Louisville Metro Air Pollution Control District

850 Barret Ave., Louisville, Kentucky 40204
31 July 2014

Title V Statement of Basis

Company: Louisville Gas & Electric Company, Mill Creek Generating Station

Plant Location: 14460 Dixie Highway, Louisville, Kentucky 40272

Date Application Received: 11/30/2007 12/14/2012; 3/5/2013; 3/25/2013; 7/10/2013; 8/14/2013; 11/15/2013; 2/21/2014; 4/30/2014

Date Admin Complete: 01/29/2008

Date of Draft Permit: 05 June 2014

Date of Proposed Permit: 05 June 2014

District Engineer: Yiqiu Lin

Permit No: 145-97-TV (R1)

Plant ID: 0127 **SIC Code:** 4911 **NAICS**: 221112 **AFS:** 00127

Introduction:

This permit will be issued pursuant to: (1) Regulation 2.16, (2) Title 40 of the Code of Federal Regulations Part 70, and (3) Title V of the Clean Air Act Amendments of 1990. Its purpose is to identify and consolidate existing District and Federal air requirements and to provide methods of determining continued compliance with these requirements.

Jefferson County is classified as an attainment area for lead (Pb), nitrogen dioxide (NO_2), carbon monoxide (CO), 1 hr and 8 hr ozone (O_3), and particulate matter less than 10 microns (PM_{10}); and is a non-attainment area for particulate matter less than 2.5 microns ($PM_{2.5}$) and partial non-attainment area for sulfur dioxide (SO_2).

Application Type/Permit Activity:

[ ] Initial Issuance

[ ] Permit Revision
- [ ] Administrative
- [ ] Minor
- [ ] Significant

[X] Permit Renewal

Compliance Summary:

[X] Compliance certification signed
[ ] Source is out of compliance
[ ] Compliance schedule included
[X] Source is operating in compliance

I. Source Information

1. **Product Description:** Louisville Gas & Electric- Mill Creek Generating Station generates electric energy for local and remote distribution.

2. **Process Description:** Coal is the primary fuel used to fire commercial boilers for generation of electricity via steam turbines and generators.

3. **Site Determination:** There are no other facilities that are contiguous or adjacent and under common control.

4. **Emission Unit Summary**:

Emission Unit	Equipment Description
U1	One coal/natural gas fired boiler (E1) and one coal silos and mills (E2)
U2	One coal/natural gas fired boiler (E3) and one coal silos and mills (E4)
U3	One coal/natural gas fired boiler (E5) and one coal silos and mills (E6)
U4	One coal/natural gas fired boiler (E7) and one coal silos and mills (E8)
U8	Flyash storage and handling unit
U9	Flyash transfer bins
U12	Limestone handling
U14	Cooling towers (E38) for U4
U15	Haul road (E39), including paved and unpaved road
U16	Lime sorbent storage silos
U17	PAC storage silos
U18	New flyash silos
U20	Gypsum pelletizing plant
U21	Coal handling operation
U22	Landfill, including haul roads, drop points and wind erosion

5. **Fugitive Sources:** There are fugitive emissions from haul roads, landfill area, and material stack piles at this source.

6. **Permit Revisions**:

Revision No.	Issue Date	Public Notice Date	Type	Attachment No./Page No.	Description
Initial	6/1/2003	1/19/2003	Initial	Entire Permit	Initial Issuance

Revision No.	Issue Date	Public Notice Date	Type	Attachment No./Page No.	Description
R1	7/31/2014	6/05/2014	Permit renewal	Entire Permit	Permit renewal and incorporate construction permit 215-01, 216-01, 225-01, 142-05, 143-05, 144-05, 145-05, 37-07, 38-07, 426-07, 30399-11, 34595-12, 34685-12, 35668-12, 35673-12

7. Emission Summary:

Pollutant	District Calculated Actual Emissions (tpy) 2012 Data	Pollutant that triggered Major Source Status (based on PTE)
CO	985.8	Yes
NO_x	7,219.9	Yes
SO_2	30,499.1	Yes
PM_{10}	2,765.4	Yes
VOC	119.0	Yes
Total HAPs	109.96	Yes
Single HAP > 1 tpy		
Hydrochloric Acid	71.6	Yes
Hydrogen Fluoride	21.98	Yes
Cyanide Compounds	4.85	No
Greenhouse Gas	14,039,349* CO_2e	Yes

* This is the plant-wide PTE for greenhouse gases.

8. Applicable Requirements:

[ ] PSD [X] 40 CFR 60 [X] SIP [X] 40 CFR 63
[ ] NSR [ ] 40 CFR 61 [X] District-Origin [ ] Other

9. Future MACT Requirements: The source will be subject to 40 CFR 63, Subpart UUUUU.

10. Referenced Federal Regulations in Permit:

40 CFR 60 Subpart D	Standards of Performance for Fossil-Fuel Fired Steam Generators for Which Construction is Commenced After August 17, 1971
40 CFR 60 Subpart Y	Standards of Performance for Coal Preparation Plants
40 CFR 60 Subpart OOO	Standards of Performance for Nonmetallic Mineral Processing Plants
40 CFR 60 Subpart IIII	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
40 CFR 63 Subpart DDDDD	National Emission Standards for Hazardous Air Pollutant for Industrial, Commercial, and Institutional Boilers and Process Heaters
40 CFR 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
40 CFR 63 Subpart UUUUU	National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units (EGU MACT)
40 CFR 64	Compliance Assurance Monitoring for Major Stationary Sources
40 CFR 72	Permits Regulation
40 CFR 73	Sulfur Dioxide Allowance System
40 CFR 75	Continuous Emission Monitoring
40 CFR 76	Acid Rain Nitrogen Oxides Emission Reduction Program
40 CFR 77	Excess Emissions
40 CFR 78	Appeals Procedures for Acid Rain Program

II. Regulatory Analysis

1. Acid Rain Requirements: The source is subject to the Acid Rain Program. The owner or operator shall comply with the acid rain requirements according to 40 CFR Parts 72, 75 and 76 for Group I boilers. Louisville Gas & Electric Company has chosen to meet the early election NO_x requirements for Group I Phase II boilers. The Acid Rain permit, which is attached to the Title V permit and this construction permit, is going to be reissued at the same time of the Title V in order to make a combined Title V and Title IV permit.

2. Stratospheric Ozone Protection Requirements: Title VI of the CAAA regulates ozone depleting substances and requires a phase-out of their use. This rule applies to any facility that manufactures, sells, distributes, or otherwise uses

any of the listed chemicals. The source stores refrigerants listed under Title VI of the CAAA in a service garage. The source will comply with the Title VI regulations for recycling and recovery. The District does not have Title VI authority**.**

3. **Prevention of Accidental Releases 112(r):** The source does manufacture, process, use, store, or otherwise handle one or more of the regulated substances listed in 40 CFR Part 68, Subpart F, and District Regulation 5.15, Chemical Accident Prevention Provisions, in a quantity in excess of the corresponding specified threshold amount. Therefore, the source is required to develop and implement a Risk Management Plan pursuant to 40 CFR 68, Subpart G and Regulation 5.15.

4. **40 CFR Part 64 Applicability Determination:** The coal-fired boilers are subject to 40 CFR Part 64 - *Compliance Assurance Monitoring (CAM) for Major Stationary Source* since since SO2 and PM emissions from each of the boilers are greater than the major source threshold and control devices are required to achieve compliance with standards. However, since SO2 and PM CEMS are installed for this unit, SO2 and PM standards are exempt from CAM requirements according to 40 CFR 64.2(b)(1)(vi).

5. **Basis of Regulation Applicability**

a. **Plant-wide**

LG&E Mill Creek is a Title V major source for NOx, CO, SO_2, VOC, PM10, Total HAP, and Single HAP. Regulation 2.16 - *Title V Operating Permits* establishes requirements for major sources. LG&E Mill Creek is one of the 28 source categories which have 100 tpy major thresholds. Base on the plantwide PTE evaluation, LG&E is a PSD major source for NO_x, CO, SO_2, VOC, Particulate matter. LG&E Mill Creek is also a GHG major source.

Regulations 5.00 5.20, 5.21, and 5.23 (STAR Program) establishes requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards. LG&E Mill Creek submitted their TAC Environmental Acceptability Demonstration to the District on December 28, 2006, March 25, 2008, April 9, 2010, and April 2, 2012. Compliance with the STAR EA Goals was demonstrated in the source's EA Demonstrations. SCREEN3 air dispersion modeling was performed for each emission unit that has non-de minimis TAC emissions. The carcinogen risk and non-carcinogen risk values, calculated using the District approved PTE for each unit and the SCREEN model results from the source's EA Demonstration, are comply with the STAR EA goals required in Regulation 5.21.

Regulation 2.16, section 4.1.9.1 and 4.1.9.2 requires monitoring and record keeping to assure ongoing compliance with the terms and conditions of the permit. The owner or operator shall maintain all the required records for a minimum of 5 years and make the records readily available to the District upon request.

