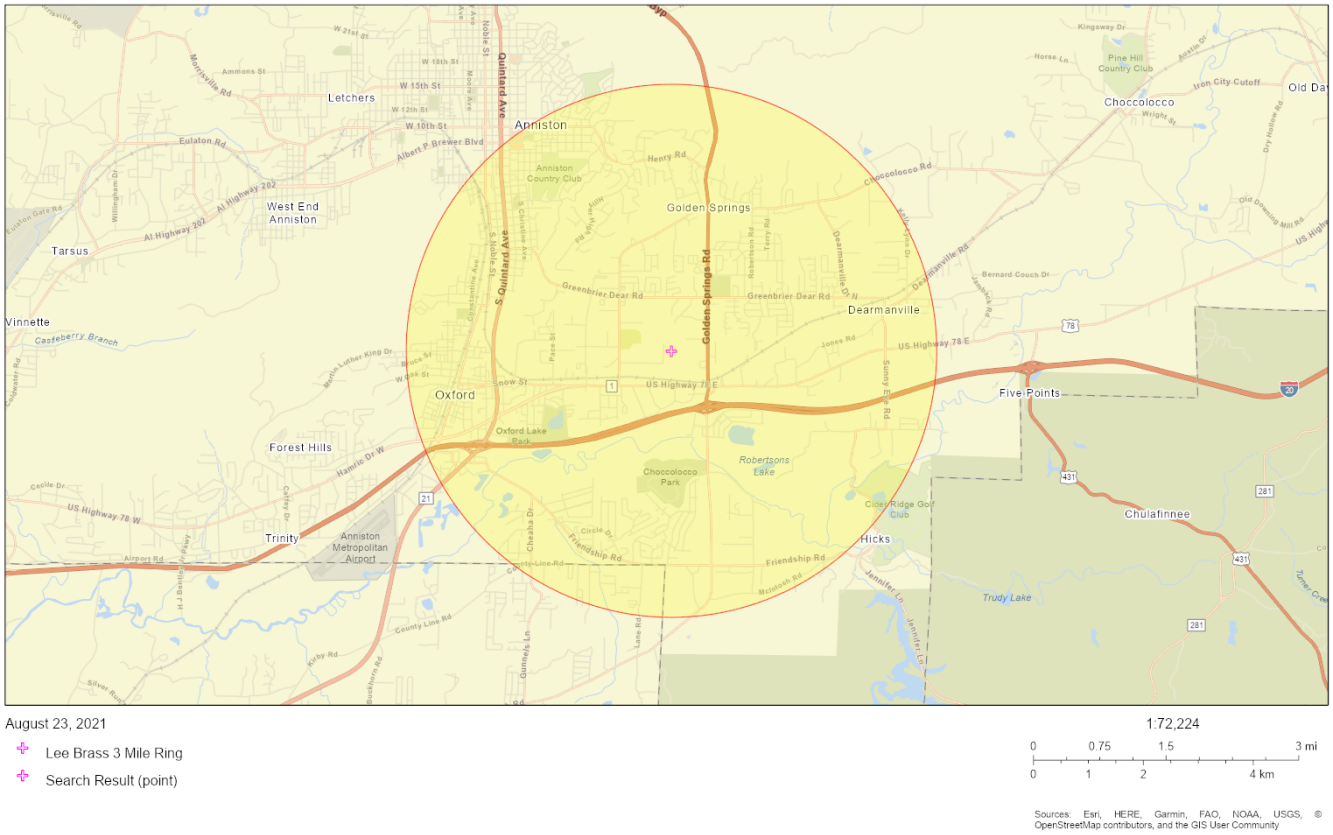
EJSCREEN Report (Version 2020)

3 miles Ring Centered at 33.620540,-85.793241, ALABAMA, EPA Region 4

Approximate Population: 20,503

Input Area (sq. miles): 28.27

Lee Brass 3 Mile Ring (The study area contains 1 blockgroup(s) with zero population.)



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	6

EJSCREEN Report (Version 2020)

3 miles Ring Centered at 33.620540,-85.793241, ALABAMA, EPA Region 4

Approximate Population: 20,503

Input Area (sq. miles): 28.27

Lee Brass 3 Mile Ring (The study area contains 1 blockgroup(s) with zero population.)

