



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



Title V Operating Permit

Permit No.: O-0126-20-V

Plant ID: 0126

Effective Date: 05/11/2020

Expiration Date: 05/31/2025

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

Source: Louisville Gas & Electric Company Cane Run Generating Station 5252 Cane Run Road Louisville, KY 40216	Owner: Louisville Gas & Electric Company 220 W. Main Street Louisville, KY 40202
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The applicable procedures of District Regulation 2.16 regarding review by the U.S. EPA and public participation have been followed in the issuance of this permit. Based on review of the application on file with the District, permission is given to operate under the conditions stipulated herein. If a renewal permit is not issued prior to the expiration date, the owner or operator may continue to operate in accordance with the terms and conditions of this permit beyond the expiration date, provided that a complete renewal application is submitted to the District no earlier than eighteen months and no later than six months prior to the expiration date.

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

Administratively Complete Date:	07/09/2019
Public Notice Date:	03/26/2020
Proposed Permit Date:	03/26/2020

Permit writer: Yiqiu Lin

Air Pollution Control Officer
5/11/2020

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Permit Revisions and Changes

Permit No.	Public Notice Date	Issue Date	Change Type	Description/Scope
175-00-TV	12/17/2000	10/1/2002	Initial	Initial Permit Issuance
175-00-TV (R1)	12/17/2000	10/1/2002	Admin. Revision	Updated preamble and insignificant activities. Removed Method 22 from emission points E2, E4, and E6
175-00-TV (R2)	08/30/2014	11/18/2014	Renewal and Revision	Permit renewal; R.O. change and addition; Acid Rain permit revision; Incorporate construction permit 244-02, 608-07, 609-07, 643-07, 119-07, 30501-11, 31791-11, 34410-12, C-0126-1002-14, 35273-12(R1), 35274-12(R1)
175-00-TV (R3)	N/A	11/12/2015	Admin. Revision	Update pressure drop range for U15 catalytic oxidizers.
175-00-TV (R4)	3/05/2017; 4/20/2017	5/30/2017	Admin. revision	Administrative changes made to incorporate updated information ^a
			Significant revision	Significant changes made to incorporate updated information ^b
<p>a. Administrative changes include the following:</p> <ol style="list-style-type: none"> 1) Create Plantwide Requirements section to include plantwide emission standards. 2) Move comments for each emission unit to footnotes. 3) Remove shutdown emission units and IAs. 4) Remove shutdown unit U4, U5, and U6 from acid rain permit 144-97-AR. 5) Add emission unit U-IA for IAs with emission standards. 6) Incorporate updated STAR EA demo. 7) Incorporate established pressure drop range for catalytic oxidizer C23 and C24. 8) Incorporate construction permit C-0126-1010-16-V for new emergency generators. 9) Add form used for determination of Benchmark Ambient Concentration. 10) Add "C-0126-1002-14, 35273-12(R1), and 35274-12(R1)" to revision description for 175-00-TV (R2) in this table. <p>b. Significant changes include the following:</p> <ol style="list-style-type: none"> 1) Incorporate CSAPR applicable requirements. 2) Incorporate CAIR applicable requirements. 				
O-0126-20-V	03/26/2020	05/11/2020	Renewal	Permit renewal. Update permit format and language. Removed GT11 (U11), removed Landfill (U20) ¹ ; removed CAIR

¹ The Landfill has been closed in accordance with Special Waste Permit 056-00030, issued by the Kentucky Department of Waste Management (DWM).

Permit No.	Public Notice Date	Issue Date	Change Type	Description/Scope
				requirements; and removed Part 1 of the NOx RACT Plan

Construction Permit Summary

Permit No.	Issue Date	Description
C-0126-1002-14-V	10/6/2014	Re-issuance of construction permit for sludge processing plant (U7)
C-0126-1010-16-V	10/25/2016	Four (4) new emergency generators

Application and Related Documents

Document No.	Date Received	Description
22578	5/10/2019	Title V permit renewal application
22713	5/29/2019	Title V renewal application completeness determination
124927	11/21/2019	Title V renewal question about quantity of parts washers
125004, 125030	11/25/2019	Email regarding solvent usage in parts washers
126124	12/11/2019	Email regarding parts washer solvent usage
126185, 126186, 126187	12/12/2019	Email questions and responses related to Title V renewal
129793	1/30/2020	Pre-Draft permit sent to company for review
131603	2/14/2020	Company comments on pre-draft permit
132290	2/19/2020	Email questions and responses related to Title V renewal
132594	2/21/2020	Email questions and responses related to Title V renewal
133241	2/28/2020	Email questions and responses related to Title V renewal
134112	3/04/2020	Email questions and responses related to Title V renewal
134336	3/09/2020	Email questions and responses related to Title V renewal
138599	4/24/2020	Company comment on Title V renewal permit
138600, 138601	4/27/2020	District response that the typo would be fixed, and letting EPA know that a comment was received

Abbreviations and Acronyms

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

Preamble

Title V of the Clean Air Act Amendments of 1990 (the Act) required EPA to create an operating permit program for implementation by state or local air permitting authorities. The purposes of this program are: (1) to require an affected company to assume full responsibility for demonstrating compliance with applicable regulations; (2) to capture all of the regulatory information pertaining to an affected company in a single document; and (3) to make permits more consistent with each other.

A company is subject to the Title V program if it meets any of several criteria related to the nature or amount of its emissions. The Title V operating permit specifies what the affected company is, how it may operate, what its applicable regulations are, how it will demonstrate compliance, and what is required if compliance is not achieved. In Jefferson County, Kentucky, the Louisville Metro Air Pollution Control District (LMAPCD or APCD) is responsible for issuing Title V permits to affected companies and enforcing local regulations and delegated federal and state regulations. EPA may enforce federal regulations but not "District Only Enforceable Regulations."

Title V offers the public an opportunity to review and comment on a company's draft permit. It is intended to help the public understand the company's compliance responsibility under the Clean Air Act. Additionally, the Title V process provides a mechanism to incorporate new applicable requirements. Such requirements are available to the public for review and comment before they are adopted.

Title V Permit General Conditions define requirements that are generally applicable to all Title V companies under the jurisdiction of LMAPCD. This avoids repeating these requirements in every section of the company's Title V permit. Company-specific conditions augment the General Conditions as necessary; these appear in the sections of the permit addressing individual emission units or emission points.

The General Conditions include references to regulatory requirements that may not currently apply to the company, but which provide guidance for potential changes at the company or in the regulations during the life of the permit. Such requirements may become applicable if the company makes certain modifications or a new applicable requirement is adopted.

When the applicability of a section or subpart of a regulation is unclear, a clarifying citation will be made in the company's Title V permit at the emission unit/point level. Comments may also be added at the emission unit/point level to give further clarification or explanation.

The owner or operator's Title V permit may include a current table of "insignificant activities."

Insignificant activities are defined in District Regulation 2.16 section 1.23, as of the date the permit was proposed for review by U.S. EPA, Region 4.

Insignificant activities identified in District Regulation 1.02, section 1.38, and Appendix A may be subject to size or production rate disclosure requirements pursuant to Regulation 2.16 section 3.5.4.1.4.

Insignificant activities identified in District Regulation 1.02, section 1.38, and Appendix A shall comply with generally applicable requirements as required by Regulation 2.16 section 4.1.9.4.

General Conditions

G1. **Compliance** - The owner or operator shall comply with all applicable requirements and with all terms and conditions of this permit. Any noncompliance shall constitute a violation of the Act, State, and District regulations and shall cause the source to be subject to enforcement actions including, but not limited to, the termination, revocation and reissuance, or revision of this permit, or denial of a permit application to renew this permit. Notwithstanding any other provision in the Jefferson County portion of the Kentucky SIP approved by EPA, any credible evidence may be used for the purpose of establishing whether the owner or operator is in compliance with, has violated, or is in violation of any such plan.
[Regulation 2.16, sections 4.1.3, 4.1.13.1, and 4.1.13.7]

G2. **Compliance Certification** - The owner or operator shall certify, annually, or more frequently if required in applicable regulations, compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. This certification shall meet the requirements of Regulation 2.16, sections 3.5.11 and 4.3.5. The owner or operator shall submit the annual compliance certification (Form 9400-O) directly to the EPA and to the District, as set forth in Regulation 2.16, section 4.3.5.4, at the following addresses:

*US EPA - Region IV
Air Enforcement Branch
Atlanta Federal Center
61 Forsyth Street
Atlanta, GA 30303-8960*

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

The owner or operator shall submit the Compliance Certification on or before April 15 of each year, or other such due date as required by another applicable regulation.

G3. **Compliance Schedule** - The owner or operator shall submit a schedule of compliance for each emission unit that is not in compliance with all applicable requirements. A compliance schedule must meet the requirements of Regulation 2.16, section 3.5.9.5. A schedule of compliance shall be supplemental to, and shall not condone noncompliance with, the applicable requirements on which it is based. For each schedule of compliance, the owner or operator shall submit certified progress reports at least semi-annually, or at a more frequent period if specified in an applicable requirement or by the District in accordance with Regulation 2.16, section 4.3.4. The progress reports shall contain:

- a. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when activities, milestones, or compliance were achieved.
- b. An explanation of why dates in the schedule of compliance were not or will not be met, and preventive or corrective measures adopted.

G4. **Duty to Supplement or Correct Application** - If the owner or operator fails to submit relevant facts or has submitted incorrect information in the permit application, they shall, upon discovery of the occurrence, promptly submit the supplementary facts or corrected information in accordance with Regulation 2.16, section 3.4.

G5. **Emergency Provision**

- a. An emergency shall constitute an affirmative defense to an enforcement action brought for noncompliance with technology-based emission limitations if the conditions in Regulation 2.16 are met. The affirmative defense of emergency shall be demonstrated

through properly signed, contemporaneous operating logs, or other relevant evidence that:

- i. An emergency occurred and that the owner or operator can identify the cause of the emergency;
 - ii. The permitted facility was at the time being properly operated;
 - iii. During the period of the emergency the owner or operator expeditiously took all reasonable steps, consistent with safe operating practices, to minimize levels of emissions that exceeded the emission standards or other requirements in this permit; and
 - iv. The owner or operator submitted notice meeting the requirements of Regulation 1.07 of the time when emissions limitations were exceeded because of the emergency. This notice must fulfill the requirement of this condition, and must contain a description of the emergency, any steps taken to mitigate emissions, and any corrective actions taken.
- b. In an enforcement proceeding, the owner or operator seeking to establish the occurrence of an emergency has the burden of proof.
- c. This condition is in addition to any emergency or upset provision contained in an applicable requirement. [Regulation 2.16, sections 4.7.1 through 4.7.4]
- G6. **Emission Fees Payment Requirements** - The owner or operator shall pay annual emission fees in accordance with Regulation 2.08, section 1.3. Failure to pay the emissions fees when due shall constitute a violation of District Regulations. Such failure is subject to penalties and an increase in the fee of an additional 5% per month up to a maximum of 25% of the original amount due. In addition, failure to pay emissions fees within 60 days of the due date shall automatically suspend this permit to operate until the fee is paid or a schedule for payment acceptable to the District has been established. [Regulation 2.08, section 1.2.5]
- G7. **Emission Offset Requirements** - The owner or operator shall comply with the requirements of Regulation 2.04.
- G8. **Enforceability Requirements** - Except for the conditions that are specifically designated as District-Only Enforceable Conditions, all terms and conditions of this permit, including any provisions designed to limit a source's potential to emit, are enforceable by EPA and citizens as specified under the Act. [Regulation 2.16, sections 4.2.1 and 4.2.2]
- G9. **Enforcement Action Defense**
- a. It shall not be a defense for the owner or operator in an enforcement action that it would have been necessary for the owner or operator to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
 - b. The owner or operator's failure to halt or reduce activity may be a mitigating factor in assessing penalties for noncompliance if the health, safety or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operation. [Regulation 2.16, sections 4.1.13.2 and 4.1.13.3]
- G10. **Hazardous Air Pollutants and Sources Categories** - The owner or operator shall comply with the applicable requirements of Regulations 5.02 and 5.14.
- G11. **Information Requests** - The owner or operator shall furnish to the District, within a reasonable time, information requested in writing by the District, to determine whether cause exists for revising, revoking and reissuing, or terminating this permit, or to determine compliance with this

permit. The owner or operator shall also furnish, upon request, copies of records required to be kept by this permit. [Regulation 2.16, section 4.1.13.6]

If information is submitted to the District under a claim of confidentiality, the source shall submit a copy of the confidential information directly to EPA at the address shown in General Condition 35.b. [Regulation 2.07, section 10.2]

G12. **Insignificant Activities** - The owner or operator shall:

- a. Notify the District in a timely manner of any proposed change to an insignificant activity that would require a permit revision. [Regulation 2.16, Section 5]
- b. Submit a current list of insignificant activities by April 15 of each year with the annual compliance certification, including an identification of the additions and removals of insignificant activities that occurred during the preceding year. [Regulation 2.16, section 4.3.5.3.6]

G13. **Inspection and Entry** - Upon presentation of credentials and other documents as required by law, the owner or operator shall allow the District or an authorized representative to perform the following during reasonable hours: [Regulation 2.16, section 4.3.2]

- a. Enter the premises to inspect any emissions-related activity or records required in this permit.
- b. Have access to and copy records required by this permit.
- c. Inspect facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required by this permit.
- d. Sample or monitor substances or parameters to assure compliance with this permit or any applicable requirements.

G14. **Monitoring and Related Record Keeping and Reporting Requirement** - The owner or operator shall comply with the requirements of Regulation 2.16, section 4.1.9. Unless specified elsewhere in this permit, the owner or operator shall complete required monthly record keeping within 30 days following the end of each calendar month. The owner or operator shall submit all required monitoring reports at least once every six months, unless more frequent reporting is required by an applicable requirement. The reporting period shall be 1 January through 30 June and 1 July through 31 December of each calendar year. All reports shall be sent to the District at the address shown in paragraph 2 of these General Conditions and must be submitted by the 60th day following the end of each reporting period, unless specified elsewhere in this permit. If surrogate operating parameters are monitored and recorded in lieu of emission monitoring, then an exceedance of multiple parameters may be deemed a single violation by the District for enforcement purposes. All reports shall include the company name, plant ID number, and the beginning and ending date of the reporting period. The compliance reports shall clearly identify any deviation from a permit requirement or a declaration that there were no such deviations. All semi-annual compliance reports shall include the statement "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in this document are true, accurate, and complete" and the signature and title of a responsible official of the company.

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

Reporting Period

January 1 - June 30

July 1 - December 31

Report Due Date

August 29

March 1 of the following year

If a change in the responsible official (RO) occurs during the term of this permit, or if an RO is added, the owner or operator shall provide written notification (Form AP-100A) to the District within 30 calendar days of such change or addition.