Regulation 2.16, section 4.3.5, requires stationary sources for which a Title V is issued shall submit an annual compliance certification by April 15. In addition, as required by Regulation 2.16, section 4.1.9.3, the source shall submit compliance reports at least every six months to show compliance with the permit. Compliance reports and compliance certifications shall be signed by a responsible official and shall include a certification statement per Regulation 2.16, section 3.5.11.

b. **Emission Unit U1 -** Electric Utility Steam Generating Unit (EGU) – Unit 1

i. **Equipment:**

Emission Point	Description	Applicable Regulation	Basis for Applicability
U1 – E1	One (1) tangentially fired boiler, rated capacity 3,085 MMBtu/hr, make Combustion Engineering, using pulverized coal as a primary fuel and natural gas as secondary fuel. Installed 1970	5.00, 5.01, 5.02, 5.14, 5.20, 5.21, 5.22, 5.23 6.02, 6.07, 6.42, 6.47 40 CFR 63 UUUUU, 40 CFR 64, 40 CFR72-78	Regulation 5.00, 5.01, 5.02, 5.14, 5.20, 5.21, 5.22, 5.23 establishes the requirements for Environmental Acceptability for TACs. The source is a Group I company with Category 1TACs which potentially could exceed the de minimis values. Regulation 6.02 establishes the general provisions for the application of standards of performance for existing affected facilities which were commenced prior to September 1, 1976. Existing indirect heat exchangers for which commenced prior to September 1, 1972 are subject to Regulation 6.07. Regulation 6.42 applies to the NO_x emissions from all NO_x emitting facilities located at major NO_x source. Regulation 6.47 incorporates the Federal Acid Rain Program for existing sources by reference. 40 CFR 63, Subpart UUUUU establishes national emission limitations and work practice standards for HAP emitted from coal- and oil-fired electric utility steam generating units as defined in 63.10042. 40 CFR 64 establishes compliance assurance

Emission Point	Description	Applicable Regulation	Basis for Applicability
			monitoring requirements for each unit that has emissions greater than major source threshold and control devices are required to achieve compliance with standards. 40 CFR 72 through 78 contain regulations for Acid Rain Program, including permits, allowance system, CEM, excess emissions, and appeal procedures.
U1 – E2	Four (4) coal silos, make Fisher-Klosterman. Installed 1970 Four (4) coal mills, make Combustion Engineering Raymond Bowl Mills, capacity 43 ton/hr each. Installed 1972	5.00, 5.01, 5.02, 5.14, 5.20, 5.21, 5.22, 5.23, 6.09	Regulation 5.00, 5.01, 5.02, 5.14, 5.20, 5.21, 5.22, 5.23 establishes the requirements for Environmental Acceptability for TACs. The source is a Group I company with Category 1TACs which potentially could exceed the de minimis values. Regulation 6.09 establishes the requirements for PM emission from new processes that commences construction before September 1, 1976.

ii. **Standards/Operating Limits**

1) **NO_x**

(a) Acid Rain Permit 176-97-AR (R3) is attached and considered part of the Title V Operating Permit. Regulation 6.47, section 3.5 references 40 CFR Part 76. The Acid Rain Permit establishes the alternative contemporaneous emissions limitations on an annual average basis for this unit.

(b) The NO_x RACT Plan establishes NO_x emission standards on a rolling 30-day average basis for this unit.

(c) The source is required to install and operate a NO_x CEMS for each boiler in accordance with Regulation 6.02, section 6.1.3, NO_x RACT Plan, Regulation 6.47, section 3.4 referencing 40 CFR 75.10(a)(2).

2) **SO_2**

(a) Regulation 6.07, section 4.1 establishes the three hour rolling average SO_2 standard for this unit.

(b) In accordance with Acid Rain Permit 176-97-AR

(R3), Regulation 6.47, section 3.2 references 40 CFR 73 which has the annual SO_2 emission allowances for each boiler at this source.

(c) The source is required to install and operate a SO_2 CEMS for each boiler in accordance with Regulation 6.02, section 6.1.3, Regulation 6.47, section 3.4 referencing 40 CFR 75.10(a)(2).

3) **PM**

(a) In accordance with Regulation 6.07, section 3.1, Table 1, PM emission standard based on a three hour rolling average for unit U1 is 0.11 lb/MMBtu.

(b) In accordance with Regulation 6.09, Table 1, PM standards for the coal silos (E2a) is:

$$E = 55.0(1500)^{0.11} - 40 = 82.95 \text{ lb/hr}$$

For each coal mill (E2b):

$$E = 55.0(43)^{0.11} - 40 = 43.2 \text{ lb/hr}$$

(c) For the coal silos and coal mills (E2), the owner or operator has shown, by worst-case calculations without allowance for a control device, that the hourly uncontrolled PM emission standard cannot be exceeded.

(d) According to the letter from EPA dated February 28, 2007, the source is allowed to utilize PM CEMS to replace COMS for each boiler. The source is required to install, maintain, calibrate, and operate PM CEMS for each boiler according the conditions as specified in EPA's letter.

4) **Opacity**

(a) Regulation 6.07, section 3.2 and 3.3 establishes opacity standards for existing boilers.

(b) Regulation 6.09, section 3.1 establishes opacity standards for existing coal silos and coal mills.

5) **TAC**

(a) Regulation 5.20, 5.21, 5.22, and 5.23 established requirements for Group I sources to demonstrate

environmental acceptability.

(b) LG&E Mill Creek submitted their TAC Environmental Acceptability Demonstration to the District on December 28, 2006, March 25, 2008, April 9, 2010, and April 2, 2012. Compliance with the STAR EA Goals was demonstrated in the source's EA Demonstrations. SCREEN3 air dispersion modeling was performed for each emission unit that has non-de minimis TAC emissions. It was demonstrated that the carcinogen risk and non-carcinogen risk values, calculated using the District approved PTE for each unit and the SCREEN model results from the source's EA Demonstration, comply with the STAR EA goals required in Regulation 5.21.

6) **HAP**

40 CFR 63.9990 and 63.9991 establishes emission limits, work practice standards, and operating limits for existing EGUs.

iii. **Monitoring and Recordkeeping**

1) **NO_x**

(a) NO_x RACT Plan establishes monitoring and record keeping requirements for NO_x emissions.

(b) Acid Rain Permit, No.176-97-AR (R3) establishes monitoring and record keeping requirements for NO_x compliance.

2) **SO_2**

Regulation 6.02, section 6.1.2 and 40 CFR 75.50(c) establishes record keeping requirements for SO_2.

3) **PM**

The coal-fired boilers are subject to 40 CFR Part 64 - Compliance Assurance Monitoring (CAM) for Major Stationary Source since SO2, PM, and NOx emissions from each of the boilers may be greater than the major source threshold and control devices are required to achieve

compliance with standards. On 5/21/2014, LG&E submitted a revised CAM Plan in which SO2 and NOx CEMS are used for compliance demonstration. PM CEMS is used to demonstrate compliance or provide an indication of continuous PM control.

4) **Opacity**

EPA's letter February 28, 2007 establishes monitoring and record keeping requirements for opacity.

5) **HAP**

(a) 40 CFR 63, Subpart UUUUU establishes monitoring and record keeping requirements for existing EGUs.

(b) According to 40 CFR 63.9984(b), the compliance date for an existing EGU is April 16, 2015. LG&E requested a year extension and the District has approved the request for the extension per (40 CFR 63.6(i)(4)(i)). Therefore the compliance date for the EGUs at this plant is April 16, 2016.

iv. **Reporting**

1) **NO_x**

(a) Regulation 6.02, section 16.1 requires a written report of excess emissions and the nature and cause of the excess emissions.

(b) In accordance with Acid Rain Permit, 40 CFR 75, Subpart G establishes reporting requirements for this pollutant.

2) **SO_2**

(a) Regulation 6.02, section 16.1 requires a written report of excess emissions and the nature and cause of the excess emissions.

(b) In accordance with Acid Rain Permit, 40 CFR 75, Subpart G establishes reporting requirements for this pollutant.

3) **PM**

Regulation 6.02, section 16.1 requires a written report of excess emissions and the nature and cause of the excess emissions.

4) **Opacity**

In accordance with Acid Rain Permit, 40 CFR 75, Subpart G establishes reporting requirements for this pollutant.

5) **HAP**

40 CFR 63.10030 and 63.10031 establishes reporting requirements for existing EGUs.

v. **Testing**

PM/ SO_2/ H_2SO_4/ Hg

1) The source is required to conduct annual Method 5 performance test for the boiler.

2) LG&E will conduct stack tests to obtain the actual emission factors and control efficiencies for new control devices per Regulation 2.16, section 4.1.9.

c. **Emission Unit U2 -** Electric Utility Steam Generating Unit (EGU) – Unit 2

i. **Equipment:**

Emission Point	Description	Applicable Regulation	Basis for Applicability
U2 – E3	One (1) tangentially fired boiler, rated capacity 3,085 MMBtu/hr, make Combustion Engineering, using pulverized coal as a primary fuel and natural gas as secondary fuel. Installed 1970	5.00, 5.01, 5.02, 5.14, 5.20, 5.21, 5.22, 5.23 6.02, 6.07, 6.42, 6.47 40 CFR 63 UUUUU, 40 CFR 64, 40 CFR72-78	Regulation 5.00, 5.01, 5.02, 5.14, 5.20, 5.21, 5.22, 5.23 establishes the requirements for Environmental Acceptability for TACs. The source is a Group I company with Category 1TACs which potentially could exceed the de minimis values. Regulation 6.02 establishes the general provisions for the application of standards of performance for existing affected facilities which were commenced prior to September 1, 1976. Existing indirect heat exchangers for which commenced prior to September 1, 1972 are

Emission Point	Description	Applicable Regulation	Basis for Applicability
			subject to Regulation 6.07. Regulation 6.42 applies to the NO_x emissions from all NO_x emitting facilities located at major NO_x source. Regulation 6.47 incorporates the Federal Acid Rain Program for existing sources by reference. 40 CFR 63, Subpart UUUUU establishes national emission limitations and work practice standards for HAP emitted from coal- and oil-fired electric utility steam generating units as defined in 63.10042. 40 CFR 64 establishes compliance assurance monitoring requirements for each unit that has emissions greater than major source threshold and control devices are required to achieve compliance with standards. 40 CFR 72 through 78 contain regulations for Acid Rain Program, including permits, allowance system, CEM, excess emissions, and appeal procedures.
U2 – E4	Four (4) coal silos, make American Air Filter. Installed 1970 Four (4) coal mills, make Combustion Engineering Raymond Bowl Mills, capacity 43 ton/hr each. Installed 1974	5.00, 5.01, 5.02, 5.14, 5.20, 5.21, 5.22, 5.23, 6.09	Regulation 5.00, 5.01, 5.02, 5.14, 5.20, 5.21, 5.22, 5.23 establishes the requirements for Environmental Acceptability for TACs. The source is a Group I company with Category 1TACs which potentially could exceed the de minimis values. Regulation 6.09 establishes the requirements for PM emission from existing processes that commences construction prior to September 1, 1976.

ii. **Standards/Operating Limits**

1) **NO_x**

(a) Acid Rain Permit 176-97-AR (R3) is attached and considered part of the Title V Operating Permit. Regulation 6.47, section 3.5 references 40 CFR Part 76. The Acid Rain Permit establishes the alternative contemporaneous emissions limitations on an annual average basis for this unit.