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m^3)	9.3	9.31	58	8.57	83	8.55	74
Ozone (ppb)	39.2	38	67	38	52	42.9	24
NATA* Diesel PM (µg/m^3)	0.31	0.346	55	0.417	<50th	0.478	<50th
NATA* Cancer Risk (lifetime risk per million)	44	43	52	36	80-90th	32	90-95th
NATA* Respiratory Hazard Index	0.69	0.65	59	0.52	90-95th	0.44	90-95th
Traffic Proximity and Volume (daily traffic count/distance to road)	240	220	78	350	66	750	52
Lead Paint Indicator (% Pre-1960 Housing)	0.23	0.18	75	0.15	78	0.28	56
Superfund Proximity (site count/km distance)	0.063	0.054	76	0.083	66	0.13	50
RMP Proximity (facility count/km distance)	1.1	0.41	90	0.6	84	0.74	79
Hazardous Waste Proximity (facility count/km distance)	2.9	0.82	95	0.91	93	5	74
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	0.092	1.2	89	0.65	93	9.4	88
Demographic Indicators							
Demographic Index	39%	36%	63	37%	59	36%	62
People of Color Population	38%	34%	64	39%	56	39%	56
Low Income Population	39%	38%	54	36%	58	33%	66
Linguistically Isolated Population	2%	1%	84	3%	67	4%	60
Population With Less Than High School Education	11%	14%	43	13%	50	13%	57
Population Under 5 years of age	7%	6%	63	6%	64	6%	61
Population over 64 years of age	20%	16%	73	17%	73	15%	75

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: https://www.epa.gov/national-air-toxics-assessment.

For additional information, see: www.epa.gov/environmentaljustice

EJSCREEN Report (Version 2020)

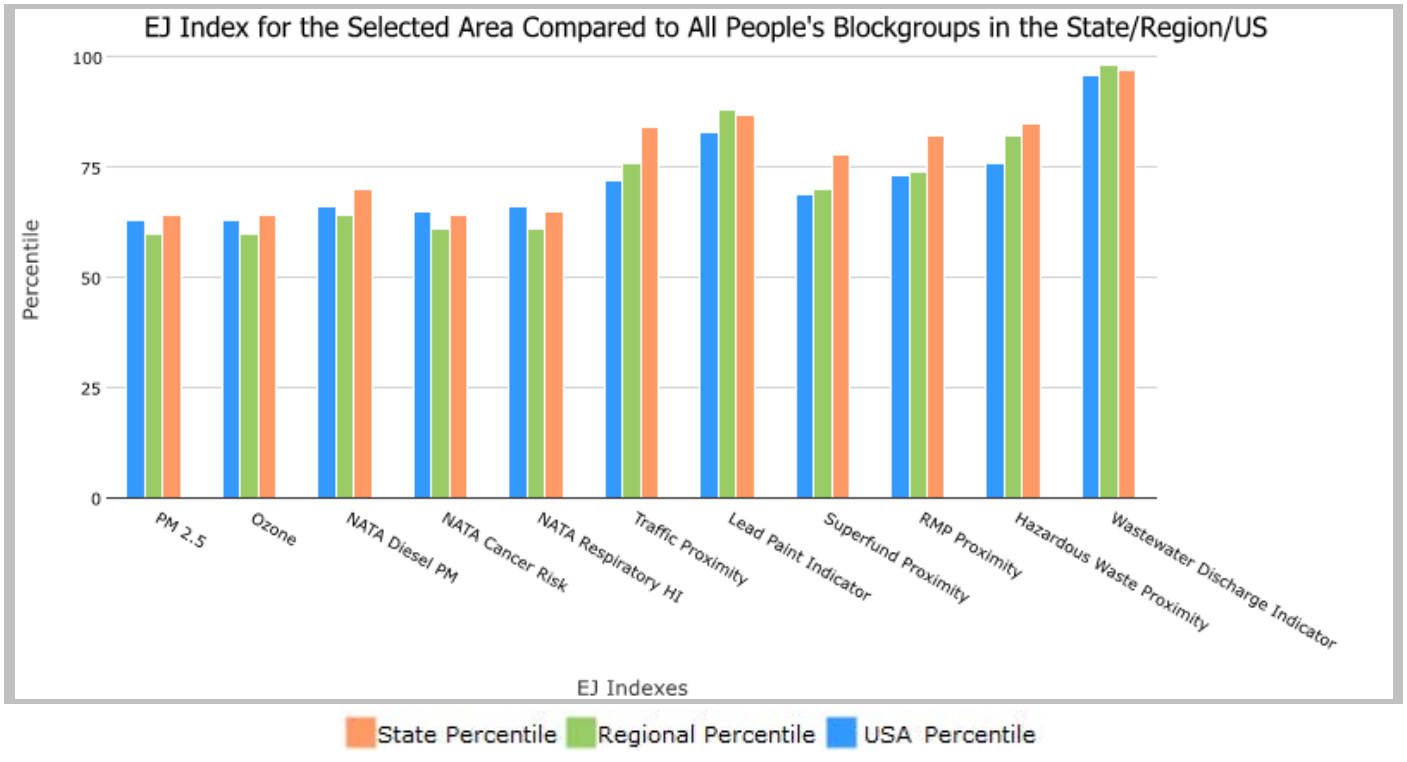
5 miles Ring Centered at 33.620540,-85.793241, ALABAMA, EPA Region 4