- G15. **Off-permit Documents** - Any applicable requirements, including emission limitations, control technology requirements, or work practice standards, contained in an off-permit document cannot be changed without undergoing the permit revision procedures in Regulation 2.16, Section 5. [Regulation 2.16, section 4.1.5]
- G16. **Operational Flexibility** - The owner or operator may make changes without permit revision in accordance with Regulation 2.16, section 5.8.
- G17. **Permit Amendments (Administrative)** - This permit can be administratively amended by the District in accordance with Regulation 2.16, section 5.4.
- G18. **Permit Application Submittal** - The owner or operator shall submit a timely and complete application for permit renewal or significant revision. If the owner or operator submits a timely and complete application, then the owner or operator's failure to have a permit is not a violation until the District takes formal action on this permit application. This protection shall cease to apply if, subsequent to completeness determination, the owner or operator fails to submit, by the deadline specified in writing by the District, additional information required to process the application as required by Regulation 2.16, sections 3 and 5.2.
- G19. **Permit Duration** - This permit is issued for a fixed term of 5 years, in accordance with Regulation 2.16, section 4.1.8.3.
- G20. **Permit Renewal, Expiration and Application** - Permit renewal, expiration and application procedural requirements shall be in accordance with Regulation 2.16, sections 4.1.8.2 and 5.3. This permit may only be renewed in accordance with section 5.3.
- G21. **Permit Revisions** - No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in the permit. [Regulation 2.16, section 4.1.16]
- G22. **Permit Revision Procedures (Minor)** - Except as provided in 40 CFR Part 72, the Acid Rain Program, this permit may be revised in accordance with Regulation 2.16, section 5.5.
- G23. **Permit Revision Procedures (Significant)** - A source seeking to make a significant permit revision shall meet all the Title V requirements for permit applications, issuance and Permit renewal, in accordance with Regulation 2.16, section 5.7, and all other applicable District Regulations.
- G24. **Permit Termination and Revocation by the District** - The District may terminate this permit only upon written request of the owner or operator. The District may revoke a permit for cause, in accordance with Regulation 2.16, section 5.11.1 through 5.11.6. For purposes of section 5.11.1, substantial or unresolved noncompliance includes, but is not limited to:
- a. Knowingly operating process or air pollution control equipment in a manner not allowed by an applicable requirement or that results in excess emissions of a regulated air pollutant that would endanger the public or the environment;
 - b. Failure or neglect to furnish information, analyses, plans, or specifications required by the District;
 - c. Knowingly making any false statement in any permit application;
 - d. Noncompliance with Regulation 1.07, section 4.2; or
 - e. Noncompliance with KRS Chapter 77.

- G25. **Permit Shield** - The permit shield shall apply in accordance with Regulation 2.16, section 4.6.1.
- G26. **Prevention of Significant Deterioration of Air Quality** - The owner or operator shall comply with the requirements of Regulation 2.05.
- G27. **Property Rights** - This permit shall not convey property rights of any sort or grant exclusive privileges in accordance with Regulation 2.16, section 4.1.13.5.
- G28. **Public Participation** - Except for modifications qualifying for administrative permit amendments or minor permit revision procedures, all permit proceedings shall meet the requirements of Regulations 2.07, Section 1; and 2.16, sections 5.1.1.2 and 5.5.4.
- G29. **Reopening for Cause** - This permit shall be reopened and revised by the District in accordance with Regulation 2.16, section 5.9.
- G30. **Reopening for Cause by EPA** - This permit may be revised, revoked and reissued or terminated for cause by EPA in accordance with Regulation 2.16, section 5.10.
- G31. **Risk Management Plan [112(r)]** - For each process subject to section 112(r) of the Act, the owner or operator shall comply with 40 CFR Part 68 and Regulation 5.15.
- G32. **Severability Clause** - The conditions of this permit are severable. Therefore, if any condition of this permit, or the application of any condition of this permit to any specific circumstance, is determined to be invalid, the application of the condition in question to other circumstances, as well as the remainder of this permit's conditions, shall not be affected.
[Regulation 2.16, section 4.1.12]
- G33. **Stack Height Considerations** - The owner or operator shall comply with the requirements of Regulation 2.10.
- G34. **Startups, Shutdowns, and Upset Conditions Requirements** - The owner or operator shall comply with the requirements of Regulation 1.07.
- G35. **Submittal of Reports, Data, Notifications, and Applications**
- a. Applications, reports, test data, monitoring data, compliance certifications, and any other document required by this permit as set forth in Regulation 2.16, sections 3.1, 3.3, 3.4, 3.5, 4.1.13.6, 5.8.5 and 5.12 shall be submitted to:
- Air Pollution Control District
701 West Ormsby Avenue, Suite 303
Louisville, Kentucky 40203-3137*
- b. Documents that are specifically required to be submitted to EPA, as set forth in Regulation 2.16, sections 3.3 and 5.8.5 shall be mailed to EPA at:
- US EPA - Region IV
APTMD - 12th floor
Atlanta Federal Center
61 Forsyth Street
Atlanta, GA 30303-3104*

- G36. **Other Applicable Regulations** - The owner or operator shall comply with all applicable requirements of the following:

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

District Only Enforceable Regulations:

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

G37. **Stratospheric Ozone Protection Requirements** - Any facility having refrigeration equipment, including air conditioning equipment, which uses a Class I or II substance (listed in 40 CFR 82, Subpart A, Appendices A and B), and any facility which maintains, services, or repairs motor vehicles using a Class I or II substance as refrigerant must comply with all requirements of 40 CFR 82, Subparts A, B, and F. Those requirements include the following restrictions:

- a. Any facility having any refrigeration equipment that normally contains fifty pounds of refrigerant or more must keep servicing records documenting the date and type of all service and the quantity of any refrigerant added, according to 40 CFR 82.166;
- b. No person repairing or servicing a motor vehicle may perform any service on a motor vehicle air conditioner (MVAC) involving the refrigerant for such air conditioner unless the person has been properly trained and certified as provided in 40 CFR 82.34 and 40 CFR 82.40, and properly uses equipment approved according to 40 CFR 82.36 and 40 CFR 82.38, and complies with 40 CFR 82.42;
- c. No person may sell or distribute, or offer for sale or distribution, any substance listed as a Class I or II substance in 40 CFR 82, Subpart A, Appendices A and B, except in compliance with 40 CFR 82.34(b), 40 CFR 82.42, and/or 40 CFR 82.166;
- d. No person maintaining, servicing, repairing, or disposing of appliances may knowingly vent or otherwise release into the atmosphere any Class I or II substance used as a refrigerant in such equipment and no other person may open appliances (except MVACs as defined in 40 CFR 82.152) for service, maintenance, or repair unless the person has been properly trained and certified according to 40 CFR 82.161 and unless the person uses equipment certified for that type of appliance according to 40 CFR 82.158 and unless the person observes the practices set forth in 40 CFR 82.156 and 40 CFR 82.166;

- e. No person may dispose of appliances (except small appliances, as defined in 40 CFR 82.152) without using equipment certified for that type of appliance according to 40 CFR 82.158 and without observing the practices set forth in 40 CFR 82.156 and 40 CFR 82.166;
- f. No person may recover refrigerant from small appliances, MVACs and MVAC-like appliances (as defined in 40 CFR 82.152), except in compliance with the requirements of 40 CFR 82 Subpart F;
- g. If the permittee manufactures, transforms, imports, or exports, a Class I or II substance (listed in 40 CFR 82, Subpart A, Appendices A and B), the permittee is subject to all requirements as specified in 40 CFR 82 Subpart A, Production and Consumption Controls. [Regulation 2.16, section 4.1.5]

Plantwide Requirements

Facility Description

Louisville Gas & Electric- Cane Run Generating Station generates electric energy for local and remote distribution. Natural gas is the primary fuel used to fire commercial turbines for generation of electricity.

Plantwide Applicable Regulations

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
2.05	Prevention of Significant Deterioration of Air Quality	1, 2
2.16	Title V Operating Permits	1 through 6
40 CFR 52 Subpart A	Approval and Promulgation of Implementation Plans – General Provisions	52.01 through 52.39
40 CFR 97, Subpart AAAAA	CSAPR NO _x Annual Trading Program	97.401 through 97.435
40 CFR 97, Subpart CCCCC	CSAPR SO ₂ Group 1 Trading Program	97.601 through 97.635
40 CFR 97, Subpart EEEEE	CSAPR NO _x Ozone Season Group 2 Trading Program	97.801 through 97.835

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

Plantwide Specific Conditions

S1. Standards

[Regulation 2.16, Section 4.1.1]

a. **CO**

- i. The owner or operator shall not allow or cause plantwide CO emissions to exceed 510.8 tons in a 12 consecutive month period.² [Regulation 2.05]

b. **HAP**

- i. Effective from November 1, 2015, the owner or operator shall not allow or cause HAP emissions from this plant to exceed 10 tons for a single HAP or 25 tons for total HAPs in a 12 consecutive month period.³ [Regulation 2.16, section 4.1.1]

c. **TAC**

- i. The owner or operator shall not allow emissions of any TAC to exceed environmentally acceptable (EA) levels, whether specifically established by modeling or determined by the District to be *de minimis*. (See Comment 1) [Regulations 5.00 and 5.21]
- ii. The owner or operator shall perform a new Environmental Acceptability (EA) Demonstration or *de minimis* determination when the following events occur and submit the EA Demonstration on the schedule noted in the reporting section:⁴
- (1) An application to construct or modify a process or process equipment is submitted to the District pursuant to Regulation 2.03, 2.04 or 2.05. [Regulation 5.21, section 4.22.1]
 - (2) A modification of any physical modeling parameters such as fence lines or building heights that are not otherwise subject to the requirements in this permit that affects the demonstration of compliance. [Regulation 5.21, section 4.22.2]; or
 - (3) A change occurs in the process or process equipment, including raw material or fuel type substitution. [Regulation 5.21, section 4.22.3]

² The plantwide CO and VOC emission standards are determined with the emission decreases during the contemporaneous period (CO = 410.8 tons; VOC = 57.0 tons) and the PSD/NSR significant emission rate (CO = 100 tons; VOC = 40 tons). The 12 consecutive month rolling emissions include the annual emissions required by 40 CFR 52.21(r)(6)(iii).

³ The source accepted these HAP emission limits to become a HAP area source.

⁴ Changes to the air dispersion modeling program or meteorological data used in the most recent Environmental Acceptability Demonstration do not trigger the requirement to perform a new Environmental Acceptability Demonstration.

- iii. When a new TAC is introduced or for any existing TAC which does not have an established BAC or *de minimis* value, the owner or operator shall calculate and report these values as part of any aforementioned EA Demonstration. The form, located in Attachment G, may be used for determining BAC and *de minimis* values.
[Regulation 5.20, sections 3 and 4]
- d. **VOC**
 - i. The owner or operator shall not allow or cause plantwide VOC emissions to exceed 97.0 tons in a 12 consecutive month period.²
- e. **Cross-State Air Pollution Rule (CSAPR)**⁵
 - i. The owner or operator shall comply with CSAPR applicable requirements in 40 CFR 97, Subpart AAAAA, Subpart EEEEE, and Subpart CCCCC (See Attachment D).

S2. Monitoring and Record Keeping

[Regulation 2.16, Section 4.1.9.1 and 4.1.9.2]

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

- a. **CO**
 - i. The owner or operator shall monthly calculate and record the plantwide CO emissions and subsequently calculate the total CO emissions during the 12 consecutive month period.
- b. **HAP**
 - i. The owner or operator shall, monthly, calculate and record the plantwide emissions for Formaldehyde, and subsequently calculate the total emissions for Formaldehyde during the 12 consecutive month period.
- c. **TAC**
 - i. The owner or operator shall maintain records sufficient to demonstrate environmental acceptability, including, but not limited to, (M)SDS, analysis of emissions, and/or modeling results.

⁵ EPA approved on May 8, 2019 (84 FR 13800) the Kentucky State SIP Revision to replace The Clean Air Interstate Rule (CAIR) with Cross State Air Pollution Rule (CSAPR). CAIR requirements have been removed from the permit.

- d. **VOC**
 - i. The owner or operator shall, monthly, calculate and record the plantwide VOC emissions and subsequently calculate the total VOC emissions during the 12 consecutive month period.
- e. **Cross-State Air Pollution Rule (CSAPR)**
 - i. The owner or operator shall comply with CSAPR applicable requirements in 40 CFR 97, Subpart AAAAAA, Subpart EEEEE, and Subpart CCCCC. (See Attachment D)

S3. Reporting

[Regulation 2.16, Section 4.1.1]

The owner or operator shall report the following information, as required by General Condition G14: (See Comment 2)

- a. **CO**
 - i. The owner or operator shall identify all periods of plantwide total CO emissions exceeding the standard during a semi-annual reporting period. The semi-annual compliance report shall include the following:
 - (1) Identification of all periods during which a deviation occurred;
 - (2) A description, including the magnitude, of the deviation;
 - (3) If known, the cause of the deviation;
 - (4) A description of all corrective actions taken to abate the deviation; and
 - (5) If no deviations occur during a semi-annual reporting period, the report shall contain a negative declaration.
 - ii.
- b. **HAP**
 - i. The owner or operator shall identify all periods of plantwide total Formaldehyde emissions exceeding the major source threshold for single HAP during a semi-annual reporting period. The semi-annual compliance report shall include the following:
 - (1) Identification of all periods during which a deviation occurred;
 - (2) A description, including the magnitude, of the deviation;
 - (3) If known, the cause of the deviation;

- (4) A description of all corrective actions taken to abate the deviation; and
- (5) If no deviations occur during a semi-annual reporting period, the report shall contain a negative declaration.

c. TAC

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

d. VOC

- i. The owner or operator shall identify all periods of plantwide total VOC emissions exceeding the standard during a semi-annual reporting period. The semi-annual compliance report shall include the following:
 - (1) Identification of all periods during which a deviation occurred;
 - (2) A description, including the magnitude, of the deviation;
 - (3) If known, the cause of the deviation;
 - (4) A description of all corrective actions taken to abate the deviation; and
 - (5) If no deviations occur during a semi-annual reporting period, the report shall contain a negative declaration.
- ii.

e. **Cross-State Air Pollution Rule (CSAPR)**

- i. The owner or operator shall comply with CSAPR applicable requirements in 40 CFR 97, Subpart AAAAA, Subpart EEEEE, and Subpart CCCCC. (See Attachment D)

S4. Testing

[Regulation 2.16, section 4.3.1]

a. **General Requirements**

These conditions apply for all testing unless superseded by requirements listed in the individual emission units.

- i. Devices of similar design may be represented by a common performance test contingent upon review and approval of the testing protocol by the District.
- ii. Before conducting a performance test, the owner or operator shall submit a written performance test plan (stack test protocol). The plan shall include the EPA test methods that will be used for testing, the process operating parameters that will be monitored during the performance test, and the control device performance indicators that will be monitored during the performance test. The test plans shall be furnished to the District at least 30 calendar days prior to the actual date of the performance test. The Protocol Checklist for a Performance Test is attached to this permit. This checklist provides information that must be provided in the protocol.
- iii. The owner or operator shall be responsible for obtaining and analyzing audit samples when the EPA Reference Method is used to analyze samples to demonstrate compliance with the source's emission regulation. The furnishing, ownership, and processing of the audit samples and their results shall be described in the protocol. The audit samples shall be available for verification by the District during the onsite testing.⁶
- iv. The owner or operator shall provide the District at least 10 working days prior notice of any performance test to afford the District the opportunity to have an observer present.
- v. The owner or operator shall furnish the District with a written report of the results of the performance test within 60 calendar days following the actual date of completion of the performance test.