(b) The NO_x RACT Plan establishes NO_x emission

standards on a rolling 30-day average basis for this unit.

(c) The source is required to install and operate a NO_x CEMS for each boiler in accordance with Regulation 6.02, section 6.1.3, NO_x RACT Plan, Regulation 6.47, section 3.4 referencing 40 CFR 75.10(a)(2).

2) **SO_2**

(a) Regulation 6.07, section 4.1 establishes the three hour rolling average SO_2 standard for this unit.

(b) In accordance with Acid Rain Permit 176-97-AR (R3), Regulation 6.47, section 3.2 references 40 CFR 73 which has the annual SO_2 emission allowances for each boiler at this source.

(a) The source is required to install and operate a SO_2 CEMS for each boiler in accordance with Regulation 6.02, section 6.1.3, Regulation 6.47, section 3.4 referencing 40 CFR 75.10(a)(2).

3) **PM**

(a) In accordance with Regulation 6.07, section 3.1, Table 1, PM emission standard based on a three hour rolling average for unit U2 is 0.11 lb/MMBtu

(b) In accordance with Regulation 6.09, Table 1, PM standards for the coal silos (E4a) is:

$$E = 55.0(1500)^{0.11} - 40 = 82.95 \text{ lb/hr}$$

For each coal mill (E4b):

$$E = 55.0(43)^{0.11} - 40 = 43.2 \text{ lb/hr}$$

(c) For the coal silos and coal mills (E4), the owner or operator has shown, by worst-case calculations without allowance for a control device, that the hourly uncontrolled PM emission standard cannot be exceeded.

(d) According to the letter from EPA dated February 28, 2007, the source is allowed to utilize PM CEMS to replace COMS for each boiler. The source is required to install, maintain, calibrate, and operate PM CEMS for each boiler according the conditions

as specified in EPA's letter.

4) **Opacity**

(a) Regulation 6.07, section 3.2 and 3.3 establishes opacity standards for existing boilers.

(b) Regulation 6.09, section 3.1 establishes opacity standards for existing coal silos and coal mills.

5) **TAC**

(a) Regulation 5.20, 5.21, 5.22, and 5.23 established requirements for Group I sources to demonstrate environmental acceptability.

(b) LG&E Mill Creek submitted their TAC Environmental Acceptability Demonstration to the District on December 28, 2006, March 25, 2008, April 9, 2010, and April 2, 2012. Compliance with the STAR EA Goals was demonstrated in the source's EA Demonstrations. SCREEN3 air dispersion modeling was performed for each emission unit that has non-de minimis TAC emissions. It was demonstrated that the carcinogen risk and non-carcinogen risk values, calculated using the District approved PTE for each unit and the SCREEN model results from the source's EA Demonstration, comply with the STAR EA goals required in Regulation 5.21.

6) **HAP**

40 CFR 63.9990 and 63.9991 establishes emission limits, work practice standards, and operating limits for existing EGUs.

iii. **Monitoring and Recordkeeping**

1) **NO_x**

(a) NO_x RACT Plan establishes monitoring and record keeping requirements for NO_x emissions.

(b) Acid Rain Permit, No.176-97-AR (R3) establishes monitoring and record keeping requirements for NO_x compliance.

2) **SO_2**

Regulation 6.02, section 6.1.2 and 40 CFR 75.50(c) establishes record keeping requirements for SO_2.

3) **PM**

The coal-fired boilers are subject to 40 CFR Part 64 - Compliance Assurance Monitoring (CAM) for Major Stationary Source since SO2, PM, and NOx emissions from each of the boilers may be greater than the major source threshold and control devices are required to achieve compliance with standards. On 5/21/2014, LG&E submitted a revised CAM Plan in which SO2 and NOx CEMS are used for compliance demonstration. PM CEMS is used to demonstrate compliance or provide an indication of continuous PM control.

4) **Opacity**

EPA's letter February 28, 2007 establishes monitoring and record keeping requirements for opacity.

5) **HAP**

(a) 40 CFR 63, Subpart UUUUU establishes monitoring and record keeping requirements for existing EGUs.

(b) According to 40 CFR 63.9984(b), the compliance date for an existing EGU is April 16, 2015. LG&E requested a year extension and the District has approved the request for the extension per (40 CFR 63.6(i)(4)(i)). Therefore the compliance date for the EGUs is April 16, 2016.

iv. **Reporting**

1) **NO_x**

(a) Regulation 6.02, section 16.1 requires a written report of excess emissions and the nature and cause of the excess emissions.

(b) In accordance with Acid Rain Permit, 40 CFR 75, Subpart G establishes reporting requirements for this pollutant.

2) **SO_2**

(a) Regulation 6.02, section 16.1 requires a written report of excess emissions and the nature and cause of the excess emissions.

(b) In accordance with Acid Rain Permit, 40 CFR 75, Subpart G establishes reporting requirements for this pollutant.

3) **PM**

Regulation 6.02, section 16.1 requires a written report of excess emissions and the nature and cause of the excess emissions.

4) **Opacity**

In accordance with Acid Rain Permit, 40 CFR 75, Subpart G establishes reporting requirements for this pollutant.

5) **HAP**

40 CFR 63.10030 and 63.10031 establishes reporting requirements for existing EGUs.

v. **Testing**

PM/ SO_2/ H_2SO_4/ Hg

1) The source is required to conduct annual Method 5 performance test for the boiler.

2) LG&E will conduct stack tests to obtain the actual emission factors and control efficiencies for new control devices per Regulation 2.16, section 4.1.9.

3) 40 CFR 60.46 (a), (b), and (d) establish requirements for performance test methods and their alternatives

d. **Emission Unit U3 -** Electric Utility Steam Generating Unit (EGU) – Unit 3

i. **Equipment:**

Emission Point	Description	Applicable Regulation	Basis for Applicability
U3 – E5	One (1) dry bottom, wall-fired boiler, rated capacity 4,204 MMBtu/hr, make Babcock & Wilcox, using pulverized coal as a primary fuel and natural gas as secondary fuel. Installed 1973	5.00, 5.01, 5.02, 5.14, 5.20, 5.21, 5.22, 5.23, 6.02, 6.42, 6.47,7.06 40 CFR 60 Subpart D 40 CFR 63 UUUUU, 40 CFR 64, 40 CFR72-78	Regulation 5.00, 5.01, 5.02, 5.14, 5.20, 5.21, 5.22, 5.23 establishes the requirements for Environmental Acceptability for TACs. The source is a Group I company with Category 1TACs which potentially could exceed the de minimis values. Regulation 6.02 establishes the general provisions for the application of standards of performance for existing affected facilities which were commenced prior to September 1, 1976. Regulation 6.42 applies to the NO_x emissions from all NO_x emitting facilities located at major NO_x source. Regulation 6.47 incorporates the Federal Acid Rain Program for existing sources by reference. New indirect heat exchangers for which commenced after September 1, 1972 are subject to Regulation 7.06. 40 CFR 60, Subpart D establishes standards of performance for fossil-fuel-fired steam generators for which construction is commenced after August 17, 1971 40 CFR 63, Subpart UUUUU establishes national emission limitations and work practice standards for HAP emitted from coal- and oil-fired electric utility steam generating units as defined in 63.10042. 40 CFR 64 establishes compliance assurance monitoring requirements for each unit that has emissions greater than major source threshold and control devices are required to achieve compliance with standards. 40 CFR 72 through 78 contain regulations for Acid Rain Program, including permits, allowance system, CEM, excess emissions, and appeal procedures.
U3 – E6	Four (4) coal silos, make American Air	5.00, 5.01, 5.02, 5.14,	Regulation 5.00, 5.01, 5.02, 5.14, 5.20, 5.21, 5.22, 5.23 establishes the requirements for

Emission Point	Description	Applicable Regulation	Basis for Applicability
	Filter. Installed 1973 Four (4) coal mills, make Babcock & Wilcox, capacity 57.5 ton/hr each. Installed 1978.	5.20, 5.21, 5.22, 5.23, 6.09, 7.08	Environmental Acceptability for TACs. The source is a Group I company with Category 1TACs which potentially could exceed the de minimis values. Regulation 6.09 establishes the requirements for PM emission from existing processes that commences construction prior to September 1, 1976. Regulation 7.08 establishes the requirements for PM emission from existing processes that commences construction after September 1, 1976.

ii. **Standards/Operating Limits**

1) **NO_x**

(a) Acid Rain Permit 176-97-AR (R3) is attached and considered part of the Title V Operating Permit. Regulation 6.47, section 3.5 references 40 CFR Part 76. The Acid Rain Permit establishes the alternative contemporaneous emissions limitations on an annual average basis for this unit.

(b) The NO_x RACT Plan establishes NO_x emission standards on a rolling 30-day average basis for this unit.

(c) Regulation 7.06, section 6.1.3 and 40 CFR 60.44(a) establishes NOx emission standards of 0.70 lb/mmBtu for coal combustion and 0.20 lb/mmBtu for natural gas combustion on a 3-hour rolling average basis.

(d) The source is required to install and operate a NO_x CEMS for each boiler in accordance with Regulation 6.02, section 6.1.3, Regulation 7.06, section 7.1, NO_x RACT Plan, Regulation 6.47, section 3.4 referencing 40 CFR 75.10(a)(2), and 40 CFR 60.45(a).

2) **SO_2**

(a) Regulation 7.06, section 5.1.2 and 40 CFR 60.43(a) establishes the three hour rolling average SO2

standards for this unit.

(b) In accordance with Acid Rain Permit 176-97-AR (R3), Regulation 6.47, section 3.2 references 40 CFR 73 which has the annual SO_2 emission allowances for each boiler at this source.

(a) The source is required to install and operate a SO_2 CEMS for each boiler in accordance with Regulation 6.02, section 6.1.3, Regulation 7.06, section 7.1, Regulation 6.47, section 3.4 referencing 40 CFR 75.10(a)(2), and 40 CFR 60.45(a).

3) **PM**

(a) In accordance with Regulation 7.06, section 4.1 and 40 CFR 60.42(a)(1), PM emission standard based on a three hour rolling average for units U3 is 0.10 lb/MMBtu.