Approximate Population: 38,204

Input Area (sq. miles): 78.53

Lee Brass 5 Mile Ring (The study area contains 1 blockgroup(s) with zero population.)

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	64	60	63
EJ Index for Ozone	64	60	63
EJ Index for NATA* Diesel PM	70	64	66
EJ Index for NATA* Air Toxics Cancer Risk	64	61	65
EJ Index for NATA* Respiratory Hazard Index	65	61	66
EJ Index for Traffic Proximity and Volume	84	76	72
EJ Index for Lead Paint Indicator	87	88	83
EJ Index for Superfund Proximity	78	70	69
EJ Index for RMP Proximity	82	74	73
EJ Index for Hazardous Waste Proximity	85	82	76
EJ Index for Wastewater Discharge Indicator	97	98	96



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

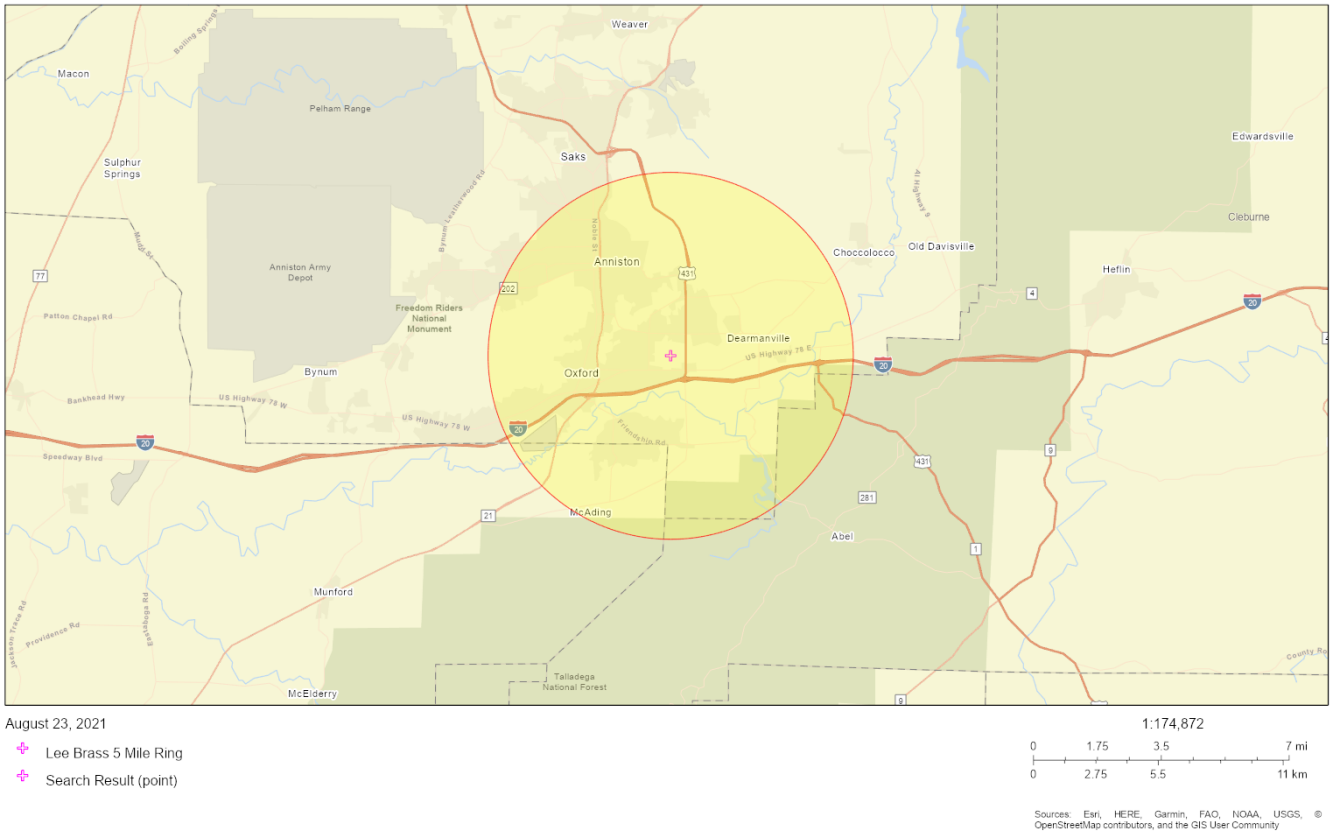
EJSCREEN Report (Version 2020)

5 miles Ring Centered at 33.620540,-85.793241, ALABAMA, EPA Region 4

Approximate Population: 38,204

Input Area (sq. miles): 78.53

Lee Brass 5 Mile Ring (The study area contains 1 blockgroup(s) with zero population.)



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	11

EJSCREEN Report (Version 2020)

5 miles Ring Centered at 33.620540,-85.793241, ALABAMA, EPA Region 4

Approximate Population: 38,204

Input Area (sq. miles): 78.53

Lee Brass 5 Mile Ring (The study area contains 1 blockgroup(s) with zero population.)