⁶ Per an EPA rule change ("Restructuring of the Stationary Source Audit Program." Federal Register 75:176 (September 13, 2010) pp 55636-55657), sources became responsible for obtaining the audit samples directly from accredited audit sample suppliers, not the regulatory agencies.

Comments for Plantwide Requirements

1. LG&E Cane Run submitted their TAC Environmental Acceptability Demonstration to the District on December 28, 2006, March 25, 2008, April 9, 2010, April 2, 2012, May 13, 2014, and August 29, 2016. Compliance with the STAR EA Goals was demonstrated in the source’s EA Demonstrations. Since June 30, 2015, the source has shut down the coal-fired boilers and their associated material processing equipment. The NGCC unit (U15) and the associated auxiliary boiler (U16) and emergency generator (U18) have been in normal operation since then. The District reviewed TAC Environmental Acceptability Demonstration for the NGCC unit and its associated equipment. AERMOD was performed for emergency generators (U18). The following table demonstrates that the carcinogen risk and non-carcinogen risk values, calculated using the District approved PTE for each unit and modeling results from the source’s EA Demonstration, comply with the STAR EA goals required in Regulation 5.21.

Plantwide Summary	All existing & new P/PE		All new P/PE	
	Industrial Total R _C	1.33	< 75	1.33
Non-Ind. Total R _C	1.33	< 7.5	1.33	< 3.8
Industrial Max. R _{NC}	0.001	< 3.0		
Non-Ind. Max. R _{NC}	0.001	< 1.0		

		R _{NC} Total			U18 (5 Egs)			
		Indus.	Non-Ind.	R _{NC}	Industrial		Non-Industrial	
TAC	CAS #	R _{NC}	R _{NC}	EA	R _C	R _{NC}	R _C	R _{NC}
Total R_C/ Max. R_{NC}		0.00	0.00	0	1.33		1.33	
Diesel particulate matter	9901	0.00	0.00	<3.0/1.0	1.30	0.001	1.30	0.001
Polycyclic organic matter	50-32-8	0.00	0.00	<3.0/1.0	0.03	0	0.03	0

2. LG&E Cane Run shall submit semi-annual compliance reports as required by General Conditions, G14, except for NO_x emissions from GT-7A and GT-7B. LG&E Cane Run shall submit quarterly reports to the District that includes the data and information for each utility boiler and combustion turbine (GT-7A and GT-7B) as required by the NO_x RACT Plan.:

Emission Unit U15: Natural gas-fired combined cycle (NGCC) unit –EGU7**Applicable Regulations**⁷

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
2.05	Prevention of Significant Deterioration of Air Quality	1, 2
6.42	Reasonably Available Control Technology Requirements for Major Volatile Organic Compound- and Nitrogen Oxides-Emitting Facilities	1, 2, 3, 4, 5
6.47	Federal Acid Rain Program for Existing Sources Incorporated by Reference	1, 2, 3, 4, 5
40 CFR 60 Subpart KKKK	Standards of Performance for Stationary Combustion Turbines	60.4300, 4305, 4310, 4315, 4320, 4325, 4330, 4333, 4340, 4345, 4350, 4360, 4365, 4370, 4375, 4380, 4385, 4390, 4400, 4405, 4410, 4415, 4420
40 CFR 72	Permits Regulation	Subparts A, B, C, D, E, F, G, H, I
40 CFR 73	Sulfur Dioxide Allowance System	Subparts A, B, C, D, E, F, G
40 CFR 75	Continuous Emission Monitoring	Subparts A, B, C, D, E, F, G
40 CFR 76	Acid Rain Nitrogen Oxides Emission Reduction Program	76.1-9, 11, 13, 14, 15, Appendix A and B
40 CFR 77	Excess Emissions	77.1- 6
40 CFR 78	Appeals Procedures for Acid Rain Program	78.1-20

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5

⁷ The source takes plantwide HAP emission limits to become a HAP area source prior to installation of this NGCC unit. Therefore, it is not subject to major source MACT for combustion turbines - 40 CFR 63 Subpart YYYY.

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
7.02	Federal New Source Performance Standards Incorporated by Reference	1 through 5
STAR regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23		

Equipment

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
E31	Natural gas-fired combustion turbine (F Class), designated as GT-7A, make Siemens Energy, model SGT6-5000F.EE, equipped with a heat recovery steam generator (HRSG)*	2015	STAR, 5.02, 5.14, 6.42, 6.47, 7.02, 40 CFR 72-73, 75-78, 40 CFR 60 Subpart KKKK	C23	S22
E32	Natural gas-fired combustion turbine (F Class), designated as GT-7B, make Siemens Energy, model SGT6-5000F.EE, equipped with a heat recovery steam generator (HRSG)*	2015		C24	S23
* Rated capacity of the NGCC electricity generating unit is 731 MW.					

Control Devices

Control ID	Description	Control Efficiency	Performance Indicator
C23	Catalytic oxidizer, make Johnson Matthey, model SC42, used to control CO and VOC emissions for turbine GT-7A	50%	Pressure drop range 0.1” to 1.0” water column ⁸
C24	Catalytic oxidizer, make Johnson Matthey, model SC42, used to control CO and VOC emissions for turbine GT-7B	50%	Pressure drop range 0.1” to 1.0” water column ⁸

⁸ LG&E established the normal pressure drop range for catalytic oxidizer C23 and C24 submitted to the District on October 5, 2015.

U15 Specific Conditions

S1. Standards

[Regulation 2.16, Section 4.1.1]

a. **CO**

i. See Plantwide Requirements.

b. **HAP**

i. See Plantwide Requirements.

c. **NO_x**

i. The owner or operator shall not cause to be discharged into the atmosphere from the subject stationary combustion turbine any gases which contain NO_x in excess of 15 ppm at 15% O₂ or 54 ng/J of useful output (0.43 lb/MWh), based upon a 30-day rolling average. (See Attachment B - NO_x RACT Plan)
[40 CFR 60.4320(a)] [Regulation 6.42, section 4.3]

d. **SO₂**

The owner or operator shall comply with either one of the following standards:
[40 CFR 60.4330(a)]

i. The owner or operator shall not cause to be discharged into the atmosphere from the subject stationary combustion turbine any gases which contain SO₂ in excess of 110 ng/J (0.90 lb/MWh) gross output based upon a 30 unit operating day rolling average; or
[40 CFR 60.4330(a)(1)]

ii. The owner or operator shall not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input based upon a 30 unit operating day rolling average. [40 CFR 60.4330(a)(2)]

e. **TAC**

i. See Plantwide Requirements.⁹

f. **VOC**

i. See Plantwide Requirements.

⁹ According to Regulation 5.21, section 2.7, TAC emissions from the natural gas-fired turbine are de minimis.

S2. Monitoring and Record Keeping

[Regulation 2.16, sections 4.1.9.1 and 4.1.9.2]

The owner or operator shall maintain the required records for a minimum of 5 years and make the records readily available to the District upon request.

a. CO

- i. The owner or operator shall install, maintain, calibrate and operate a continuous emission monitoring system (CEMS) for the measurement or calculation of CO in the flue gas.¹⁰ [Regulation 2.16, section 4.1.1]
- ii. See Plantwide Requirements.

b. HAP

- i. See Plantwide Requirements.

c. NO_x

- i. General requirements: [40 CFR 60.4333]
 - (1) The owner or operator must operate and maintain the stationary combustion turbine, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction. [60.4333(a)]
 - (2) When an affected unit with heat recovery utilizes a common steam header with one or more combustion turbines, the owner or operator shall either: [60.4333(b)]
 - (a) Determine compliance with the applicable NO_x emissions limits by measuring the emissions combined with the emissions from the other unit(s) utilizing the common heat recovery unit; or [60.4333(b)(1)]
 - (b) Develop, demonstrate, and provide information satisfactory to the Administrator (EPA or the District) on methods for apportioning the combined gross energy output from the heat recovery unit for each of the affected combustion turbines. The Administrator may approve such demonstrated substitute methods for apportioning the combined gross energy output measured at the steam turbine whenever the demonstration ensures accurate estimation of emissions related under this part. [60.4333(b)(2)]

¹⁰ The owner or operator elected to utilize a CO CEMS to monitor CO emissions and demonstrate compliance with the PSD avoidance emission cap.

- ii. The owner or operator shall install, maintain, calibrate and operate a continuous emission monitoring system (CEMS) for the measurement or calculation of nitrogen oxides in the flue gas, as follows:¹¹ (See Attachment B - NO_x RACT Plan) [40 CFR 60.4335(b) or 4340(b)(1)]
 - (1) Install, certify, maintain, and operate a continuous emission monitoring system (CEMS) consisting of a NO_x monitor and a diluent gas (oxygen (O₂) or carbon dioxide (CO₂)) monitor, to determine the hourly NO_x emission rate in parts per million (ppm) or pounds per million British thermal units (lb/MMBtu); [40 CFR 60.4335(b)(1)]
 - (2) For units complying with the output-based standard, install, calibrate, maintain, and operate a fuel flow meter (or flow meters) to continuously measure the heat input to the affected unit; [40 CFR 60.4335(b)(2)]
 - (3) For units complying with the output-based standard, install, calibrate, maintain, and operate a watt meter (or meters) to continuously measure the gross electrical output of the unit in megawatt-hours; and [40 CFR 60.4335(b)(3)]
- iii. The NO_x emission rate for combustion turbine GT-7A and GT-7B (U15) shall be determined using the methods and procedures specified in NO_x RACT Plan - Amendment 2 Appendix A, except that any reference to an annual average shall be read as a rolling 30-day average. (See Attachment B - NO_x RACT Plan)
- iv. The NO_x CEMS shall meet the following requirements: [40 CFR 60.4345]
 - (1) Each NO_x diluent CEMS must be installed and certified according to Performance Specification 2 (PS 2) in appendix B to this part, except the 7-day calibration drift is based on unit operating days, not calendar days. With state approval, Procedure 1 in appendix F to this part is not required. Alternatively, a NO_x diluent CEMS that is installed and certified according to appendix A of part 75 of this chapter is acceptable for use under this subpart. The relative accuracy test audit (RATA) of the CEMS shall be performed on a lb/MMBtu basis. [40 CFR 60.4345(a)]
 - (2) As specified in 40 CFR 60.13(e)(2), during each full unit operating hour, both the NO_x monitor and the diluent monitor must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour, to validate the hour. For partial unit operating hours, at least one valid

¹¹ According to 40 CFR 60.4335 and 60.4340, depending on whether a water or steam injection is used for NO_x control, the owner or operator may elect to use one of the following: continuous monitoring system for fuel and water/steam, continuous emission monitoring system (CEMS), performance test, or continuous parameter monitoring system to demonstrate compliance with NO_x limit. LG&E has elected to use NO_x CEMS for the units.

- data point must be obtained with each monitor for each quadrant of the hour in which the unit operates. For unit operating hours in which required quality assurance and maintenance activities are performed on the CEMS, a minimum of two valid data points (one in each of two quadrants) are required for each monitor to validate the NO_x emission rate for the hour. [40 CFR 60.4345(b)]
- (3) Each fuel flowmeter shall be installed, calibrated, maintained, and operated according to the manufacturer's instructions. Alternatively, with state approval, fuel flowmeters that meet the installation, certification, and quality assurance requirements of appendix D to part 75 of this chapter are acceptable for use under this subpart. [40 CFR 60.4345(c)]
 - (4) Each watt meter, steam flow meter, and each pressure or temperature measurement device shall be installed, calibrated, maintained, and operated according to manufacturer's instructions. [40 CFR 60.4345(d)]
 - (5) The owner or operator shall develop and keep on-site a quality assurance (QA) plan for all of the continuous monitoring equipment described in paragraphs (a), (c), and (d) of this section. For the CEMS and fuel flow meters, the owner or operator may, with state approval, satisfy the requirements of this paragraph by implementing the QA program and plan described in section 1 of appendix B to part 75 of this chapter. [40 CFR 60.4345(e)]
- v. The owner or operator will identify excess emissions using the following guidelines: [40 CFR 60.4350]
- (1) All CEMS data must be reduced to hourly averages as specified in 40 CFR 60.13(h). [40 CFR 60.4350(a)]
 - (2) For each unit operating hour in which a valid hourly average, as described in 40 CFR 60.4345(b), is obtained for both NO_x and diluent monitors, the data acquisition and handling system must calculate and record the hourly NO_x emission rate in units of ppm or lb/MMBtu, using the appropriate equation from Method 19 in appendix A of this part. For any hour in which the hourly average O₂ concentration exceeds 19.0 percent O₂ (or the hourly average CO₂ concentration is less than 1.0 percent CO₂), a diluent cap value of 19.0 percent O₂ or 1.0 percent CO₂ (as applicable) may be used in the emission calculations. [40 CFR 60.4350(b)]
 - (3) Correction of measured NO_x concentrations to 15 percent O₂ is not allowed. [40 CFR 60.4350(c)]
 - (4) If the owner or operator have installed and certified a NO_x diluent CEMS to meet the requirements of part 75 of this chapter, states can approve that only quality assured data from the CEMS shall be used to identify excess emissions under this subpart. Periods where

the missing data substitution procedures in subpart D of part 75 are applied are to be reported as monitor downtime in the excess emissions and monitoring performance report required under 40 CFR 60.7(c). [40 CFR 60.4350(d)]

- (5) All required fuel flow rate, steam flow rate, temperature, pressure, and megawatt data must be reduced to hourly averages. [40 CFR 60.4350(e)]
- (6) Calculate the hourly average NO_x emission rates, in units of the emission standards under 40 CFR 60.4320, using either ppm for units complying with the concentration limit or the following equation for units complying with the output based standard: [40 CFR 60.4350(f)]
- (a) For combined-cycle and combined heat and power complying with the output-based standard, use Equation 1 of this subpart, except that the gross energy output is calculated as the sum of the total electrical and mechanical energy generated by the combustion turbine, the additional electrical or mechanical energy (if any) generated by the steam turbine following the heat recovery steam generator, and 100 percent of the total useful thermal energy output that is not used to generate additional electricity or mechanical output, expressed in equivalent MW, as in the following equations: [40 CFR 60.4350(f)(2)]

$$E = \frac{(NO_x)_h(HI)_h}{P} \quad (\text{Eq. 1})$$

Where:

- E = hourly NO_x emission rate, in lb/MWh
 (NO_x)_h = hourly NO_x emission rate, in lb/MMBtu
 (HI)_h = hourly heat input rate to the unit, in MMBtu/hr, measured using the fuel flowmeters, e.g., calculated using Equation D-15a in appendix D to part 75 of this chapter, and
 P = gross energy output of the combustion turbine in MW

$$P = (PE)_t + (PE)_c + P_s + P_o \quad (\text{Eq. 2})$$

Where:

- P = gross energy output of the stationary combustion turbine system (MW)
 (PE)_t = electrical or mechanical energy output of the CT (MW)
 (PE)_c = electrical or mechanical output of the steam turbine (MW)

$$Ps = \frac{Q*H}{3.413 \times 10^6 \text{ Btu/MWh}} \quad (\text{Eq. 3})$$

Where:

- Ps = useful thermal energy of the system, measured relative to ISO conditions, not used to generate additional electric or mechanical output, in MW
- Q = measured steam flow rate in lb/hr
- H = enthalpy of steam at measured temperature and pressure relative to ISO conditions, in Btu/lb, and 3.413×10^6 = conversion from Btu/hr to MW
- Po = other useful heat recovery, measured relative to ISO conditions, not used for steam generation or performance enhancement of the combustion turbine.