(b) In accordance with Regulation 6.09, Table 1, PM standards for the coal silos (E6a) is:

$$E = 55.0(1500)^{0.11} - 40 = 82.95 \text{ lb/hr}$$

(c) In accordance with Regulation 7.08, Table 1, PM standards for the coal mills (E6b) is:

$$E = 17.31(58)^{0.16} = 33.1 \text{ lb/hr}$$

(d) For the coal silos and coal mills (E6), the owner or operator has shown, by worst-case calculations without allowance for a control device, that the hourly uncontrolled PM emission standard cannot be exceeded.

(e) According to the letter from EPA dated February 28, 2007, the source is allowed to utilize PM CEMS to replace COMS for each boiler. The source is required to install, maintain, calibrate, and operate PM CEMS for each boiler according the conditions as specified in EPA's letter.

4) **Opacity**

(a) Regulation 7.06, section 4.2 and 40 CFR 60.42(a)(2) establishes opacity standards for new boilers U3 and U4.

(b) Regulation 6.09, section 3.1 establishes opacity standards for existing coal silos. Regulation 7.08, section 3.1.2 establishes opacity standards for new coal mills.

5) **TAC**

(a) Regulation 5.20, 5.21, 5.22, and 5.23 established requirements for Group I sources to demonstrate environmental acceptability.

(b) LG&E Mill Creek submitted their TAC Environmental Acceptability Demonstration to the District on December 28, 2006, March 25, 2008, April 9, 2010, and April 2, 2012. Compliance with the STAR EA Goals was demonstrated in the source's EA Demonstrations. SCREEN3 air dispersion modeling was performed for each emission unit that has non-de minimis TAC emissions. It was demonstrated that the carcinogen risk and non-carcinogen risk values, calculated using the District approved PTE for each unit and the SCREEN model results from the source's EA Demonstration, comply with the STAR EA goals required in Regulation 5.21.

6) **HAP**

40 CFR 63.9990 and 63.9991 establishes emission limits, work practice standards, and operating limits for existing EGUs.

iii. **Monitoring and Recordkeeping**

1) **NO_x**

(a) NO_x RACT Plan establishes monitoring and record keeping requirements for NO_x emissions.

(b) Acid Rain Permit, No.176-97-AR (R3) establishes monitoring and record keeping requirements for NO_x compliance.

(c) 40 CFR 60.45(c) establishes requirements for the performance evaluations of SO_2 and NO_x CEMS.

(d) In accordance with Regulation 7.06, section 7.4, a CEMS for CO_2 or O_2 shall be installed, calibrated, maintained, and operated for NO_x, SO_2, and PM.

2) **SO_2**

Regulation 6.02, section 6.1.2 and 40 CFR 75.50(c) establishes record keeping requirements for SO_2.

3) **PM**

The coal-fired boilers are subject to 40 CFR Part 64 - Compliance Assurance Monitoring (CAM) for Major Stationary Source since SO2, PM, and NOx emissions from each of the boilers may be greater than the major source threshold and control devices are required to achieve compliance with standards. On 5/21/2014, LG&E submitted a revised CAM Plan in which SO2 and NOx CEMS are used for compliance demonstration. PM CEMS is used to demonstrate compliance or provide an indication of continuous PM control.

4) **Opacity**

(a) EPA's letter February 28, 2007 establishes monitoring and record keeping requirements for opacity.

(b) 40 CFR 60.45(b) and (h) establishes monitoring and record keeping requirements for affected facility subject to an opacity standard but that elects to not use a COMS.

5) **HAP**

(a) 40 CFR 63, Subpart UUUUU establishes monitoring and record keeping requirements for existing EGUs.

(b) According to 40 CFR 63.9984(b), the compliance date for an existing EGU is April 16, 2015. LG&E requested a year extension and the District has approved the request for the extension per (40 CFR 63.6(i)(4)(i)). Therefore the compliance date for the EGUs is April 16, 2016.

iv. **Reporting**

1) **NO_x**

(a) Regulation 6.02, section 16.1 requires a written report of excess emissions and the nature and cause of the excess emissions.

(b) In accordance with Acid Rain Permit, 40 CFR 75, Subpart G establishes reporting requirements for this pollutant.

(c) For units U3, 40 CFR 60.45(g) defines the excess emissions for affected facilities using a NO_x CEMS.

2) **SO_2**

(a) Regulation 6.02, section 16.1 requires a written report of excess emissions and the nature and cause of the excess emissions.

(b) In accordance with Acid Rain Permit, 40 CFR 75, Subpart G establishes reporting requirements for this pollutant.

(c) For units U3, 40 CFR 60.45(g) defines the excess emissions for affected facilities using a SO_2 CEMS.

3) **PM**

(a) Regulation 6.02, section 16.1 requires a written report of excess emissions and the nature and cause of the excess emissions.

(b) For units U3, 40 CFR 60.45(g) defines the excess emissions for affected facilities using a PM CEMS.

4) **Opacity**

(a) In accordance with Acid Rain Permit, 40 CFR 75, Subpart G establishes reporting requirements for this pollutant.

(b) For units U3, 40 CFR 60.45(g) defines the excess emissions for opacity.

5) **HAP**

40 CFR 63.10030 and 63.10031 establishes reporting requirements for existing EGUs.

v. **Testing**

PM/ SO_2/ H_2SO_4/ Hg

1) The source is required to conduct annual Method 5 performance test for the boiler.

2) LG&E will conduct stack tests to obtain the actual emission factors and control efficiencies for new control devices per Regulation 2.16, section 4.1.9.

3) 40 CFR 60.46 (a), (b), and (d) establish requirements for performance test methods and their alternatives

e. **Emission Unit U4 -** Electric Utility Steam Generating Unit (EGU) – Unit 4

i. **Equipment:**

Emission Point	Description	Applicable Regulation	Basis for Applicability
U4 – E7	One (1) dry bottom, wall-fired boiler, rated capacity 5,025 MMBtu/hr, make Babcock & Wilcox, using pulverized coal as a primary fuel and natural gas as secondary fuel. Installed 1975	5.00, 5.01, 5.02, 5.14, 5.20, 5.21, 5.22, 5.23, 6.02, 6.42, 6.47,7.06 40 CFR 60 Subpart D 40 CFR 63 UUUUU, 40 CFR 64, 40 CFR72-78	Regulation 5.00, 5.01, 5.02, 5.14, 5.20, 5.21, 5.22, 5.23 establishes the requirements for Environmental Acceptability for TACs. The source is a Group I company with Category 1TACs which potentially could exceed the de minimis values. Regulation 6.02 establishes the general provisions for the application of standards of performance for existing affected facilities which were commenced prior to September 1, 1976. Regulation 6.42 applies to the NO_x emissions from all NO_x emitting facilities located at major NO_x source. Regulation 6.47 incorporates the Federal Acid Rain Program for existing sources by reference. New indirect heat exchangers for which commenced after September 1, 1972 are subject to Regulation 7.06. 40 CFR 60, Subpart D establishes standards of

Emission Point	Description	Applicable Regulation	Basis for Applicability
			performance for fossil-fuel-fired steam generators for which construction is commenced after August 17, 1971 40 CFR 63, Subpart UUUUU establishes national emission limitations and work practice standards for HAP emitted from coal- and oil-fired electric utility steam generating units as defined in 63.10042. 40 CFR 64 establishes compliance assurance monitoring requirements for each unit that has emissions greater than major source threshold and control devices are required to achieve compliance with standards. 40 CFR 72 through 78 contain regulations for Acid Rain Program, including permits, allowance system, CEM, excess emissions, and appeal procedures.
U4 – E8	Five (5) coal silos, make American Air Filter. Installed 1975 Five (5) coal mills, make Babcock & Wilcox, capacity 57.5 ton/hr each. Installed 1982	5.00, 5.01, 5.02, 5.14, 5.20, 5.21, 5.22, 5.23, 6.09, 7.08	Regulation 5.00 establishes the requirements for Environmental Acceptability for TACs. The source is a Group I company with Category 1TACs which could exceed the de minimis values. Regulation 6.09 establishes the requirements for PM emission from existing processes that commences construction prior to September 1, 1976. Regulation 7.08 establishes the requirements for PM emission from existing processes that commences construction after September 1, 1976.

ii. **Standards/Operating Limits**

1) **NO_x**

(a) Acid Rain Permit 176-97-AR (R3) is attached and considered part of the Title V Operating Permit. Regulation 6.47, section 3.5 references 40 CFR Part 76. The Acid Rain Permit establishes the alternative contemporaneous emissions limitations on an annual average basis for this unit.

(b) The NO_x RACT Plan establishes NO_x emission standards on a rolling 30-day average basis for this unit.

(c) Regulation 7.06, section 6.1.3 and 40 CFR 60.44(a) establishes NOx emission standards of 0.70 lb/mmBtu for coal combustion and 0.20 lb/mmBtu for natural gas combustion on a 3-hour rolling average basis.

(d) The source is required to install and operate a NO_x CEMS for each boiler in accordance with Regulation 6.02, section 6.1.3, Regulation 7.06, section 7.1, NO_x RACT Plan, Regulation 6.47, section 3.4 referencing 40 CFR 75.10(a)(2), and 40 CFR 60.45(a).

2) **SO_2**

(a) Regulation 7.06, section 5.1.2 and 40 CFR 60.43(a) establishes the three hour rolling average SO_2 standards for this unit.

(b) In accordance with Acid Rain Permit 176-97-AR (R3), Regulation 6.47, section 3.2 references 40 CFR 73 which has the annual SO_2 emission allowances for each boiler at this source.

(a) The source is required to install and operate a SO_2 CEMS for each boiler in accordance with Regulation 6.02, section 6.1.3, Regulation 7.06, section 7.1, Regulation 6.47, section 3.4 referencing 40 CFR 75.10(a)(2), and 40 CFR 60.45(a).

3) **PM**

(a) In accordance with Regulation 7.06, section 4.1 and 40 CFR 60.42(a)(1), PM emission standard based on a three hour rolling average for units U4 is 0.10 lb/MMBtu.