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m^3)	9.32	9.31	58	8.57	84	8.55	75
Ozone (ppb)	39.2	38	68	38	52	42.9	24
NATA* Diesel PM (µg/m^3)	0.318	0.346	56	0.417	<50th	0.478	<50th
NATA* Cancer Risk (lifetime risk per million)	44	43	53	36	90-95th	32	90-95th
NATA* Respiratory Hazard Index	0.69	0.65	59	0.52	90-95th	0.44	90-95th
Traffic Proximity and Volume (daily traffic count/distance to road)	260	220	79	350	68	750	54
Lead Paint Indicator (% Pre-1960 Housing)	0.33	0.18	84	0.15	86	0.28	65
Superfund Proximity (site count/km distance)	0.069	0.054	78	0.083	68	0.13	53
RMP Proximity (facility count/km distance)	0.99	0.41	88	0.6	81	0.74	76
Hazardous Waste Proximity (facility count/km distance)	2.4	0.82	92	0.91	90	5	69
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	0.36	1.2	94	0.65	96	9.4	92
Demographic Indicators							
Demographic Index	43%	36%	69	37%	65	36%	67
People of Color Population	43%	34%	69	39%	61	39%	61
Low Income Population	43%	38%	61	36%	63	33%	71
Linguistically Isolated Population	2%	1%	79	3%	60	4%	53
Population With Less Than High School Education	15%	14%	59	13%	65	13%	69
Population Under 5 years of age	6%	6%	52	6%	53	6%	50
Population over 64 years of age	18%	16%	65	17%	67	15%	70

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: https://www.epa.gov/national-air-toxics-assessment.

For additional information, see: www.epa.gov/environmentaljustice