- (7) For combined cycle and combined heat and power units with heat recovery, use the calculated hourly average emission rates from paragraph (f) of this section to assess excess emissions on a 30 unit operating day rolling average basis, as described in 40 CFR 60.4380(b)(1). [40 CFR 60.4350(h)]

d. **SO₂**

- i. The owner or operator shall monitor the total sulfur content of the fuel being fired in the turbine, except as provided in 40 CFR 60.4365. The sulfur content of the fuel must be determined using total sulfur methods described in 40 CFR 60.4415. Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than half the applicable limit, ASTM D4084, D4810, D5504, or D6228, or Gas Processors Association Standard 2377 (all of which are incorporated by reference, see 40 CFR 60.17), which measure the major sulfur compounds, may be used. [40 CFR 60.4360]
- ii. If the owner or operator elects not to demonstrate sulfur content using options in 40 CFR 60.4365, and the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel must be determined and recorded once per unit operating day. [40 CFR 60.4370(b)]
- iii. The owner or operator may elect not to monitor the total sulfur content of the fuel combusted in the turbine, if the fuel is demonstrated not to exceed potential sulfur emissions of 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input for units located in continental areas and 180 ng SO₂/J (0.42 lb SO₂/MMBtu) heat input for units located in non-continental areas or a continental area that the Administrator determines does not have access to natural gas and that the removal of sulfur compounds would cause more

environmental harm than benefit. The owner or operator must use one of the following sources of information to make the required demonstration: [40 CFR 60.4365]

- (1) The fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel, specifying that the maximum total sulfur content for oil use in continental areas is 0.05 weight percent (500 ppmw) or less and 0.4 weight percent (4,000 ppmw) or less for non-continental areas, the total sulfur content for natural gas use in continental areas is 20 grains of sulfur or less per 100 standard cubic feet and 140 grains of sulfur or less per 100 standard cubic feet for non-continental areas, has potential sulfur emissions of less than less than 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input for continental areas and has potential sulfur emissions of less than less than 180 ng SO₂/J (0.42 lb SO₂/MMBtu) heat input for non-continental areas; or [40 CFR 60.4365(a)]
- (2) Representative fuel sampling data which show that the sulfur content of the fuel does not exceed 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input for continental areas or 180 ng SO₂/J (0.42 lb SO₂/MMBtu) heat input for non-continental areas. At a minimum, the amount of fuel sampling data specified in section 2.3.1.4 or 2.3.2.4 of appendix D to part 75 of this chapter is required. [40 CFR 60.4365(b)]

e. **TAC**

- i. See Plantwide Requirements.

f. **VOC**

- i. See Plantwide Requirements.

S3. Reporting

[Regulation 2.16, section 4.1.9.3]

The owner or operator shall report the following information, as required by General Condition G14:

a. **General requirements**

- i. For each affected unit required to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content under this subpart, the owner or operator must submit reports of excess emissions and monitor downtime, in accordance with 40 CFR 60.7(c), as specified in S3.a.iii. Excess emissions must be reported for all periods of unit

operation, including start-up, shutdown, and malfunction.
[40 CFR 60.4375(a)]

- ii. Each owner or operator required to install a continuous monitoring device shall submit excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and-or summary report form (see paragraph (d) of this section) to the Administrator semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each six-month period. Written reports of excess emissions shall include the following information:
[40 CFR 60.7(c)]

- (1) The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period. [40 CFR 60.7(c)(1)]
- (2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted. [40 CFR 60.7(c)(2)]
- (3) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments. [40 CFR 60.7(c)(3)]
- (4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report. [40 CFR 60.7(c)(4)]

- iii. All reports required under 40 CFR 60.7(c) shall be postmarked by the 30th day following the end of each reporting period. [40 CFR 60.4395]

b. CO

- i. See Plantwide Requirements.

c. HAP

- i. See Plantwide Requirements.

d. **NO_x**

- i. The owner or operator shall identify all periods of exceeding a NO_x emission standard during a semi-annual reporting period. The semi-annual compliance report shall include the following:
- (1) Emission Unit ID number and emission point ID number;
 - (2) Identification of all periods during which a deviation occurred;
 - (3) A description, including the magnitude, of the deviation;
 - (4) If known, the cause of the deviation;
 - (5) A description of all corrective actions taken to abate the deviation; and
 - (6) If no deviations occur during a semi-annual reporting period, the report shall contain a negative declaration.
- ii. For turbines using continuous emission monitoring, periods of excess emissions and monitor downtime that must be reported are defined as follows: [40 CFR 60.4380(b)]
- (1) An excess emissions is any unit operating period in which the 4-hour or 30-day rolling average NO_x emission rate exceeds the applicable emission limit in 40 CFR 60.4320. For the purposes of this subpart, a “4-hour rolling average NO_x emission rate” is the arithmetic average of the average NO_x emission rate in ppm or ng/J (lb/MWh) measured by the continuous emission monitoring equipment for a given hour and the three unit operating hour average NO_x emission rates immediately preceding that unit operating hour. Calculate the rolling average if a valid NO_x emission rate is obtained for at least 3 of the 4 hours. For the purposes of this subpart, a “30-day rolling average NO_x emission rate” is the arithmetic average of all hourly NO_x emission data in ppm or ng/J (lb/MWh) measured by the continuous emission monitoring equipment for a given day and the twenty-nine unit operating days immediately preceding that unit operating day. A new 30-day average is calculated each unit operating day as the average of all hourly NO_x emissions rates for the preceding 30 unit operating days if a valid NO_x emission rate is obtained for at least 75 percent of all operating hours. [40 CFR 60.4380(b)(1)]
 - (2) A period of monitor downtime is any unit operating hour in which the data for any of the following parameters are either missing or invalid: NO_x concentration, CO₂ or O₂ concentration, fuel flow rate, steam flow rate, steam temperature, steam pressure, or megawatts. The steam flow rate, steam temperature, and steam pressure are only required if the owner or operator will use this information for compliance purposes. [40 CFR 60.4380(b)(2)]

- iii. The owner or operator shall comply with the quarterly reporting requirements as specified in Appendix A to NO_x RACT Plan. (See Attachment B)
- iv. The owner or operator shall comply with the reporting requirements for Continuous Emission Monitoring as specified in 40 CFR 75, Subpart G. (See Attachment C)
- e. **SO₂**
 - i. The owner or operator shall identify all periods of exceeding a SO₂ emission standard during a semi-annual reporting period. The semi-annual compliance report shall include the following:
 - (1) Emission Unit ID number and emission point ID number;
 - (2) Identification of all periods during which a deviation occurred;
 - (3) A description, including the magnitude, of the deviation;
 - (4) If known, the cause of the deviation;
 - (5) A description of all corrective actions taken to abate the deviation; and
 - (6) If no deviations occur during a semi-annual reporting period, the report shall contain a negative declaration.
- f. **TAC**
 - i. See Plantwide Requirements.¹²
- g. **VOC**
 - i. See Plantwide Requirements.

S4. Testing

[Regulation 2.16, section 4.1.9.1]

- a. **General testing requirements**
 - i. See Plantwide Requirements.
- b. **NO_x**
 - i. If the owner or operator elects to install and certify a NO_x-diluent CEMS under 40 CFR 60.4345, then the initial performance test required under 40 CFR 60.8 may be performed in the following alternative manner: [40 CFR 60.4405]

¹² According to Regulation 5.21, section 2.7, TAC emissions from the natural gas-fired turbine are de minimis.

- (1) Perform a minimum of nine RATA reference method runs, with a minimum time per run of 21 minutes, at a single load level, within plus or minus 25 percent of 100 percent of peak load. The ambient temperature must be greater than 0 ° F during the RATA runs. [40 CFR 60.4405(a)]
 - (2) For each RATA run, concurrently measure the heat input to the unit using a fuel flow meter (or flow meters) and measure the electrical and thermal output from the unit. [40 CFR 60.4405(b)]
 - (3) Use the test data both to demonstrate compliance with the applicable NO_x emission limit under 40 CFR 60.4320 and to provide the required reference method data for the RATA of the CEMS described under 40 CFR 60.4335. [40 CFR 60.4405(c)]
 - (4) Compliance with the applicable emission limit in 40 CFR 60.4320 is achieved if the arithmetic average of all of the NO_x emission rates for the RATA runs, expressed in units of ppm or lb/MWh, does not exceed the emission limit. [40 CFR 60.4405(d)]
- ii. The performance test must be done at any load condition within plus or minus 25 percent of 100 percent of peak load. The owner or operator may perform testing at the highest achievable load point, if at least 75 percent of peak load cannot be achieved in practice. The owner or operator must conduct three separate test runs for each performance test. The minimum time per run is 20 minutes. [40 CFR 60.4400(b)]
- (1) If the stationary combustion turbine combusts both oil and gas as primary or backup fuels, separate performance testing is required for each fuel. [40 CFR 60.4400(b)(1)]
 - (2) If water or steam injection is used to control NO_x with no additional post-combustion NO_x control and the owner or operator choose to monitor the steam or water to fuel ratio in accordance with 40 CFR 60.4335, then that monitoring system must be operated concurrently with each EPA Method 20 or EPA Method 7E run and must be used to determine the fuel consumption and the steam or water to fuel ratio necessary to comply with the applicable 40 CFR 60.4320 NO_x emission limit. [40 CFR 60.4400(b)(3)]
 - (3) Compliance with the applicable emission limit in 40 CFR 60.4320 must be demonstrated at each tested load level. Compliance is achieved if the three-run arithmetic average NO_x emission rate at each tested level meets the applicable emission limit in 40 CFR 60.4320. [40 CFR 60.4400(b)(4)]
 - (4) If the owner or operator elects to install a CEMS, the performance evaluation of the CEMS may either be conducted separately or (as described in 40 CFR 60.4405) as part of the initial performance test of the affected unit. [40 CFR 60.4400(b)(5)]

- (5) The ambient temperature must be greater than 0 °F during the performance test. [40 CFR 60.4400(b)(6)]

c. **SO₂**

- i. If the owner or operator is exempt from monitoring the total sulfur content of the fuel according to 40 CFR 60.4365, there is no performance testing requirements for this gas turbine.
- ii. If the owner or operator is not exempt from monitoring the total sulfur content of the fuel according to 40 CFR 60.4365, and elects to monitor the total sulfur content of the fuel being fired in the turbine, the owner or operator must conduct an initial performance test, as required in 40 CFR 60.8. Subsequent SO₂ performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test). There are three methodologies that the owner or operator may use to conduct the performance tests.¹³ [40 CFR 60.4415(a)]
- (1) If the owner or operator chooses to periodically determine the sulfur content of the fuel combusted in the turbine, a representative fuel sample would be collected following ASTM D5287 (incorporated by reference, see 40 CFR 60.17) for natural gas or ASTM D4177 (incorporated by reference, see 40 CFR 60.17) for oil. Alternatively, for oil, the owner or operator may follow the procedures for manual pipeline sampling in section 14 of ASTM D4057 (incorporated by reference, see 40 CFR 60.17). The fuel analyses of this section may be performed either by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency. Analyze the samples for the total sulfur content of the fuel using: [40 CFR 60.4415(a)(1)]
- (a) For liquid fuels, ASTM D129, or alternatively D1266, D1552, D2622, D4294, or D5453 (all of which are incorporated by reference, see 40 CFR 60.17); or [40 CFR 60.4415(a)(1)(i)]
- (b) For gaseous fuels, ASTM D1072, or alternatively D3246, D4084, D4468, D4810, D6228, D6667, or Gas Processors Association Standard 2377 (all of which are incorporated by reference, see 40 CFR 60.17). [40 CFR 60.4415(a)(1)(ii)]
- (2) Measure the SO₂ concentration (in parts per million (ppm)), using EPA Methods 6, 6C, 8, or 20 in appendix A of this part. In addition, the American Society of Mechanical Engineers (ASME) standard, ASME PTC 19–10–1981–Part 10, “Flue and Exhaust Gas Analyses,” manual methods for sulfur dioxide (incorporated

¹³ LG&E conducted initial stack tests for SO₂ on May 14, 2015 (GT-7A) and May 29, 2015 (GT-7B).

by reference, see 40 CFR 60.17) can be used instead of EPA Methods 6 or 20. For units complying with the output based standard, concurrently measure the stack gas flow rate, using EPA Methods 1 and 2 in appendix A of this part, and measure and record the electrical and thermal output from the unit. Then use the following equation to calculate the SO₂ emission rate:

[40 CFR 60.4415(a)(2)]

$$E = \frac{1.664 \times 10^{-7} (SO_2)_c Q_{std}}{P} \quad (\text{Eq.6})$$

Where:

E = SO₂ emission rate, in lb/MWh

1.664 x 10⁻⁷ = conversion constant, in lb/dscf-ppm

(SO₂)_c = average SO₂ concentration for the run, in ppm

Q_{std} = stack gas volumetric flow rate, in dscf/hr

P = gross electrical and mechanical energy output of the combustion turbine, in MW (for simple-cycle operation), for combined-cycle operation, the sum of all electrical and mechanical output from the combustion and steam turbines, or, for combined heat and power operation, the sum of all electrical and mechanical output from the combustion and steam turbines plus all useful recovered thermal output not used for additional electric or mechanical generation, in MW, calculated according to 40 CFR 60.4350(f)(2); or

- (3) Measure the SO₂ and diluent gas concentrations, using either EPA Methods 6, 6C, or 8 and 3A, or 20 in appendix A of this part. In addition, the owner or operator may use the manual methods for sulfur dioxide ASME PTC 19–10–1981–Part 10 (incorporated by reference, see 40 CFR 60.17). Concurrently measure the heat input to the unit, using a fuel flowmeter (or flowmeters), and measure the electrical and thermal output of the unit. Use EPA Method 19 in appendix A of this part to calculate the SO₂ emission rate in lb/MMBtu. Then, use Equations 1 and, if necessary, 2 and 3 in 40 CFR 60.4350(f) to calculate the SO₂ emission rate in lb/MWh.
[40 CFR 60.4415(a)(3)]

Emission Unit U16: Natural Gas-fired Auxiliary Boiler**Applicable Regulations¹⁴**

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
2.05	Prevention of Significant Deterioration of Air Quality	1, 2
6.42	Reasonably Available Control Technology Requirements for Major Volatile Organic Compound- and Nitrogen Oxides-Emitting Facilities	1, 2, 3, 4, 5
7.06	Standards of Performance for New Indirect Heat Exchangers	1 through 8
40 CFR 60, Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	60.40c, 41c, 42c, 43c, 44c, 45c, 46c, 47c, 48c

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

¹⁴ The equipment is subject to 40 CFR 60, Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, due to the commencement date of construction (after June 9, 1989) and the heat input capacity (less than 100 MMBtu/hr, but greater than 10 MMBtu/hr).