(b) In accordance with Regulation 6.09, Table 1, PM standards for the coal silos (E8a) is:

$$E = 55.0(1500)^{0.11} - 40 = 82.95 \text{ lb/hr}$$

(c) In accordance with Regulation 7.08, Table 1, PM standards for the coal mills (E8b) is:

$$E = 17.31(58)^{0.16} = 33.1 \text{ lb/hr}$$

(d) For the coal silos and coal mills (E8), the owner or operator has shown, by worst-case calculations

without allowance for a control device, that the hourly uncontrolled PM emission standard cannot be exceeded.

(e) According to the letter from EPA dated February 28, 2007, the source is allowed to utilize PM CEMS to replace COMS for each boiler. The source is required to install, maintain, calibrate, and operate PM CEMS for each boiler according the conditions as specified in EPA's letter.

4) **Opacity**

(a) Regulation 7.06, section 4.2 and 40 CFR 60.42(a)(2) establishes opacity standards for new boilers U4.

(b) Regulation 6.09, section 3.1 establishes opacity standards for existing coal silos. Regulation 7.08, section 3.1.2 establishes opacity standards for new coal mills.

5) **TAC**

(a) Regulation 5.20, 5.21, 5.22, and 5.23 established requirements for Group I sources to demonstrate environmental acceptability.

(b) LG&E Mill Creek submitted their TAC Environmental Acceptability Demonstration to the District on December 28, 2006, March 25, 2008, April 9, 2010, and April 2, 2012. Compliance with the STAR EA Goals was demonstrated in the source's EA Demonstrations. SCREEN3 air dispersion modeling was performed for each emission unit that has non-de minimis TAC emissions. It was demonstrated that the carcinogen risk and non-carcinogen risk values, calculated using the District approved PTE for each unit and the SCREEN model results from the source's EA Demonstration, comply with the STAR EA goals required in Regulation 5.21.

6) **HAP**

40 CFR 63.9990 and 63.9991 establishes emission limits, work practice standards, and operating limits for existing

EGUs.

iii. **Monitoring and Recordkeeping**

1) **NO_x**

(a) NO_x RACT Plan establishes monitoring and record keeping requirements for NO_x emissions.

(b) Acid Rain Permit, No.176-97-AR (R3) establishes monitoring and record keeping requirements for NO_x compliance.

(c) 40 CFR 60.45(c) establishes requirements for the performance evaluations of SO_2 and NO_x CEMS.

(d) In accordance with Regulation 7.06, section 7.4, a CEMS for CO_2 or O_2 shall be installed, calibrated, maintained, and operated for NO_x, SO_2, and PM.

2) **SO_2**

Regulation 6.02, section 6.1.2 and 40 CFR 75.50(c) establishes record keeping requirements for SO_2.

3) **PM**

The coal-fired boilers are subject to 40 CFR Part 64 - Compliance Assurance Monitoring (CAM) for Major Stationary Source since SO2, PM, and NOx emissions from each of the boilers may be greater than the major source threshold and control devices are required to achieve compliance with standards. On 5/21/2014, LG&E submitted a revised CAM Plan in which SO2 and NOx CEMS are used for compliance demonstration. PM CEMS is used to demonstrate compliance or provide an indication of continuous PM control.

4) **Opacity**

(a) EPA's letter February 28, 2007 establishes monitoring and record keeping requirements for opacity.

(b) 40 CFR 60.45(b) and (h) establishes monitoring and record keeping requirements for affected facility

subject to an opacity standard but that elects to not use a COMS.

5) **HAP**

(a) 40 CFR 63, Subpart UUUUU establishes monitoring and record keeping requirements for existing EGUs.

(b) According to 40 CFR 63.9984(b), the compliance date for an existing EGU is April 16, 2015. LG&E requested a year extension and the District has approved the request for the extension per (40 CFR 63.6(i)(4)(i)). Therefore the compliance date for the EGUs is April 16, 2016.

iv. **Reporting**

1) **NO_x**

(a) Regulation 6.02, section 16.1 requires a written report of excess emissions and the nature and cause of the excess emissions.

(b) In accordance with Acid Rain Permit, 40 CFR 75, Subpart G establishes reporting requirements for this pollutant.

(c) For units U4, 40 CFR 60.45(g) defines the excess emissions for affected facilities using a NO_x CEMS.

2) **SO_2**

(a) Regulation 6.02, section 16.1 requires a written report of excess emissions and the nature and cause of the excess emissions.

(b) In accordance with Acid Rain Permit, 40 CFR 75, Subpart G establishes reporting requirements for this pollutant.

(c) For units U4, 40 CFR 60.45(g) defines the excess emissions for affected facilities using a SO_2 CEMS.

3) **PM**

(a) Regulation 6.02, section 16.1 requires a written

report of excess emissions and the nature and cause of the excess emissions.

(b) For units U4, 40 CFR 60.45(g) defines the excess emissions for affected facilities using a PM CEMS.

4) **Opacity**

(a) In accordance with Acid Rain Permit, 40 CFR 75, Subpart G establishes reporting requirements for this pollutant.

(b) For units U4, 40 CFR 60.45(g) defines the excess emissions for opacity.

5) **HAP**

40 CFR 63.10030 and 63.10031 establishes reporting requirements for existing EGUs.

v. **Testing**

PM/ SO_2/ H_2SO_4/ Hg

1) The source is required to conduct annual Method 5 performance test for the boiler.

2) LG&E will conduct stack tests to obtain the actual emission factors and control efficiencies for new control devices per Regulation 2.16, section 4.1.9.

3) 40 CFR 60.46 (a), (b), and (d) establish requirements for performance test methods and their alternatives

f. **Emission Unit U8** – Fly ash storage & handling unit

i. **Equipment:**

Emission Point	Description	Applicable Regulation	Basis for Applicability
U8 – E13	One (1) flyash silo designated as Silo A and one (1) flyash silo designated as Silo B. Both installed 1978.	5.00, 5.01, 5.02, 5.14, 5.20, 5.21, 5.22, 5.23, 7.08	Regulation 5.00, 5.01, 5.02, 5.14, 5.20, 5.21, 5.22, 5.23 establishes the requirements for Environmental Acceptability for TACs. The source is a Group I company with Category 1TACs which potentially could exceed the de minimis values.

Emission Point	Description	Applicable Regulation	Basis for Applicability
U8 – E31	Silo A and B dry truck load-out, make DCL, installed 2000 and 2005		Regulation 7.08 establishes the requirements for PM emission from new processes that commences construction after September 1, 1976.
U8 – E32	Silo A and B railcar load-out, installed 2005 and 2007		
U8 – E33	Silo A and B wet truck load-out, installed 1998		

ii. **Standards/Operating Limits**

1) **PM**

(a) In accordance with Regulation 7.08, Table 1, PM standards for the silos is determined by the following equations:

$E = 3.59(P)^{0.62}$ if P <= 30 tons/hr
$E = 17.31(P)^{0.16}$ if P > 30 tons/hr

E13: $E = 17.31(80.5)^{0.16} = 34.9$ lb/hr
E31: $E = 17.31(50)^{0.16} = 32.4$ lb/hr
E32: $E = 17.31(37)^{0.16} = 30.9$ lb/hr
E33: $E = 17.31(150)^{0.16} = 38.6$ lb/hr

(b) It has been demonstrated that the PM emissions cannot exceed the PM standards specified in Regulation 7.08 uncontrolled. Therefore there are no monitoring, record keeping, and reporting requirements with respect to the PM standards.

2) **Opacity**

Regulation 7.08, section 3.1.1 establishes an opacity standard of less than 20%.

3) **TAC**

(a) Regulation 5.20, 5.21, 5.22, and 5.23 established requirements for Group I sources to demonstrate environmental acceptability.

(b) LG&E submitted their TAC Environmental Acceptability Demonstration to the District on

December 28, 2006, March 25, 2008, April 9, 2010, and April 2, 2012. Using the District approved PTE for this unit and the SCREEN model results from the source's EA Demonstration, this unit complies with the STAR EA goals required in Regulation 5.21 uncontrolled.

g. **Emission Unit U9** – Fly ash transfer bins

i. **Equipment:**

Emission Point	Description	Applicable Regulation	Basis for Applicability
U9 – E16	One (1) flyash transfer bin with a separator for Unit 1 and 2. Total capacity of transfer bin E16, E17, and E18 is 80.5 tph. Installed 1978.	5.00, 5.01, 5.02, 5.14, 5.20, 5.21, 5.22, 5.23, 7.08	Regulation 5.00, 5.01, 5.02, 5.14, 5.20, 5.21, 5.22, 5.23 establishes the requirements for Environmental Acceptability for TACs. The source is a Group I company with Category 1TACs which potentially could exceed the de minimis values. Regulation 7.08 establishes the requirements for PM emission from new processes that commences construction after September 1, 1976.
U9 – E17	One (1) flyash transfer bin with a separator for Unit 3. Installed 1978		
U9 – E18	One (1) flyash transfer bin with a separator for Unit 4. Installed 1978		

ii. **Standards/Operating Limits**

1) **PM**

(a) In accordance with Regulation 7.08, Table 1, PM standard for the silos is determined by the following equations:

$E = 17.31(P)^{0.16}$ if $P > 30$ tons/hr

$E\ (total) = 17.31(80.5)^{0.16} = 34.9$ lb/hr

(b) It has been demonstrated that the PM emissions cannot exceed the PM standards specified in Regulation 7.08 uncontrolled. Therefore there are no monitoring, record keeping, and reporting requirements with respect to the PM standards.

2) **Opacity**

Regulation 7.08, section 3.1.1 establishes an opacity standard of less than 20%.

3) **TAC**

(a) Regulation 5.20, 5.21, 5.22, and 5.23 established requirements for Group I sources to demonstrate environmental acceptability.

(b) LG&E submitted their TAC Environmental Acceptability Demonstration to the District on December 28, 2006, March 25, 2008, April 9, 2010, and April 2, 2012. It has been demonstrated that the potential TAC emissions for this unit cannot exceed its de minimis level uncontrolled.

h. **Emission Unit U12** – Limestone processing operation

i. **Equipment:**

Emission Point	Description	Applicable Regulation	Basis for Applicability
U12 – E24	One (1) barge unloading operation with unloading hopper, rated capacity 750 tph. Installed 1999	7.08 40 CFR 60 Subpart OOO	Regulation 7.08 establishes the requirements for PM emission from new processes that commences construction after September 1, 1976. 40 CFR 60, Subpart OOO establishes national emission limitations and work practice standards for nonmetallic mineral processing plants.
U12 – E25	One (1) storage pile with receiving rate capacity 1,000 tph. Installed 1999		
U12 – E26	One (1) belt conveyor LA, rated capacity 1000 tph. Installed 1999		
U12 – E27	One (1) belt conveyor LB, rated capacity 1000 tph. Installed 1999		
U12 – E28	Three (3) limestone crushers with a total capacity 145 tph. Installed 2001, 2002		

ii. **Standards/Operating Limits**

1) **PM**

(a) In accordance with Regulation 7.08, Table 1, PM standards for the silos is determined by the following equations:

$E = 17.31(P)^{0.16}$ if P > 30 tons/hr

E24: $E = 17.31(750)^{0.16} = 49.9$ lb/hr

E25, 26, 27: $E = 17.31(1000)^{0.16} = 52.3$ lb/hr

E28: $E = 17.31(145)^{0.16} = 38.4$ lb/hr

E28-Unit C: $E = 17.31(45)^{0.16} = 31.8$ lb/hr

(b) It has been demonstrated that the PM emissions cannot exceed the PM standards specified in Regulation 7.08 uncontrolled. Therefore there are no monitoring, record keeping, and reporting requirements with respect to the PM standards.

2) **Opacity**

(a) Regulation 7.08, section 3.1.1 establishes an opacity standard of less than 20%.

(b) 40 CFR 60.672(b) and Table 2 to 40 CFR 60, Subpart OOO establish opacity standard for this unit.

iii. **Testing**

Opacity

40 CFR 60.672(b) establishes opacity testing requirements for this unit.

i. **Emission Unit U14** – Cooling tower

i. **Equipment:**

Emission Point	Description	Applicable Regulation	Basis for Applicability
U14 – E38	One (1) cooling tower for Unit 4 boiler, make Zurn, model 12Z-3300, rated capacity 222,600 gallon water per minute. (1982)	7.08	Regulation 7.08 establishes the requirements for PM emission from new processes that commences construction after September 1, 1976.

ii. **Standards/Operating Limits**

1) **PM**

(a) In accordance with Regulation 7.08, Table 1, PM standards for the silos is determined by the following equations:

$E = 17.31(P)^{0.16}$ if P > 30 tons/hr

E38: $E = 17.31(50{,}540)^{0.16} = 97.9$ lb/hr

(b) It has been demonstrated that the PM emissions cannot exceed the PM standards specified in Regulation 7.08 uncontrolled. Therefore there are no monitoring, record keeping, and reporting requirements with respect to the PM standards.

2) **Opacity**

(a) Regulation 7.08, section 3.1.1 establishes an opacity standard of less than 20%.

(b) Testing for opacity is not required for this unit due to the nature of the cooling tower.

j. **Emission Unit U15** – Haul roads

i. **Equipment:**

Emission Point	Description	Applicable Regulation	Basis for Applicability
U15–E39a	Paved road particulate emissions	1.14	Regulation 1.14 establishes the requirements for the control of fugitive particulate emissions for any source.
U15-39b	Unpaved road particulate emissions		

ii. **Standards/Operating Limits**

1) **PM**

Regulation 1.14, section 2.1 establishes work practice standards to prevent particulate matter from becoming airborne beyond the work site.

2) **Opacity**

Regulation 1.14, section 2.3 establishes standards for opacity.

k. **Emission Unit U16** – Sorbent storage silos

i. **Equipment:**

Emission Point	Description	Applicable Regulation	Basis for Applicability
U16: E40a through E40h	Six (6) to eight (8) sorbent silos for hydrated lime or Trona, make BCSI, model BCSI-14. Each silo has a capacity of 120 tons, loading rate 40 tons/hr, and equipped with a bin vent filter. Installed TBD	7.08	Regulation 7.08 establishes the requirements for PM emission from new processes that commences construction after September 1, 1976.

ii. **Standards/Operating Limits**

1) **PM**

In accordance with Regulation 7.08, Table 1, PM standards for the silos is determined by the following equations:

$E = 17.31(P)^{0.16}$ if $P > 30$ tons/hr

Six (6) new sorbent silos combined:

$P = (6)(40 \text{ tons/hr}) = 240 \text{ tons/hr}$

$E = 17.31(240)^{0.16} = 41.6 \text{ lb/hr}$

Each sorbent silo of U16:

PM limit = (41.6)(1/6) = 6.9 lbs/hr

2) **Opacity**

Regulation 7.08, section 3.1.1 establishes an opacity standard of less than 20%.

l. **Emission Unit U17** – PAC storage silos

i. **Equipment:**

Emission Point	Description	Applicable Regulation	Basis for Applicability
U17: E41a through E41f	Four (4) to six (6) PAC silos for PAC injection system, make & model TBD. Each silo has a capacity of 94 tons, loading rate 40 tons/hr, and equipped with a bin vent filter. Installed date TBD	7.08	Regulation 7.08 establishes the requirements for PM emission from new processes that commences construction after September 1, 1976.

ii. **Standards/Operating Limits**

1) **PM**

In accordance with Regulation 7.08, section 3.3.3 and Table 1, PM standards for the silos is determined by the following equations:

$E = 17.31(P)^{0.16}$ if $P > 30$ tons/hr

Four (4) new PAC silos

$P = (4)(40 \text{ tons/hr}) = 160 \text{ tons/hr}$

$E = 17.31(160)^{0.16} = 39.0 \text{ lb/hr}$

Each PAC silo of U17:

PM limit = (39.0)(1/4) = 9.7 lbs/hr

2) **Opacity**

Regulation 7.08, section 3.1.1 establishes an opacity standard of less than 20%.

m. **Emission Unit U18** – Flyash storage silos

i. **Equipment:**

Emission Point	Description	Applicable Regulation	Basis for Applicability
U18 – E42	One (1) or more flyash silo for PJFF units, make & model TBD, storage capacity 3,620 tons, maximum loading rate 79.5 ton/hr, equipped with bin	5.00, 5.01, 5.02, 5.14, 5.20, 5.21, 5.22, 5.23, 7.08	Regulation 5.00, 5.01, 5.02, 5.14, 5.20, 5.21, 5.22, 5.23 establishes the requirements for Environmental Acceptability for TACs. The source is a Group I company with Category 1TACs which potentially could exceed the de minimis values. Regulation 7.08 establishes the requirements

Emission Point	Description	Applicable Regulation	Basis for Applicability
	vent filter. Installed 2013.		for PM emission from new processes that commences construction after September 1, 1976.

ii. **Standards/Operating Limits**

1) **PM**

In accordance with Regulation 7.08, section 3.3.3 and Table 1, PM standards for the silos is determined by the following equations:

$E = 17.31(P)^{0.16}$ if P > 30 tons/hr

U18: One (1) new and two (2) existing flyash silos of U8
P = (3)(79.5 tons/hr) = 238.5 tons/hr
$E = 17.31(238.5)^{0.16} = 41.6$ lb/hr

Each flyash silo of U18:
PM limit = (41.6)(1/3) = 13.9 lbs/hr

2) **Opacity**

Regulation 7.08, section 3.1.1 establishes an opacity standard of less than 20%.

3) **TAC**

(a) Regulation 5.20, 5.21, 5.22, and 5.23 established requirements for Group I sources to demonstrate environmental acceptability.

(b) LG&E submitted their TAC Environmental Acceptability Demonstration to the District on December 28, 2006, March 25, 2008, and April 9, 2010, in which the source has demonstrated compliance with the EA Goals. The company demonstrated compliance with the STAR Program in the updated the EA Demo dated April 3, 2012.

n. **Emission Unit U20** – Gypsum pelletizing plant

i. **Equipment:**

Emission Point	Description	Applicable Regulation	Basis for Applicability
U20 – E44	One (1) gypsum pelletizing process and one (1) baghouse used as gypsum separator and PM control. Installed 2013	7.08	Regulation 7.08 establishes the requirements for PM emission from new processes that commences construction after September 1, 1976.
U20 – E45 and E46	Two (2) natural gas-fired heaters used for dispersion dryer and fluid bed dryer respectively, combined heat input rate 42 MMBtu/hr, make Star Combustion. Installed 2013	5.00, 5.01, 5.02, 5.14, 5.20, 5.21, 5.22, 5.23, 7.06 40 CFR 63 Subpart DDDDD	Regulation 5.00, 5.01, 5.02, 5.14, 5.20, 5.21, 5.22, 5.23 establishes the requirements for Environmental Acceptability for TACs. The source is a Group I company with Category 1TACs which potentially could exceed the de minimis values. New indirect heat exchangers having a capacity less than 250 MMBtu/hr and commenced after the applicable classification date are subject to Regulation 7.06. 40 CFR 63, Subpart DDDDD establishes requirements for industrial, commercial, or institutional boiler or process heater that is located at, or is part of, a major source of HAP.

ii. **Standards/Operating Limits**

1) **PM**

(a) In accordance with Regulation 7.08, Table 1, PM standards for the silos is determined by the following equations:

$$E = 17.31(P)^{0.16} \qquad \text{if } P > 30 \text{ tons/hr}$$

Maximum capacity of the process is 50 tons/hr. In accordance with Regulation 7.08, Table 1, PM standards for the gypsum pelletizing process (E44) is determined by the following equations:

$$E = 17.31(50)^{0.16} = 32.4 \text{ lbs/hr}$$

(b) The total heat input capacity of all affected facilities, including boilers and heaters within the source is: Total heat input = 3085 (U1) + 3085 (U2) + 4204 (U3) + 5025 (U4) + 42 (U20) = 15,441 MMBtu/hr

In accordance with Regulation 7.06, section 4.1.2, for sources having a total heat input capacity that is 250 MMBtu/hr or more, PM limit for the heaters

(E45 and E46) is 0.10 lb/MMBtu.

(c) The natural gas heaters are not subject to 40 CFR 60, Subpart D_c – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, since it does not generate steam.

2) **Opacity**

(a) Regulation 7.08, section 3.1.1 establishes an opacity standard of less than 20% for the gypsum pelletizing process (E44).