The source accepted HAP emission limits to become HAP area source. Therefore, the boilers at this source are not subject to the major source MACT for boilers 40 CFR 63 Subpart DDDDD. This natural gas-fired boiler is not subject to 40 CFR 63, Subpart JJJJJ – Industrial, Commercial, and Institutional Boilers and Process Heaters at Area Sources, according to 40 CFR 63.11195(e).

Equipment

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
E33	Natural gas-fired auxiliary boiler with low NOx burners, make Cleaver Brooks, model CP-NB-200D-45-250, capacity 59.9 MMBtu/hr.	2015	STAR, 6.42, 7.02, 7.06, 40 CFR 60 Subpart Dc	N/A	S24

Control Devices

There is no control device associated with this unit.

U16 Specific Conditions

S1. Standards

[Regulation 2.16, section 4.1.1]

a. **HAP**

i. See Plantwide Requirements

b. **NO_x**

i. The owner or operator shall not cause to be discharged into the atmosphere from this unit NO_x emissions in excess of 3.60 lb/hr based upon a rolling 30-day average. (NO_x RACT Plan)
[Regulation 6.42, section 4.3]

c. **Opacity**

i. The owner or operator combusting natural gas shall not cause to be discharged into the atmosphere from any affected facility PM emissions which exhibit greater than 20% opacity.¹⁵ [Regulation 7.06, section 4.2]

d. **PM**

i. The owner or operator shall not cause to be discharged into the atmosphere from each affected facility PM in excess of 0.154 lb/MMBtu actual total heat input based upon a rolling 30-day average.¹⁶
[Regulation 7.06, section 4.1.4]

e. **SO₂**

i. The owner or operator shall not cause to be discharged into the atmosphere from each affected facility any gases which contain SO₂ in excess of 1.0 lb/MMBtu actual total heat input based upon a rolling 30-day average.¹⁶ [Regulation 7.06, section 5.1.1]

f. **TAC**

i. See Plantwide Requirements.¹⁷

¹⁵ The District has determined that using a natural gas fired boiler will inherently meet the 20% opacity standard.

¹⁶ A one-time PM and SO₂ compliance demonstration have been performed for the boiler, using AP-42 emission factors and combusting natural gas, and the emission standards under Regulation 7.06 for PM and SO₂ cannot be exceeded when combusting natural gas.

¹⁷ According to Regulation 5.21, section 2.7, TAC emissions from the natural gas-fired boiler are de minimis.

S2. Monitoring and Record Keeping

[Regulation 2.16, sections 4.1.9.1 and 4.1.9.2]

The owner or operator shall maintain the required records for a minimum of 5 years and make the records readily available to the District upon request.

a. HAP

- i. See Plantwide Requirements

b. NO_x

- i. The owner or operator shall record and maintain records of the amount of fuel combusted in each unit during each calendar month. (NO_x RACT Plan) [Regulation 6.42, section 4.3]
- ii. The owner or operator shall calculate and maintain records of the lb/hr NO_x emissions from each unit, determined by multiplying the actual total heat input (in MMBtu) and the manufacturer certified emissions factor, based upon a rolling 30-day average, in order to demonstrate compliance. (NO_x RACT Plan)
[Regulation 6.42, section 4.3]

c. Opacity

- i. There are no routine monitoring or record keeping requirements for this pollutant.

d. PM

- i. There are no routine monitoring or record keeping requirements for this pollutant.

e. SO₂

- i. As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in §60.48c(f) to demonstrate compliance with the SO₂ standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month. [40 CFR 60.48c(g)(2)]

f. TAC

- i. See Plantwide Requirements.

S3. Reporting

[Regulation 2.16, section 4.1.9.3]

The owner or operator shall report the following information, as required by General Condition G14:

a. General requirements

- i. The owner or operator shall submit notification of the date of construction or reconstruction and actual startup, as provided by 40 CFR 60.7. The notification shall include the design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.¹⁸ [40 CFR 60.48c(a)]

b. HAP

- i. See Plantwide Requirements

c. NO_x

- i. The owner or operator shall identify all periods of exceeding a NO_x emission standard during a semi-annual reporting period. The semi-annual compliance report shall include the following:
 - (1) Emission Unit ID number and emission point ID number;
 - (2) Identification of all periods during which a deviation occurred;
 - (3) A description, including the magnitude, of the deviation;
 - (4) If known, the cause of the deviation;
 - (5) A description of all corrective actions taken to abate the deviation; and
 - (6) If no deviations occur during a semi-annual reporting period, the report shall contain a negative declaration.

d. Opacity

- i. There are no routine reporting requirements for this pollutant.

e. PM

- i. There are no routine reporting requirements for this pollutant.

f. SO₂

- i. There are no routine reporting requirements for this pollutant.

¹⁸ This notification has been submitted to the District on February 17, 2015.

- g. **TAC**
 - i. See Plantwide Requirements.

Emission Unit U18: Emergency Generators

Applicable Regulations¹⁹

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
40 CFR 63, Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	63.6603, 6604, 6605, 6625, 6640, 6645, 6655
40 CFR 60, Subpart IIII	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	60.4200 - 4219

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.02	Adoption of National Emission Standards for Hazardous Air Pollutants	1 through 4
5.14	Hazardous Air Pollutants and Source Categories	1, 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
7.02	Federal New Source Performance Standards Incorporated by Reference	1 through 5
STAR regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23		

¹⁹ These emergency generators are subject to 40 CFR 63, Subpart ZZZZ because they involve stationary reciprocating internal combustion engines (RICE) located at area source of HAP. These emergency generators are also subject to 40 CFR 60, Subpart IIII because they involve new compression ignition (CI) ICEs as specified in 60 CFR 60.4200(a).

Equipment

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
E35	Emergency diesel generator, make Caterpillar, model C27, maximum output 1,006 hp (750 KW), equipped with a 1,286 gallons storage tank. ²⁰ Model year 2014.	2015	STAR, 40 CFR 63, Subpart ZZZZ, 40 CFR 60, Subpart IIII	N/A	S26
E38A	Four (4) diesel emergency generators, make Cummins, model C3000 D6e, each rated 3,000 KW (4,307 HP) and equipped with a 500 gallon diesel tank. ²⁰ These generators are installed to provide electrical power to start either one of the NGCC primary turbines during emergency blackout conditions.	2016		N/A	S27
E38B		2016		N/A	S28
E38C		2016		N/A	S29
E38D		2016		N/A	S30

Control Devices

There is no control device associated with this unit.

²⁰ The associated 1,286-gallon and 500-gallon diesel storage tanks are insignificant activities. They are listed in Insignificant Activities table and permitted under unit IA2.

U18 Specific Conditions

S1. Standards

[Regulation 2.16, section 4.1.1]

a. HAP

- i. The equipment listed in this emission unit is subject to 40 CFR 63 Subpart ZZZZ, however, there are no HAP standards.²¹
- ii. See Plantwide Requirements.

b. TAC

- i. See Plantwide Requirements. (See Comment 1)
- ii. The owner or operator shall not operate each of these emergency generators for more than 500 hours during any 12 consecutive month period. The 500 hours of operation includes time operated during emergency and non-emergency situations.²² [Regulation 5.21, section 4.3]

c. Unit operation

- i. The owner or operator of 2007 model year or later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in 40 CFR 60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE. [40 CFR 60.4205(b)]

Engine manufacturers shall certify the engines with the exhaust emission standards in the following table. In lieu of the NO_x standards, NMHC + NO_x standards, and PM standards, manufacturers may elect to include engine families in the averaging, banking, and trading program. The manufacturer must set a family emission limit (FEL) not to exceed the levels contained in the following table:

[40 CFR 60.4202(a) refers to 40 CFR 89.112 and 113]

²¹ This engine 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 an area source of HAP emissions. However, according to 40 CFR 63.6590(c), this engine must meet the requirements of 40 CFR 63 Subpart ZZZZ by meeting the requirements of 40 CFR 60 Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. No further requirements apply for the engine under 40 CFR 63 Subpart ZZZZ.

²² Environmental acceptability demonstration for these emergency generators were based on 500 hours per year operation time for each of the emergency generators.

Engine Capacity: > 560 kW Engine Tier: Tier 2	unit: g/kW-hr				
	NO_x	HC	NMHC+ NO_x	CO	PM
Emission Standards (Table 1 to 40 CFR 89.112(a))	N/A	N/A	6.4	3.5	0.2
Family Emission Limits (Table 2 to 40 CFR 89.112(d))	N/A	N/A	10.5	N/A	0.54
Smoke emission standard (40 CFR 89.113(a))	1) 20% during the acceleration mode; 2) 15% during the lugging mode; 3) 50% during the peaks in either the acceleration or lugging modes.				

- ii. The owner or operator must operate and maintain stationary CI ICE that achieve the emission standards as required in 40 CFR 60.4205 over the entire life of the engine. [40 CFR 60.4206]
- iii. Beginning October 1, 2010, the owner or operator of a stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that uses diesel fuel shall use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted: [40 CFR 60.4207(b)]
 - (1) Sulfur content: 15 parts per million (ppm) maximum for NR diesel fuel. [40 CFR 80.510(b)(1)(i)]
 - (2) A minimum cetane index of 40; or [40 CFR 80.510(b)(2)(i)]
 - (3) A maximum aromatic content of 35 volume percent. [40 CFR 80.510(b)(2)(ii)]
- iv. The owner or operator that is required comply with the emission standards specified in 40 CFR 60, Subpart IIII shall do all of the following: [40 CFR 60.4211(a)]
 - (1) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions; [40 CFR 60.4211(a)(1)]
 - (2) Change only those emission-related settings that are permitted by the manufacturer; [40 CFR 60.4211(a)(2)]
- v. The owner or operator shall purchase an engine certified to the emission standards in 40 CFR 60.4205(b), as applicable for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications. [40 CFR 60.4211(c)]
- vi. In order for the engine to be considered an emergency stationary ICE under this subpart, 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 paragraphs (f)(1) through (3) of this section, is prohibited. If the owner or operator does not operate the engine according to the requirements below, the engine will not be considered an emergency engine under this subpart and shall meet all requirements for non-emergency engines.

[40 CFR 60.4211(f)]

(1) There is no time limit on the use of emergency stationary ICE in emergency situations. [40 CFR 60.4211(f)(1)]

(2) The owner or operator may operate the emergency stationary ICE for any combination of the purposes specified in 60 CFR 60.4211(f)(2)(i) through (iii) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by 60 CFR 60.4211(f)(3) counts as part of the 100 hours per calendar year allowed by this paragraph.

[40 CFR 60.4211(f)(2)]

(a) Emergency stationary ICE may be operated for maintenance checks 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 owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

[40 CFR 60.4211(f)(2)(i)]

(b) Emergency stationary ICE may 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 (incorporated by reference, see § 60.17), 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.

[40 CFR 60.4211(f)(2)(ii)]

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

[40 CFR 60.4211(f)(2)(iii)]

- (3) Emergency stationary ICE 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 40 CFR 60.4211(f)(2). Except as provided in 40 CFR 60.4211(f)(3)(i), the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.
[40 CFR 60.4211(f)(3)]
- (a) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met: [40 CFR 60.4211(f)(3)(i)]
- (i) The engine is dispatched by the local balancing authority or local transmission and distribution system operator; [40 CFR 60.4211(f)(3)(i)(A)]
 - (ii) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.
[40 CFR 60.4211(f)(3)(i)(B)]
 - (iii) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.
[40 CFR 60.4211(f)(3)(i)(C)]
 - (iv) The power is provided only to the facility itself or to support the local transmission and distribution system. [40 CFR 60.4211(f)(3)(i)(D)]
 - (v) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.
[40 CFR 60.4211(f)(3)(i)(E)]

S2. Monitoring and Record Keeping

[Regulation 2.16, sections 4.1.9.1 and 4.1.9.2]

The owner or operator shall maintain the required records for a minimum of 5 years and make the records readily available to the District upon request.

a. HAP

- i. See Plantwide Requirements.

b. TAC

- i. See Plantwide Requirements.
- ii. The owner or operator shall record, on the first working day after the end of each month, the engine's running time meter reading, and calculate (by difference) and record, the engine's operating time and the 12-month rolling total for the previous month.

c. Unit Operation

- i. The owner or operator of an emergency stationary CI internal combustion engine that does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter prior to startup of the engine. [40 CFR 60.4209(a)]
- ii. The owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator shall keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time. [40 CFR 60.4214(b)]
- iii. The owner or operator shall maintain records of the fuel MSDS/SDS sheets and receipts showing dates, amounts of fuel purchased, sulfur content of fuel purchased and supplier's name and address.

S3. Reporting

[Regulation 2.16, section 4.1.9.3]

The owner or operator shall report the following information, as required by General Condition G14:

a. HAP

- i. See Plantwide Requirements.

b. TAC

- i. See Plantwide Requirements.
- ii. The owner or operator shall report any exceedances of the hours of operation limits for every month in the reporting period in which the 12-month rolling total hours of operation exceeded the limits. If there are no exceedances during the reporting period, the owner or operator shall submit a negative declaration stating that there were no exceedances.

c. Unit Operation

- i. The owner or operator shall identify all periods of exceeding the hours of operating limits during the reporting period. The compliance report shall include the following:
 - (1) Identification of all periods during which a deviation occurred;
 - (2) A description, including the magnitude, of the deviation;
 - (3) If known, the cause of the deviation;
 - (4) A description of all corrective actions taken to abate the deviation; and
 - (5) If no deviations occur during a reporting period, the report shall contain a negative declaration.
- ii. The owner or operator is not required to submit an initial notification.
[40 CFR 60.4214(b)]

U18 Comments

1. LG&E Cane Run submitted an EA demonstration on June 13, 2011 (for engine E35) and 8/29/2016 (for engine E38A, E38B, E38C, and E38D), using AERMOD dispersion model. The following table demonstrates that the carcinogen risk and non-carcinogen risk values, calculated using PTE for each engine and modeling results from the source's EA Demonstration, comply with the STAR EA goals required in Regulation 5.21.