(b) Regulation 7.06, section 4.2 establishes an opacity standard of less than 20% for the heaters (E45 and E46).

3) **SO_2**

For heaters (E45 and E46):

The total heat input capacity of all affected facilities, including boilers and heaters within the source is: Total heat input = 3085 (U1) + 3085 (U2) + 4204 (U3) + 5025 (U4) + 42 (U20) = 15,441 MMBtu/hr

In accordance with Regulation 7.06, section 5.1.2, for sources having a total heat input capacity that is 250 MMBtu/hr or more, SO_2 limit is 0.80 lb/MMBtu

4) **HAP**

LG&E Mill Creek Station is a major source of HAP. Therefore the heaters are subject to the major source Boiler MACT, 40 CFR 63 Subpart DDDDD.

5) **TAC**

For heaters (E45 and E46):

(a) Regulation 5.20, 5.21, 5.22, and 5.23 established requirements for Group I sources to demonstrate environmental acceptability.

(b) Per Regulation 5.21, section 2.7, the TAC emissions from the combustion of natural gas are considered to

be “de minimis emissions” for the STAR Program.

iii. **Monitoring and Recordkeeping**

1) **PM**

(a) A one-time PM compliance demonstration for gypsum pelletizing process (E44) has been performed for this equipment and the lb/hr standard cannot be exceeded uncontrolled. Therefore, there are no monitoring, record keeping, and reporting requirements with respect to PM lb/hr emission limits.

(b) A one-time PM and SO_2 compliance demonstration has been performed for the heaters (E45 and E46), using AP-42 emission factors and combusting natural gas, and the emission standards under Regulation 7.06 for PM and SO_2 cannot be exceeded when combusting natural gas.

2) **Opacity**

It has been determined that using a natural gas fired heater will inherently meet the 20% opacity standard. Therefore, the company is not required to perform periodic monitoring to demonstrate compliance with the opacity standard when combusting natural gas.

3) **SO_2**

A one-time PM and SO_2 compliance demonstration has been performed for the heater, using AP-42 emission factors and combusting natural gas, and the emission standards under Regulation 7.06 for PM and SO_2 cannot be exceeded when combusting natural gas. There are no monitoring and recordkeeping requirements for this pollutant.

4) **HAP**

The owner or operator shall comply with the applicable monitoring and recordkeeping requirements in 40 CFR 63, Subpart DDDDD.

iv. **Reporting**

1) **PM**

(a) For gypsum pelletizing process (E44)

A one-time PM compliance demonstration has been performed for this equipment and the lb/hr standard cannot be exceeded uncontrolled. Therefore, there are no monitoring, record keeping, and reporting requirements with respect to PM lb/hr emission limits.

(b) For heaters (E45 and E46):

A one-time PM and SO_2 compliance demonstration has been performed for the heater, using AP-42 emission factors and combusting natural gas, and the emission standards under Regulation 7.06 for PM and SO_2 cannot be exceeded when combusting natural gas. There are no reporting requirements for this pollutant.

2) **SO_2**

A one-time PM and SO_2 compliance demonstration has been performed for the heater, using AP-42 emission factors and combusting natural gas, and the emission standards under Regulation 7.06 for PM and SO_2 cannot be exceeded when combusting natural gas. There are no reporting requirements for this pollutant.

3) **HAP**

The owner or operator shall comply with the applicable reporting requirements in 40 CFR 63, Subpart DDDDD.

o. **Emission Unit U21** – Coal handling facilities

i. **Equipment:**

Emission Point	Description	Applicable Regulation	Basis for Applicability
U21 – E47	One (1) coal handling operation including barge	5.00, 5.01, 5.02, 5.14, 5.20, 5.21,	Regulation 5.00, 5.01, 5.02, 5.14, 5.20, 5.21, 5.22, 5.23 establishes the requirements for Environmental Acceptability for TACs. The

Emission Point	Description	Applicable Regulation	Basis for Applicability
	unloading (1980), railcar unloading (1971), coal radial stacker (1971), coal belt conveyors (1971), coal crushers (2014), and coal storage pile (1971).	5.22, 5.23, 6.09, 7.08, 7.02, 40 CFR 60, Subpart Y	source is a Group I company with Category 1TACs which potentially could exceed the de minimis values. Regulation 6.09 establishes the requirements for PM emission from new processes that commences construction prior to September 1, 1976. Regulation 7.08 establishes the requirements for PM emission from new processes that commences construction after September 1, 1976. 40 CFR 60, Subpart Y establishes national emission limitations and work practice standards for coal preparation and processing plants that process more than 200 tons per day.

ii. **Standards/Operating Limits**

1) **PM**

(a) In accordance with Regulation 6.09, Table 1, PM standards for the silos is determined by the following equations:

$E = 55.0(P)^{0.11} – 40$ if P > 30 tons/hr

E47b: $E = 55.0(2400)^{0.11} – 40 = 89.5$ lb/hr
E47c: $E = 55.0(1500)^{0.11} – 40 = 83.0$ lb/hr
E47e: $E = 55.0(750)^{0.11} – 40 = 73.9$ lb/hr
E47e: $E = 55.0(2400)^{0.11} – 40 = 89.5$ lb/hr
E47f: $E = 55.0(2400)^{0.11} – 40 = 89.5$ lb/hr

(b) In accordance with Regulation 7.08, Table 1, PM standards for the silos is determined by the following equations:

$E = 17.31(P)^{0.16}$ if P > 30 tons/hr

E47a: $E = 17.31(1500)^{0.16} = 55.8$ lb/hr
E47d: $E = 17.31(900)^{0.16} = 51.4$ lb/hr

(c) It has been demonstrated that the PM emissions cannot exceed the PM standards specified in Regulation 6.09 and 7.08 uncontrolled. Therefore there are no monitoring, record keeping, and reporting requirements with respect to the PM lb/hr

emission standards.

2) **Opacity**

Regulation 6.09, section 3.1 and Regulation 7.08, section 3.1.1 establishes an opacity standard of less than 20%.

3) **Standards of Performance for Coal Preparation and Processing Plants** (40 CFR 60, Subpart Y)

40 CFR 60.254 establishes emission standards for coal processing equipment.

4) **TAC**

(a) Regulation 5.20, 5.21, 5.22, and 5.23 established requirements for Group I sources to demonstrate environmental acceptability.

(b) Each TAC contained in coal is less than 0.1% by weight. According to Regulation 5.21, section 2.1, emissions of TACs from this coal handling operation are de minimis.

p. **Emission Unit U22** – Landfill

i. **Equipment:**

Emission Point	Description	Applicable Regulation	Basis for Applicability
U22–E48	Landfill emissions including haul roads on landfill area, drop point emissions, and wind erosion emissions.	5.00, 5.01, 5.02, 5.14, 5.20, 5.21, 5.22, 5.23, 1.14	Regulation 1.14 establishes the requirements for the control of fugitive particulate emissions for any source. Regulation 5.00, 5.01, 5.02, 5.14, 5.20, 5.21, 5.22, 5.23 establishes the requirements for Environmental Acceptability for TACs. The source is a Group I company with Category 1TACs which potentially could exceed the de minimis values.

ii. **Standards/Operating Limits**

1) **PM**

Regulation 1.14, section 2.1 establishes work practice standards to prevent particulate matter from becoming

airborne beyond the work site.

2) **Opacity**

Regulation 1.14, section 2.3 establishes standards for opacity.

3) **TAC**

(a) Regulation 5.20, 5.21, 5.22, and 5.23 established requirements for Group I sources to demonstrate environmental acceptability.

(b) LG&E submitted a TAC Environmental Acceptability Demonstration for this unit to the District on July 19 and July 31, 2013, in which the source has demonstrated compliance with the EA Goals.

III. Other Requirements

1. Temporary Sources: The source did not request to operate any temporary facilities.

2. Short Term Activities: The source did not report any short term activities.

3. Emissions Trading: N/A

4. Operational Flexibility: The source requested operational flexibility for ESPs in order to achieve the designed efficiency of the PJFF baghouse.

5. Compliance History:

Date	Regulation Violated	Result
6/9/1993	Reg. 6.07, Section 4 for SO2	Board Order 9/15/1993
12/14/1994	Reg. 1.14, Section 2 for fugitive emission	Rescinded 2/6/1996
7/29/1998	Reg. 1.14, Section 2, failure to take reasonable precautions to prevent emission	Rescinded 12/21/1998
3/5/1999	Reg. 1.14, Section 2, visible emissions beyond property line	Agreement 4/12/1999
4/13/1999	Reg. 1.14, Section 2, failure to take reasonable precautions to prevent emission	Agreement 6/1/1999
7/26/1999	Reg. 1.14, Section 2, failure to take	Agreement 10/12/1999

Date	Regulation Violated	Result
	reasonable precautions to prevent emission	
5/8/2000	Reg. 1.09, general prohibition	Agreement 10/12/2000
6/19/2000	Reg. 1.09, general prohibition	Agreement 10/12/2000
12/8/2000	Reg. 1.09, general prohibition	Agreement 4/3/2000
1/31/2001	Reg. 1.09, general prohibition	Agreement 4/18/2001

6. Calculation Methodology or Other Approved Method:

For the coal-fired and natural gas-fired boilers, the PTE evaluation utilized emission factors from AP-42, 1.1 for criteria pollutants and HAPs. The actual emissions shall be determined using CEMS records for NO_x, SO_2, and PM, or emission factors from the performance tests. AP-42 emission factors can be utilized if CEMS or performance test emission factors are not available. Control efficiencies for the control devices determined by the required performance tests shall be used for actual emission calculations.

Emission factors for the sorbent silos and PAC silos are from AP-42 Section 11.17, Lime Manufacturing, Table 4, for product loading, 0.61 lb/ton. The emissions will be reduced by the integrated bin vent filters.