Emission Point	Diesel PM		POM (50-32-8)	
	R _C	R _{NC}	R _C	R _{NC}
E35	0.53	0.0004	N/A	N/A
E38A	0.20	0.0001	0.007	N/A
E38B	0.19	0.0001	0.006	N/A
E38C	0.20	0.0001	0.007	N/A
E38D	0.18	0.0001	0.006	N/A
Total	1.31	0.001	0.026	N/A

Emission Unit U21: Parts Washer**Applicable Regulations**

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
6.18	Standards of Performance for Solvent metal Cleaning Equipment	1 through 6

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

Equipment

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
E39	Parts washer, make Westward, model 4KTV8, capacity 40 gallons, no secondary reservoir	N/A	6.18, STAR	N/A	N/A

Control Devices

There is no control device associated with this unit.

IA3 Specific Conditions

S1. Standards

[Regulation 2.16, section 4.1.1]

a. **TAC**

- i. See Plantwide Requirements.²³

b. **VOC**

- i. The owner or operator shall install, maintain, and operate the control equipment as follows: [Regulation 6.18, section 4.1]
- (1) The cold cleaner shall be equipped with a tightly fitting cover that is free of cracks, holes, or other defects. If the solvent is agitated or heated, then the cover shall be designed so that it can be easily operated with 1 hand. [Regulation 6.18, section 4.1.1]
 - (2) The cold cleaner shall be equipped with a drainage facility that is designed so that the solvent that drains off parts removed from the cleaner will return to the cold cleaner. The drainage facility may be external if the District determines that an internal type cannot fit into the cleaning system. [Regulation 6.18, section 4.1.2]
 - (3) A permanent, conspicuous label summarizing the operating requirements specified in section 4.2 shall be installed on or near the cold cleaner.
[Regulation 6.18, section 4.1.3]
 - (4) If used, the solvent spray shall be a fluid stream, not a fine, atomized, or shower type spray, at a pressure that does not cause excessive splashing. Flushing of parts using a flexible hose or other flushing device shall be performed only within the freeboard area of the cold cleaner. Solvent flow shall be directed downward to avoid turbulence at the air-solvent interface and to prevent solvent from splashing outside of the cold cleaner.
[Regulation 6.18, section 4.1.4]
 - (5) Work area fans shall be located and positioned so that they do not blow across the opening of the cold cleaner.
[Regulation 6.18, section 4.1.6]
 - (6) The solvent-containing portion of the cold cleaner shall be free of all liquid leaks. Auxiliary cold cleaner equipment such as pumps, water separators, steam traps, or distillation units shall not have any visible liquid leaks, visible tears, or cracks.
[Regulation 6.18, section 4.1.8]

²³ TAC emissions from this equipment are de minimis per PTE.

- ii. The owner or operator shall observe at all times the following operating requirements: [Regulation 6.18, section 4.2]
 - (1) Waste solvent shall neither be disposed of nor transferred to another party in a manner such that more than 20% by weight of the waste solvent can evaporate. Waste solvent shall be stored only in a covered container. A covered container may contain a device that allows pressure relief, but does not allow liquid solvent to drain from the container. [Regulation 6.18, section 4.2.1]
 - (2) The solvent level in the cold cleaner shall not exceed the fill line. [Regulation 6.18, section 4.2.2]
 - (3) The cold cleaner cover shall be closed whenever a part is not being handled in the cold cleaner. [Regulation 6.18, section 4.2.3]
 - (4) Parts to be cleaned shall be racked or placed into the cold cleaner in a manner that will minimize drag-out losses. [Regulation 6.18, section 4.2.4]
 - (5) Cleaned parts shall be drained for at least 15 seconds or until dripping ceases, whichever is longer. Parts having cavities or blind holes shall be tipped or rotated while the part is draining. During the draining, tipping, or rotating, the parts shall be positioned so that the solvent drains directly back to the cold cleaner. [Regulation 6.18, section 4.2.5]
 - (6) A spill during solvent transfer shall be cleaned immediately, and the wipe rags or other sorbent material shall be immediately stored in a covered container for disposal or recycling, unless enclosed storage of these items is not allowed by fire protection authorities. [Regulation 6.18, section 4.2.6]
 - (7) Sponges, fabric, wood, leather, paper products, and other absorbent material shall not be cleaned in a cold cleaner. [Regulation 6.18, section 4.2.7]
- iii. The owner or operator shall not operate a cold cleaner using a solvent with a vapor pressure that exceeds 1.0 mm Hg (0.019 psi) measured at 20°F (68°F). [Regulation 6.18, section 4.3.2]

S2. Monitoring and Record Keeping

[Regulation 2.16, sections 4.1.9.1 and 4.1.9.2]

The owner or operator shall maintain the required records for a minimum of 5 years and make the records readily available to the District upon request.

a. TAC

- i. See Plantwide Requirements.

b. VOC

- i. The owner or operator shall maintain records that include the following for each purchase: [Regulation 6.18, section 4.4.2]
 - (1) The name and address of the solvent supplier,
 - (2) The date of the purchase,
 - (3) The type of the solvent, and
 - (4) The vapor pressure of the solvent measured in mm Hg at 20°F (68°F).
- ii. All records required in Specific Condition S2.a shall be retained for 5 years and made available to the District upon request. [Regulation 6.18, section 4.4.3]

S3. Reporting

[Regulation 2.16, section 4.1.9.3]

The owner or operator shall report the following information, as required by General Condition G14:

a. TAC

- i. See Plantwide Requirements.

b. VOC

- i. There are no routine compliance reporting requirements for Regulation 6.18.

Permit Shield

The owner or operator is hereby granted a permit shield that shall apply as long as the owner or operator demonstrates ongoing compliance with all conditions of this permit. Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements of the regulations cited in this permit as of the date of issuance, pursuant to Regulation 2.16, section 4.6.1.

Off-Permit Documents

The source does not have off-permit documents associated with this Title V permit.

Alternative Operating Scenario

The company requested no alternative operating scenario in its Title V application.

Insignificant Activities

Equipment	Qty.	PTE (ton/yr)	Regulation Basis
Indirect heat exchangers <10 MMBtu/hr capacity ranged from 0.05 – 0.35 MMBtu/hr	11	0.74 SO ₂	Regulation 1.02, Appendix A
Mechanical draft cooling tower (See unit IA1)	1	2.58 PM ₁₀	Regulation 1.02
1,286 gallons diesel tank for emergency generator U18-E35 (See unit IA2)	1	0.027 VOC	Regulation 1.02, Appendix A
500 gallons diesel tanks for emergency generator U18-E38 (See unit IA2)	4	0.02 VOC	Regulation 1.02, Appendix A
4,000 gallons diesel tank (See unit IA2)	1	0.01 VOC	Regulation 1.02, Appendix A
275 gallons diesel tank (See unit IA2)	1	5.0×10 ⁻⁵ VOC	Regulation 1.02, Appendix A
300 gallons kerosene tank (See unit IA2)	1	7.5×10 ⁻⁵ VOC	Regulation 1.02, Appendix A
Portable diesel tank (See unit IA2)	1	6.0×10 ⁻⁵ VOC	Regulation 1.02, Appendix A
Portable gasoline tank (See unit IA2)	1	0.055 VOC	Regulation 1.02
Haul roads (See unit IA3)	1	0.30 PM ₁₀	Regulation 1.02, Appendix A

1. Insignificant activities identified in District Regulation 1.02, Appendix A, may be subject to size or production rate disclosure requirements pursuant to Regulation 2.16 section 3.5.4.1.4.
2. Insignificant activities identified in District Regulation 1.02, Appendix A shall comply with generally applicable requirements as required by Regulation 2.16 section 4.1.9.4.
3. The Insignificant Activities Table is correct as of the date the permit was proposed for review by U.S. EPA, Region 4.
4. Emissions from Insignificant Activities shall be reported in conjunction with the reporting of annual emissions of the facility as required by the District.
5. The owner or operator shall submit an updated list of insignificant activities that occurred during the preceding year pursuant to Regulation 2.16 section 4.3.5.3.6.
6. The owner or operator may elect to monitor actual throughputs for each of the insignificant activities and calculate actual annual emissions, or use Potential to Emit (PTE) to be reported on the annual emission inventory.
7. The District has determined pursuant to Regulation 2.16 section 4.1.9.4 that no monitoring, record keeping, or reporting requirements apply to the insignificant activities listed, except for the equipment that has an applicable regulation and permitted under an insignificant activity (IA) unit.

Equipment Not Regulated

Equipment	Qty.	Basis of Determination
Lube oil demister vents	3	No applicable regulation. Not subject to Reg. 7.25 since total VOC of affected facilities less than 5 tpy.

Emission Unit IA1: Cooling Tower

Applicable Regulations

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
7.08	Standards of Performance for New Affected Facilities	1, 2, 3, 4, 5, 6

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

Equipment

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
IE1	Mechanical draft cooling tower with water flow rate 210,000 gal/min	2015	STAR, 7.08	N/A	N/A

Control Devices

There is no control device associated with this unit.

IA1 Specific Conditions

S1. Standards

[Regulation 2.16, section 4.1.1]

a. Opacity

- i. The owner or operator shall not allow visible emissions to equal or exceed 20% opacity. [Regulation 7.08, section 3.1.1]

b. PM

- i. The owner or operator shall not allow PM emissions to exceed 98.5 lb/hr based on actual operating hours in a calendar day.²⁴ [Regulation 7.08, section 3.1.2]

c. TAC

- i. See Plantwide Requirements.²⁵

S2. Monitoring and Record Keeping

[Regulation 2.16, sections 4.1.9.1 and 4.1.9.2]

The owner or operator shall maintain the required records for a minimum of 5 years and make the records readily available to the District upon request.

a. Opacity

- i. There are no monitoring and record keeping requirements for this pollutant.

b. PM

- i. There are no monitoring and record keeping requirements for this pollutant.

c. TAC

- i. See Plantwide Requirements.

²⁴ It has been demonstrated that PM emissions from this equipment cannot exceed the lb/hr PM standards uncontrolled.

²⁵ Per Regulation 5.21, section 2.3, TAC emissions from insignificant activity are de minimis.

S3. Reporting

[Regulation 2.16, section 4.1.9.3]

The owner or operator shall report the following information, as required by General Condition G14:

a. **Opacity**

i. There are no compliance reporting requirements for this pollutant.

b. **PM**

i. There are no compliance reporting requirements for this pollutant.

a. **TAC**

i. See Plantwide Requirements.

Emission Unit IA2: Storage Tanks**Applicable Regulations**

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
7.15	Standards of Performance for Gasoline Transfer to New Service Station Storage Tanks (Stage I Vapor Recovery)	1, 2, 3.1, 3.3, 3.4, 3.6, 3.7, 3.8, and 5

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

Equipment

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
IE3	Diesel storage tank, make Caterpillar, capacity 1,286 gallons, used for emergency generator U18-E35.	2015	STAR	N/A	N/A
IE4	Diesel storage tank, make Albert Oil, capacity 275 gallons	N/A	STAR	N/A	N/A
IE5	Kerosene storage tank, make Albert Oil, capacity 300 gallons	N/A	STAR	N/A	N/A
IE6	Portable diesel storage tank, make Tuthill Transfer Systems, model 485000	N/A	STAR	N/A	N/A
IE7	Portable gasoline storage tank (truck bed fuel transfer tank), capacity 100 gal, make Transfer Flow, model DOT-SP11911	N/A	STAR, 7.15	N/A	N/A

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
IE8	Four (4) diesel storage tanks, capacity 500 gallons for each, used for emergency generators U18-E38A, E38B, E38C, and E38D	N/A	STAR	N/A	N/A
IE9	Diesel storage tank, capacity 4,000 gallons, used to supply 500-gallon tanks for emergency generators U18-E38A, E38B, E38C, and E38D	N/A	STAR	N/A	N/A

Control Devices

There is no control device associated with this unit.

IA2 Specific Conditions

S1. Standards

[Regulation 2.16, section 4.1.1]

a. **TAC**

- i. See Plantwide Requirements.²⁶

b. **VOC**

i.

- ii. For gasoline storage tank (IE7): The owner or operator of an affected facility shall install, maintain, and operate the following devices on the storage tank:

[Regulation 7.15, section 3.1]

(1) Submerged fill pipe; [Regulation 7.15, section 3.1.1]

(2) If the gasoline storage tank is equipped with a separate gauge well, a gauge well drop tube shall be installed which extends to within six inches of the bottom of the tank;
[Regulation 7.15, section 3.1.2]

(3) Vent line restrictions on the affected facility; and
[Regulation 7.15, section 3.1.3]

(4) Vapor balance system and vapor tight connections on the liquid fill and vapor return hoses. The cross-sectional area of the vapor return hose and any other vapor return passages in the circuit connecting the vapor space in the service station tank to that of the truck tank must be at least 50% of the liquid fill hose cross-sectional area for each tank and free of flow restrictions to achieve acceptable recovery. The vapor balance equipment must be maintained according to the manufacturer's specifications. The type, size and design of the vapor balance system are subject to the approval of the District. [Regulation 7.15, section 3.1.4]

- iii. For gasoline storage tank (IE7): The owner or operator shall not allow delivery of fuel to the storage tanks until the vapor balance system is properly connected to the transport vehicle and the affected facility.
[Regulation 7.15, section 3.3]

- iv. For gasoline storage tank (IE7): No person shall deliver gasoline to a service station as defined in Regulation 7.15 without connecting the vapor return hose between the tank of the delivery truck and the storage tank receiving the product. The vapor balance system must be operating in

²⁶ Per Regulation 5.21, section 2.3, TAC emissions from insignificant activity are de minimis.

accordance with the manufacturer's specifications. [Regulation 7.15, section 3.4]

- v. For gasoline storage tank (IE7): The owner or operator shall equip above ground tanks with dry breaks with any liquid spillage upon the line disconnect not exceeding 10 ml. [Regulation 7.15, section 3.7]
- vi. For gasoline storage tank (IE7): The owner or operator shall operate and maintain equipment with no defects and: [Regulation 7.15, section 3.8]
 - (1) All fill tubes shall be equipped with vapor-tight covers including gaskets, [Regulation 7.15, section 3.8.1]
 - (2) All dry breaks shall have vapor-tight seals and shall be equipped with vapor-tight covers or dust covers, [Regulation 7.15, section 3.8.2]
 - (3) All vapor return passages shall be operated so there can be no obstruction of vapor passage from the storage tank back to the delivery vehicle, [Regulation 7.15, section 3.8.3]
 - (4) All storage tank vapor return pipes and fill pipes without dry breaks shall be equipped with vapor-tight covers including gaskets, and [Regulation 7.15, section 3.8.4]
 - (5) All hoses, fittings, and couplings shall be in a vapor-tight condition. [Regulation 7.15, section 3.8.5]

S2. Monitoring and Record Keeping

[Regulation 2.16, sections 4.1.9.1 and 4.1.9.2]

The owner or operator shall maintain the required records for a minimum of 5 years and make the records readily available to the District upon request.

a. TAC

- i. See Plantwide Requirements.

b. VOC

- i. For gasoline storage tank (IE7): There are no routine monitoring and record keeping requirements for this equipment.

S3. Reporting

[Regulation 2.16, section 4.1.9.3]

The owner or operator shall report the following information, as required by General Condition G14:

a. **TAC**

i. See Plantwide Requirements.

b. **VOC**

i. There are no routine reporting requirements for this equipment.

Emission Unit IA3: Haul Road**Applicable Regulations**²⁷

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
1.14	Control of Fugitive Particulate Emissions	1, 2, 3, 4, 8, 9

Equipment

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
E36-A	Paved road particulate emissions	N/A	1.14	N/A	Fugitive
E36-B	Unpaved road particulate emissions	N/A	1.14	N/A	Fugitive

Control Devices

There are no control devices associated with this emission unit.

²⁷ This unit is not subject to STAR since it does not have any TAC emissions.

IA3 Specific Conditions

S1. Standards

[Regulation 2.16, section 4.1.1]

a. Opacity

- i. The owner or operator shall not allow visible emissions to equal or exceed 20% opacity. [Regulation 1.14, section 2.3]
- ii. The owner or operator shall not allow visible fugitive emissions beyond the lot line of the property on which the emissions originate. [Regulation 1.14, section 2.4]

b. PM

- i. The owner or operator shall not allow a road to be used without taking reasonable precautions to prevent particulate matter from becoming airborne beyond the work site. Such precautions shall include, where applicable, but shall not be limited to the following: [Regulation 1.14, section 2.1]
 - (1) Applying and maintaining asphalt, oil, water, or suitable chemicals on roads, materials stockpiles, and other surfaces which can create airborne dusts, [Regulation 1.14, section 2.1.2]
 - (2) Covering at all times, except when loading and unloading and off-road open bodied trucks, open bodied trucks transporting materials likely to become airborne, [Regulation 1.14, section 2.1.4]
 - (3) Maintaining paved roadways in a clean condition, [Regulation 1.14, section 2.1.6]
 - (4) Removing earth or other material from paved streets which earth or other material has been transported thereto by trucking or earth moving equipment or erosion by water. [Regulation 1.14, section 2.1.7]

S2. Monitoring and Record Keeping

[Regulation 2.16, sections 4.1.9.1 and 4.1.9.2]

The owner or operator shall maintain the required records for a minimum of 5 years and make the records readily available to the District upon request.

a. Opacity/ PM

- i. The owner or operator shall keep records of vehicle miles traveled (VMT) and weights for the vehicles traveled on unpaved and paved roads.

S3. Reporting

[Regulation 2.16, section 4.1.9.3]

The owner or operator shall report the following information, as required by General Condition G14:

a. **Opacity/ PM**

- i. There are no compliance reporting requirements for this emission unit.

Attachment A - Protocol Checklist for a Performance Test

A complete protocol must include the following information

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

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

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

Attachment B - NO_x RACT Plan - Amendment 2

Part 1 of NO_x RACT Plan

(Part 1 of the NO_x RACT Plan will remain effective until the LG&E/CRGS shuts down the coal-fired boilers.)²⁸

1.

Part 2 of NO_x RACT Plan

(Part 2 of this NO_x RACT Plan will be effective when the new NGCC unit and the associated equipment start to be operated, and the coal-fired boilers are shut down and Part 1 of this Plan is voided.)²⁹

1. The oxides of nitrogen (NO_x, expressed as NO₂) emission from the NGCC unit (U15), which includes combustion turbine GT-7A, GT-7B and the associated heat recovery steam generators, and steam turbine generator, shall not exceed 15 ppm at 15% O₂ or 54 ng/J (0.43 lb/MWh), based upon a rolling 30-day average. (40 CFR 60.4320(a))
2. The Louisville Gas and Electric Company Cane Run Generating Station (LG&E/CRGS) shall install, maintain, and operate a NO_x continuous emissions monitoring system (CEMS) for each combustion turbine GT-7A and GT-7B (U15) and shall keep records and submit reports and other notifications as specified in NO_x RACT Plan Appendix A - Amendment 1. (40 CFR 60.4340(b)(1))
3. The LG&E/CRGS elect to install and certify a NO_x-diluent CEMS for combustion turbine GT-7A and GT-7B (U15) under 40 CFR 60.4345. Therefore the initial performance test required under 40 CFR 60.8 may be performed in the following alternative manner: (40 CFR 60.4405)
 - A. Perform a minimum of nine RATA reference method runs, with a minimum time per run of 21 minutes, at a single load level, within plus or minus 25 percent of 100 percent peak load. The ambient temperature must be greater than 0 °F during the RATA runs. (40 CFR 60.4405(a))
 - B. For each RATA run, concurrently measure the heat input to the unit using a fuel flow meter (or flow meters) and measure the electrical and thermal output from the unit. (40 CFR 60.4405(b))
 - C. Use the test data both to demonstrate compliance with the applicable NO_x emission limit under §60.4320 (and NO_x RACT) and to provide the required reference method data for the RATA of the CEMS described under §60.4335. (40 CFR 60.4405(c))
 - D. Compliance with the applicable emission limit of §60.4320 (and NO_x RACT) for Combustion Turbine GT-7A and GT-7B is achieved if the arithmetic average of

²⁸ Part 1 of the NO_x RACT Plan has been ineffective since coal-fired boilers U4, U5, and U6 were shut down in June 2015.

²⁹ Part 2 of the NO_x RACT Plan has been effective since NGCC unit was in full operation in June 2015.

all of the NO_x emission rates for the RATA runs (ppm or lb/MWh) does not exceed the emission limit. (40 CFR 60.4405(d))

4. The NO_x emission rate for combustion turbine GT-7A and GT-7B (U15) shall be determined using the methods and procedures specified in NO_x RACT Plan Appendix A - Amendment 1, except that any reference to an annual average shall be read as a rolling 30-day average.
5. The LG&E/CRGS shall calculate the hourly average NO_x emission rates for the NGCC unit (U15) using either ppm for units complying with the concentration limit or the equation under 40 CFR 60.4350(f)(2) for units complying with the output based standard. (40 CFR 60.4350(f))
6. The GT-11 turbine (U11) shall not be operated for more than 500 hours per calendar year.³⁰
7. The LG&E/CRGS shall make a record of the hours of operation during each day of operation of the GT-11 turbine (U11). Each record shall be maintained for a minimum of 5 years and made available to the District upon request.
8. NO_x emissions from the auxiliary boiler (U16) shall not exceed 3.60 lb/hr, determined by multiplying the actual total heat input (in MMBtu) and the manufacturer certified emissions factor (0.036 lb/MMBtu), based upon a rolling 30-day average. (Regulation 6.42, section 4.3)
9. NO_x emissions from the auxiliary boiler (U16) will be monitored and recorded by maintaining records of the monthly fuel usage in this unit.
10. NO_x emissions from the fuel gas dew point heater (U17)³¹ shall not exceed 0.72 lb/hr, determined by multiplying the actual total heat input (in MMBtu) and the manufacturer certified emissions factor (0.06 lb/MMBtu), based upon a rolling 30-day average. (Regulation 6.42, section 4.3)
11. NO_x emissions from the fuel gas dew point heater (U17) will be monitored and recorded by maintaining records of the monthly fuel usage in this unit.
12. The LG&E/CRGS shall keep a record identifying all deviations from the requirements of this NO_x RACT Plan and shall submit to the District quarterly report of all deviations that occurred during the preceding calendar quarter. Each report shall be submitted within 30 days following the end of the calendar quarter. The report shall contain the following information:
 - A. The unit number,
 - B. The beginning and ending date of the reporting period,

³⁰ Gas turbine GT-11 has been disabled since November 30, 2019.

³¹ The fuel gas dew point heater has never been installed.

- C. Identification of all periods during which a deviation occurred,
 - D. A description, including the magnitude, of the deviation,
 - E. If known, the cause of the deviation, and
 - F. A description of all corrective actions taken to abate the deviation.
 - G. If no deviation occurred during the calendar quarter, the report shall contain a negative declaration.
 - H. This report shall include a summary of the monthly and calendar-year-to-date hours of operation of the GT-11 gas turbine.
 - I. This report shall include the excess emissions and monitor downtime for each combustion turbine. (40 CFR 60.4375)
13. In lieu of the requirements in this NO_x RACT Plan, the LG&E/CRGS may comply with alternative requirements regarding emission limitations, equipment operation, test methods, monitoring, recordkeeping, or reporting, provided the following conditions are met:
- A. The alternative requirements are established and incorporated into an operating permit pursuant to a Title V Operating Permit issuance, renewal, or significant permit revision process as established in Regulation 2.16,
 - B. The alternative requirements are consistent with the streamlining procedures and guidelines set forth in section II.A. of *White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program*, March 5, 1996, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards. The overall effect of compliance with alternative requirements shall consider the effect on an intrinsic basis, such as pounds per million Btu heat input. However, alternative requirements that are developed based upon revisions to the applicable requirements contained in 40 CFR Part 60 or Part 75 shall be approvable pursuant to this NO_x RACT Plan Element,
 - C. The U.S. Environmental Protection Agency (EPA) has not objected to the issuance, renewal, or revision of the Title V Operating Permit, and either
 - D. If the public comment period preceded the EPA review period, then the District had transmitted any public comments concerning the alternative requirements to EPA with the proposed permit, or
 - E. If the EPA and public comment periods ran concurrently, then the District had transmitted any public comments concerning the alternative requirements to EPA no later than 5 working days after the end of the public comment period.

The District's determination of approval of any alternative requirements is not binding on EPA. Noncompliance with any alternative requirement established pursuant to the Title V Operating Permit process constitutes a violation of this NO_x RACT Plan.

History: Approved 11-8-99, effective 1-1-00; amended a1/10-18-00, effective 1-1-01; amended a2/07-18-12, effective 07-18-12

**Appendix A to NO_x RACT Plan
(Requirements for NO_x CEMS)**

I. General Operating Requirements

- A. Primary measurement requirements.** The LG&E/CRGS shall, for each utility boiler and combustion turbine (GT-7A and GT-7B), install, certify, operate, and maintain, in accordance with the requirements of 40 CFR 75, an oxides of nitrogen (NO_x) continuous emission monitoring system (CEMS), consisting of a NO_x pollutant concentration monitor and an oxygen (O₂) or carbon dioxide (CO₂) diluent gas monitor, with an automated data acquisition and handling system for measuring and recording NO_x concentration (in parts per million (ppm)), O₂ or CO₂ concentration (in percent O₂ or CO₂) and NO_x emission rate (in lb/mmBtu heat input) discharged to the atmosphere. Any reference in this Appendix to an annual average shall be read as a rolling 30-day average. The LG&E/CRGS shall account for total NO_x emissions, both nitrogen oxide (NO) and nitrogen dioxide (NO₂), either by monitoring for both NO and NO₂ or by monitoring for NO only and adjusting the emissions data to account for NO₂.
- B. Primary equipment performance requirements.** The LG&E/CRGS shall ensure that each CEMS used to demonstrate compliance with the NO_x emission limit meets the equipment, installation, and performance specifications in 40 CFR 75 Appendix A, and is maintained according to the quality assurance and quality control procedures in 40 CFR 75 Appendix B.
- C. Primary equipment hourly operating requirements.**
1. The LG&E/CRGS shall ensure that all CEMS are in operation and monitoring the emissions from the associated utility boiler and combustion turbine (GT-7A and GT-7B) at all times that the utility boiler and combustion turbine (GT-7A and GT-7B) combusts any fuel except during a period of any of the following:
 - a. Calibration, quality assurance, or preventive maintenance, any of which is performed pursuant to 40 CFR 75.21, 40 CFR 75 Appendix B, District regulations, District permit conditions, or this NO_x RACT Plan, or
 - b. Repair, backups of data from the data acquisition and handling system, or recertification, any of which is performed pursuant to 40 CFR 75.20.
 2. The LG&E/CRGS shall ensure that the following requirements are met:
 - a. Each CEMS and component thereof is capable of completing a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute interval. The LG&E/CRGS shall reduce all volumetric flow, CO₂ concentration, O₂ concentration, NO_x concentration, and NO_x emission rate data collected by the monitors to hourly averages. Hourly averages shall be computed using at least one data point in each 15-minute quadrant of an hour during which the utility boiler and combustion turbine (GT-7A and GT-7B) combusted fuel during that quadrant of the hour. Notwithstanding this requirement, an hourly average

may be computed from at least two data points separated by a minimum of 15 minutes (where the unit operates for more than one quadrant of the hour) if data are unavailable as a result of the performance of any activity specified in paragraph I.C.1. of this Appendix. The LG&E/CRGS shall use all valid measurements or data points collected during an hour to calculate the hourly averages. All data points collected during an hour shall be, to the extent practicable, evenly spaced over the hour.

- b. Failure of a CO₂ or O₂ diluent concentration monitor, flow monitor, or NO_x pollutant concentration monitor to acquire the minimum number of data points for calculation of an hourly average shall result in the failure to obtain a valid hour of data and the loss of such component data for the entire hour. An hourly average NO_x emission rate in lb/mmBtu heat input is valid only if the minimum number of data points are acquired by both the pollutant concentration monitor (NO_x) and the diluent monitor (CO₂ or O₂). If a valid hour of data is not obtained, the owner or operator shall estimate and record emissions, moisture, or flow data for the missing hour by means of the automated data acquisition and handling system, in accordance with the applicable procedure for missing data substitution in 40 CFR 75 Subpart D.

D. Optional backup monitor requirements. If the LG&E/CRGS chooses to use two or more CEMS, each of which is capable of monitoring the same stack or duct at a specific utility boiler and combustion turbine (GT-7A and GT-7B), then the LG&E/CRGS shall designate one CEMS as the primary monitoring system and shall record this designation in the monitoring plan. The LG&E/CRGS shall designate any other CEMS as a backup CEMS in the monitoring plan. Any other backup CEMS shall be designated as a redundant backup CEMS, non-redundant backup CEMS, or reference method CEMS, as described in 40 CFR 75.20(d). When the certified primary monitoring system is operating and not out-of-control as defined in 40 CFR 75.24, only data from the certified primary monitoring system shall be reported as valid, quality-assured data. Thus, data from a backup CEMS may be reported as valid, quality-assured data only when a backup CEMS is operating and not out-of-control as defined in 40 CFR 75.24 or in the applicable reference method in 40 CFR 60 Appendix A and when the certified primary monitoring system is not operating or is operating but out-of-control. A particular monitor may be designated both as a certified primary monitor for one unit and as a certified redundant backup monitor for another unit.

E. Minimum measurement capability requirements. Each CEMS and component thereof shall be capable of accurately measuring, recording, and reporting data, and shall not incur a full scale exceedance, except as provided in section 2.1.2.5 of 40 CFR 75 Appendix A.

F. The LG&E/CRGS shall not operate a utility boiler and combustion turbine (GT-

7A and GT-7B) so as to discharge, or allow to be discharged, emissions of NO_x to the atmosphere without accounting for all such emissions in accordance with the methods and procedures specified in this Appendix.