Emission factors for flyash silos are derived from the emission factor for cement supplement uploading to elevated storage silo pneumatically (3-05-011-17) from AP-42, 11.12, Concrete Batching, Table 2, PM = 3.14 lbs/ton, PM10 = PM2.5 = 1.10 lbs/ton (uncontrolled). The emission factors for flyash are adjusted per moisture content, per AP-42, 13.2.4, equation (1). The adjusted emission factor for silos and transfer bins are PM = 0.3493 lbs/ton; PM10 = PM2.5 = 0.1224 lbs/ton

For the gypsum processing equipment, Emission factors for material transfer points are determined using drop point equation from AP-42 Section 13.2.4, Equation (1). The emission factor for the screener comes from AP-42, 11.19.2, Crushed Stone Processing and Pulverized Mineral Processing, Table 2. The emission factor for the hammer mill comes from AP-42, 11.19.2, Table 4. The dust collector is used to separate the dried gypsum from the air. PM emission from the dust collector shall be determined using manufacturer's guaranteed emission rate at the baghouse outlet.

For the natural gas-fired heater, emissions can be calculated using manufacturer's guaranteed emission factors, or AP-42 emission factors if manufacturer's guaranteed emission factors are not available for the pollutants.

7. Insignificant Activities

Description	Quan.	PTE (tpy)	Basis for Exemption
Fuel or Lubricating oils storage tanks with vapor pressure <10mm Hg @ 20 deg C	13	0.005 VOC	Regulation 1.02, Appendix A, 3.9.2
1,000 gallon storage tank for #1 fuel oil with annual turnover < 2X the capacity	1	0.001 VOC	Regulation 1.02, Appendix A, 3.25
Minor combustion sources <10 MMBtu/hr	25	0.79 NOx	Regulation 1.02, Appendix A, 1.1
Emergency relief vents for boiler steam supply	24	0	Regulation 1.02, Appendix A, 3.10
Lab exhaust systems	3	0.001 VOC	Regulation 1.02, Appendix A, 3.11
Portable kerosene storage tanks with capacity less than 500 gallons	1	3.5e-5 VOC	Regulation 1.02, Appendix A, 3.23
Ash pond with wet storage	1	0	Regulation 2.16, section 1.23
Cooling Towers for Unit 2 and Unit 3	2	3.35 PM10	Regulation 2.16, section 1.23
Stack piles (coal, limestone, gypsum piles)	3	1.66 PM10	Regulation 2.16, section 1.23
turbine oil reservoir vapor extractor	4	0	Regulation 2.16, section 1.23
hydrogen seal oil tank vent	4	0	Regulation 2.16, section 1.23
Gypsum handling equipment	1	4.69 PM10	Regulation 2.16, section 1.23
Gasoline storage tank, 3,000 gallons (previous U10, see unit IA1)	1	1.87 VOC	Regulation 2.16, section 1.23
Non-halogenated cold solvent parts washers with secondary reservoir (previous U11, see unit IA2)	8	0.33 VOC	Regulation 2.16, section 1.23
Emergency generators, 800 HP each (previous U13, see unit IA3)	2	4.93 NOx	Regulation 2.16, section 1.23
Fire pumps, 157 HP and 183 HP (See unit IA4)	2	1.42 NOx	Regulation 2.16, section 1.23
Emergency vent for U1 and U2 boilers	1	0.7 NOx	Regulation 2.16, section 1.23

1) Insignificant Activities identified in District Regulation 1.02 Appendix A may be subject to size or production rate disclosure requirements.

2) Insignificant Activities identified in District Regulation 1.02 Appendix A shall comply with generally applicable requirements.

3) Activities identified in Regulation 1.02, Appendix A, may not require a permit and may be insignificant with regard to application disclosure requirements but may still have generally applicable requirements that continue to apply to the source and must be included in the permit.

4) Emissions from Insignificant Activities shall be reported in conjunction with the reporting of annual emissions of the facility as required by the District.

5) In lieu of recording annual throughputs and calculating actual annual emissions, the owner or operator may elect to report the pollutant Potential To Emit (PTE) quantity listed in the Insignificant Activities table, as the annual emission for each piece of equipment.

6) The Insignificant Activities Table is correct as of the date the permit was proposed for review by U.S. EPA, Region 4.

7) The owner or operator shall submit an updated list of Insignificant Activities whenever changes in equipment located at the facility occur that cause changes to the plant wide emissions.

8. Basis of Regulation Applicability for IA units

a. **Emission Unit IA1** – gasoline storage tank

i. **Equipment**

Emission Point	Description	Applicable Regulation	Basis for Applicability
IA1 – E20	One (1) Stage I gasoline refueling station, including one 3000 gallon unleaded gasoline storage tank	6.40 7.15	Regulation 6.40 establishes requirements for the control of emissions from motor vehicle refueling at gasoline dispensing facilities. Regulation 7.15 establishes requirements for the control of emissions from gasoline delivery and storage tanks at existing service stations.

ii. **Standards/Operating Limits**

VOC

(a) Regulation 6.40 and 7.15 establishes work practice standards for the gasoline storage tank.

(b) The storage tanks under this unit meet the definition of insignificant activities per Regulation 2.16, section 1.23. However, Regulation 6.40 or 7.15 applies to gasoline storage vessels. These tanks shall meet the requirements under Regulation 6.40 or 7.15.

iii. **Monitoring and Record Keeping**

VOC

Regulation 6.40, section 3.1.1 establishes record keeping requirement for this unit.

b. **Emission Unit IA2** – parts washers with secondary reservoirs

i. **Equipment**

Emission Point	Description	Applicable Regulation	Basis for Applicability
IA2: IE1 to IE8	Eight (8) parts washers each equipped with a secondary reservoir	6.18	Regulation 6.18 applies to each cold cleaner that use VOCs to remove soluble impurities from metal surfaces.

ii. **Standards/Operating Limits**

VOC

1) Regulation 6.18 establishes standards for cold cleaner that use VOCs to remove soluble impurities from metal surfaces.

2) The parts washers under this unit meet the definition of insignificant activities per Regulation 2.16, section 1.23. However, Regulation 6.18 applies to each cold cleaner that use VOC to remove soluble impurities from metal surfaces. These parts washers shall meet the requirements under Regulation 6.18.

iii. **Monitoring and Record Keeping**

VOC

Regulation 6.18, section 4.4 establishes record keeping requirements for cold cleaners

c. **Emission Unit IA3** – Two (2) emergency generator

i. **Equipment**

Emission Point	Description	Applicable Regulation	Basis for Applicability
IA3 –E36	One (1) Turning Gear diesel generator, make Caterpillar, model C18, rated at 800 HP with an internal 404 gallon diesel fuel tank. Model year 2007 (Tier 2)	40 CFR 63, Subpart ZZZZ, 40 CFR 60, Subpart IIII	40CFR60 Subpart IIII applies to manufacturers, owner or operators of new stationary compression ignition internal combustion engines. 40CFR63 Subpart ZZZZ establishes national emission limitations and operating limitations for HAP emitted from stationary RICE located at major and area sources of HAP emissions.
IA3 –E37	One (1) diesel generator for FGD Quench Water system, make Caterpillar, model 3412, rated at 800 HP with an internal 450 gallon diesel fuel tank. Model year 2005 (Tier 1)	40 CFR 63, Subpart ZZZZ	

i. **Standards/Operating Limits**

1) **Unit Operation**

40 CFR 60.4211 establishes unit operation requirements for emergency generators.

2) **SO_2**

40 CFR 60.4207(b) refers to 40 CFR 80.510(b)(1)(i) which establishes the sulfur content requirement for nonroad diesel engines.

3) **HAP**

This operation is subject to 40 CFR 63, Subpart ZZZZ, *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, because it involves a stationary reciprocating internal combustion engine (RICE) located at a major source of HAP emissions.

d. **Emission Unit IA4** – Two (2) fire pump engines

i. **Equipment**

Emission Point	Description	Applicable Regulation	Basis for Applicability
IA4 –IE9	One (1) diesel fire pump engine, make Clarke, model JU4H-UFADY8, rated at 157 HP with a 187 gallon diesel fuel tank. Model year 2013.	40 CFR 63, Subpart ZZZZ, 40 CFR 60, Subpart IIII	40CFR60 Subpart IIII applies to manufacturers, owner or operators of new stationary compression ignition internal combustion engines. 40CFR63 Subpart ZZZZ establishes national emission limitations and operating limitations for HAP emitted from stationary RICE located at major and area sources of HAP emissions.
IA4 –IE10	One (1) diesel fire pump engine, make Clarke, model JU6H-UFADY58, rated at 183 HP with a 300 gallon diesel fuel tank. Model year 2013.	40 CFR 63, Subpart ZZZZ	

ii. **Standards/Operating Limits**

1) **Unit Operation**

40 CFR 60.4211 establishes unit operation requirements for emergency generators.

2) **SO_2**

40 CFR 60.4207(b) refers to 40 CFR 80.510(b)(1)(i) which establishes the sulfur content requirement for nonroad diesel engines.

3) **HAP**

This operation is subject to 40 CFR 63, Subpart ZZZZ, *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, because it involves a stationary reciprocating internal combustion engine (RICE) located at a major source of HAP emissions.

e. **Emission Unit IA-EG** – Emergency generators

i. **Equipment**

Emission Point	Description	Applicable Regulation	Basis for Applicability
IA –EG	Emergency diesel generators that installed after July 11, 2005 and manufactured after April 1, 2006, with a maximum engine power less than or equal to 500 HP and located at a major source of HAP.	40 CFR 63, Subpart ZZZZ, 40 CFR 60, Subpart IIII	40CFR60 Subpart IIII applies to manufacturers, owner or operators of new stationary compression ignition internal combustion engines. 40CFR63 Subpart ZZZZ establishes national emission limitations and operating limitations for HAP emitted from stationary RICE located at major and area sources of HAP emissions.

ii. **Standards/Operating Limits**

1) **Unit Operation**

(a) 40 CFR 60.4202 and 4205 establish emission standards for the owner or operator or manufacturer of the emergency stationary CI ICE.

(b) 40 CFR 60.4211 establishes unit operation requirements for emergency stationary CI ICE.

2) **Fuel requirements**

40 CFR 60.4207 establishes requirement for nonroad diesel fuel.

iii. **Monitoring and Record Keeping**

1) **Unit Operation**

40 CFR 60.4209(a) and 4214(b) establish monitoring and record keeping requirements for emergency stationary CI ICE.

iv. **Reporting**

1) **Unit Operation**

40 CFR 60.4214 establish reporting requirements for emergency stationary CI ICE.