- G.** The LG&E/CRGS shall not disrupt the CEMS, any portion thereof, or any other approved emission monitoring method, and thereby avoid monitoring and recording NO_x emissions discharged into the atmosphere, except for periods of recertification or periods when calibration, quality assurance testing, or maintenance is performed in accordance with the provisions of this Appendix.
- H.** The LG&E/CRGS shall not retire or permanently discontinue use of the CEMS, any component thereof, or any other approved emission monitoring system under this Appendix except under any one of the following circumstances:
1. The LG&E/CRGS is monitoring NO_x emissions from the utility boiler and combustion turbine (GT-7A and GT-7B) with another certified monitoring system approved in accordance with the provisions of paragraph I.D. of this Appendix, or
 2. The LG&E/CRGS submits notification of the date of certification testing of a replacement monitoring system.
- I.** The quality assurance and quality control requirements in 40 CFR 75.21 that applies to NO_x pollutant concentration monitors and diluent gas monitors shall be met.
- J.** **Moisture correction.** If a correction for the stack gas moisture content is needed to properly calculate the NO_x emission rate in lb/mmBtu heat input (i.e., if the NO_x pollutant concentration monitor measures on a different moisture basis from the diluent monitor), LG&E/CRGS shall either report a fuel-specific default moisture value for each utility boiler and combustion turbine (GT-7A and GT-7B) operating hour, as provided in 40 CFR 75.11(b)(1), or shall install, operate, maintain, and quality assure a continuous moisture monitoring system, as defined in 40 CFR 75.11(b)(2). Notwithstanding this requirement, if Equation 19-3, 19-4 or 19-8 in Method 19 in Appendix A to 40 CFR Part 60 is used to measure NO_x emission rate, the following fuel-specific default moisture percentages shall be used in lieu of the default values specified in 40 CFR 75.11(b)(1): 5.0%, for anthracite coal; 8.0% for bituminous coal; 12.0% for sub-bituminous coal; 13.0% for lignite coal; and 15.0% for wood.

II. Specific Provisions for Monitoring NO_x Emission Rate (NO_x and diluent gas monitors)

- A.** The LG&E/CRGS shall meet the general operating requirements in 40 CFR 75.10 for a NO_x CEMS for each utility boiler and combustion turbine (GT-7A and GT-7B). The diluent gas monitor in the NO_x CEMS may measure either O₂ or CO₂ concentration in the flue gases.

- B.** The LG&E/CRGS shall calculate hourly and rolling 30-day NO_x emission rates by combining the NO_x concentration (in ppm), diluent concentration (in percent O₂ or CO₂), and percent moisture (if applicable) measurements according to the procedures in 40 CFR 75 Appendix F.

III. Monitoring plan

The LG&E/CRGS shall prepare and maintain a monitoring plan as specified in 40 CFR 75.53. The monitoring plan shall be submitted to the District no later than 45 days prior to the first scheduled certification test.

IV. Recordkeeping Provisions

- A.** The LG&E/CRGS shall maintain for each utility boiler and combustion turbine (GT-7A and GT-7B) a file of all measurements, data, reports, and other information required by this Appendix at the stationary source in a form suitable for inspection for at least 5 years from the date of each record. This file shall contain the following information:
1. The data and information required in paragraph IV.B. of this Appendix,
 2. The component data and information used to calculate values required in paragraph IV.B. of this Appendix,
 3. The current monitoring plan as specified in 40 CFR 75.53, and
 4. The quality control plan as described in 40 CFR 75 Appendix B.
- B. NO_x emission record provisions.** The LG&E/CRGS shall record hourly the following information as measured and reported from the certified primary monitor, certified back-up or certified portable monitor, or other approved method of emissions determination for each utility boiler and combustion turbine (GT-7A and GT-7B):
1. Date and hour,
 2. Hourly average NO_x concentration (ppm, rounded to the nearest tenth),
 3. Hourly average diluent gas concentration (percent O₂ or percent CO₂, rounded to the nearest tenth),
 4. Hourly average NO_x emission rate (rounded to nearest hundredth),
 5. Hourly average NO_x emission rate (rounded to nearest hundredth) adjusted for bias, if a bias adjustment factor is required by 40 CFR 75.24 (d),
 6. Percent monitoring system data availability (recorded to the nearest tenth of a percent), calculated pursuant to 40 CFR 75.32,
 7. Method of determination for hourly average NO_x emission rate using Codes 1-55 in 40 CFR 75.57 Table 4A, and
 8. Unique code identifying emissions formula used to derive hourly average NO_x emission rate, as provided for in 40 CFR 75.53.

V. Certification, Quality Assurance, and Quality Control Record Provisions

- A.** For each NO_x pollutant concentration monitor and diluent gas monitor, the

LG&E/CRGS shall record the following:

1. Results of all trial runs and certification tests and quality assurance activities and measurements (including all reference method field test sheets, charts, records of combined system responses, laboratory analyses, and example calculations) necessary to substantiate compliance with all relevant requirements of this Appendix,
 2. Bias test results as specified in 40 CFR 75, Appendix A, section 7.6.4,
 3. The appropriate bias adjustment factor as follows:
 - a. The value derived from Equations A-11 and A-12 in 40 CFR 75 Appendix A for any monitoring system or component that failed the bias test, or
 - b. A value of 1.0 for any monitoring system or component that passed the bias test, and
 4. The component/system identification code.
- B.** For each NO_x pollutant concentration monitor and diluent gas monitor, the LG&E/CRGS shall record the following for all daily and 7-day calibration error tests, including any follow-up tests after corrective action:
1. Instrument span and span scale,
 2. Date and hour,
 3. Reference value (i.e., calibration gas concentration or reference signal value, in ppm or other appropriate units),
 4. Observed value (monitor response during calibration, in ppm or other appropriate units), (flag if using alternative performance specification for low emitters or differential pressure monitors),
 5. Percent calibration error (rounded to the nearest tenth of a percent),
 6. Calibration gas level,
 7. Test number and reason for test,
 8. For 7-day calibrations tests for certification or recertification, a certification from the cylinder gas vendor or CEMS vendor that calibration gases as defined in 40 CFR 72.2 and 40 CFR 75 Appendix A were used to conduct calibration error testing,
 9. Description of any adjustments, corrective actions, or maintenance following a test,
 10. For quality test for off-line calibration, whether the unit is off-line or on-line, and
 11. The component/system identification code.
- C.** For each NO_x pollutant concentration monitor and diluent gas monitor, the LG&E/CRGS shall record the following for the initial and all subsequent linearity checks, including any follow-up tests after corrective action:
1. Instrument span and span scale,
 2. Calibration gas level,
 3. Date, hour, and minute of each gas injection at each calibration gas level,
 4. Reference value (i.e., reference gas concentration for each gas injection at each calibration gas level, in ppm or other appropriate units),

5. Observed value (monitor response to each reference gas injection at each calibration gas level, in ppm or other appropriate units),
6. Mean of reference values and mean of measured values at each calibration gas level,
7. Linearity error at each of the reference gases concentrations (rounded to the nearest tenth of a percent), (flag if using alternative performance specification),
8. Test number and reason for test (flag if aborted test),
9. Description of any adjustments, corrective action, or maintenance prior to a passed test or following a failed test,
10. The number of out-of-control hours, if any, following any tests, and
11. The component/system identification code.

D. For each NO_x pollutant concentration monitor and diluent gas monitor, the LG&E/CRGS shall record the following information for the initial and all subsequent relative accuracy tests and test audits:

1. Reference method(s) used,
2. Individual test run data from the relative accuracy test audit for the NO_x pollutant concentration monitor or diluent gas monitor, including:
 - a. Date, hour, and minute of beginning of test run,
 - b. Date, hour, and minute of end of test run,
 - c. Monitoring system identification code,
 - d. Test number and reason for test,
 - e. Operating load level (low, mid, high, or normal, as appropriate) and number of load levels comprising test,
 - f. Normal load indicator for flow RATAs (except for peaking units),
 - g. Units of measure,
 - h. Run number,
 - i. Run data from CEMS being tested, in the appropriate units of measure,
 - j. Run data for reference method, in the appropriate units of measure,
 - k. Flag value (0, 1, or 9, as appropriate) indicating whether run has been used in calculating relative accuracy and bias values or whether the test was aborted prior to completion,
 - l. Average gross unit load (expressed as a total gross unit load rounded to the nearest MWe or as steam load rounded to the nearest thousand lb/hr), and
 - m. Flag to indicate whether an alternative performance specification has been used,
3. Calculations and tabulated results, as follows:
 - a. Arithmetic mean of the monitoring system measurement values, reference method values, and of their differences, as specified in Equation A-7 in 40 CFR 75 Appendix A,
 - b. Standard deviation, as specified in Equation A-8 in 40 CFR 75 Appendix A,
 - c. Confidence coefficient, as specified in Equation A-9 in 40 CFR 75

- Appendix A,
- d. Statistical “t” value used in calculations,
 - e. Relative accuracy test results, as specified in Equation A-10 in 40 CFR 75 Appendix A,
 - f. Bias test results as specified in section 7.6.4 in 40 CFR 75 Appendix A,
 - g. Bias adjustment factor from Equation A-12 in 40 CFR 75 Appendix A for any monitoring system or component that failed the bias test (except as otherwise provided in section 7.6.5 in 40 CFR 75 Appendix A) and 1.000 for any monitoring system or component that passed the bias test,
 - h. F-factor value(s) used to convert NO_x pollutant concentration and diluent gas (O₂ or CO₂) concentration measurements into NO_x emission rates (in lb/mmBtu),
 - i. The raw data and calculated results for any stratification tests performed in accordance with sections 6.5.6.1 through 6.5.6.3 in 40 CFR 75 Appendix A, and
 - j. For moisture monitoring systems, the coefficient “K” factor or other mathematical algorithm used to adjust the monitoring system with respect to the reference method,
4. Description of any adjustment, corrective action, or maintenance prior to a passed test or following a failed or aborted test,
 5. For each run of each test using Method 7E or 3A in Appendix A of 40 CFR 60 to determine NO_x, CO₂, or O₂ concentration the following:
 - a. Pollutant or diluent gas being measured,
 - b. Span of reference method analyzer,
 - c. Type of reference method system (e.g., extractive or dilution type),
 - d. Reference method dilution factor (dilution type systems, only),
 - e. Reference gas concentration (low, mid, and high gas levels) used for the 3-point, pre-test analyzer calibration error test (or, for dilution type reference method systems, for the 3-point, pre-test system calibration error test) and for any subsequent recalibrations,
 - f. Analyzer responses to the zero-, mid-, and high-level calibration gases during the 3-point pre-test analyzer (or system) calibration error test and during any subsequent recalibration(s),
 - g. Analyzer calibration error at each gas level (zero, mid, and high) for the 3-point, pre-test analyzer (or system) calibration error test and for any subsequent recalibration(s) (percent of span value),
 - h. Upscale gas concentration (mid or high gas level) used for each pre-run or post-run system bias check or, for dilution type reference method systems, for each pre-run or post-run system calibration error check,
 - i. Analyzer response to the calibration gas for each pre-run or post-run system bias (or system calibration error) check,
 - j. The arithmetic average of the analyzer responses to the zero-level gas, for each pair of pre- and post-run system bias (or system

- calibration error) checks,
 - k. The arithmetic average of the analyzer responses to the upscale calibration gas, for each pair of pre- and post-run system bias (or system calibration error) checks,
 - l. The results of each pre-run and each post-run system bias (or system calibration error) check using the zero-level gas (percentage of span value),
 - m. The results of each pre-run and each post-run system bias (or system calibration error) check using the upscale calibration gas (percentage of span value),
 - n. Calibration drift and zero drift of analyzer during each RATA run (percentage of span value),
 - o. Moisture basis of the reference method analysis,
 - p. Moisture content of stack gas, in percent, during each test run (if needed to convert to moisture basis of CEMS being tested),
 - q. Unadjusted (raw) average pollutant or diluent gas concentration for each run,
 - r. Average pollutant or diluent gas concentration for each run, corrected for calibration bias (or calibration error) and, if applicable, corrected for moisture,
 - s. The F-factor used to convert reference method data to units of lb/mmBtu (if applicable)
 - t. Date(s) of the latest analyzer interference test(s),
 - u. Results of the latest analyzer interference test(s),
 - v. Date of the latest NO₂ to NO conversion test (Method 7E only),
 - w. Results of the latest NO₂ to NO conversion test (Method 7E only), and
 - x. For each calibration gas cylinder used during each RATA, record the cylinder gas vendor, cylinder number, expiration date, pollutant(s) in the cylinder, and certified gas concentration(s),
6. The number of out-of-control hours, if any, following any tests, and
 7. The component/system identification code.

VI. Notifications

- A. The LG&E/CRGS or a designated representative shall submit notice to the District for the following purposes, as required by this Appendix:
 1. Initial certification and recertification test notifications. Written notification shall be submitted of initial certification tests, recertification tests, and revised test dates as specified in 40 CFR 75.20 for continuous emission monitoring systems, except for testing only of the data acquisition and handling system, and
 2. Notification of initial certification testing. Initial certification test notifications shall be submitted not later than 21 days prior to the first scheduled day of initial certification testing. Testing may be performed on a date other than that already provided in a notice under this subparagraph

as long as notice of the new date is provided either in writing or by telephone or other means at least 7 days prior to the original scheduled test date or the revised test date, whichever is earlier.

- B.** For retesting following a loss of certification under 40 CFR 75.20(a)(5) or for recertification under 40 CFR 75.20(b), notice of testing shall be submitted either in writing or by telephone at least 7 days prior to the first scheduled day of testing, except that in emergency situations when testing is required following an uncontrollable failure of equipment that results in lost data, notice shall be sufficient if provided within 2 business days following the date when testing is scheduled. Testing may be performed on a date other than that already provided in a notice under this subparagraph as long as notice of the new date is provided by telephone or other means at least 2 business days prior to the original scheduled test date or the revised test date, whichever is earlier.
- C.** Notwithstanding the notice requirements of paragraph B. above, the LG&E/CRGS may elect to repeat a certification test immediately, without advance notification, whenever the LG&E/CRGS has determined during the certification testing that a test was failed or that a second test is necessary in order to attain a reduced relative accuracy test frequency.
- D.** Written notice shall be submitted, either by mail or facsimile, of the date of periodic relative accuracy testing performed under 40 CFR Part 75 Appendix B no later than 21 days prior to the first scheduled day of testing. Testing may be performed on a date other than that already provided in a notice under this subparagraph as long as notice of the new date is provided either in writing or by telephone or other means acceptable to the District, and the notice is provided as soon as practicable after the new testing date is known, but no later than 24 hours in advance of the new date of testing.
- E.** Notwithstanding the notice requirements under paragraph D. above, the LG&E/CRGS may elect to repeat a periodic relative accuracy test immediately, without additional notification whenever the LG&E/CRGS has determined that a test was failed, or that a second test is necessary in order to attain a reduced relative accuracy test frequency. If an observer from the District is present when a test is rescheduled, the observer may waive all notification requirements under paragraph D. above for the rescheduled test.

VII. Quarterly reports

- A.** The LG&E/CRGS shall, within 30 days following the end of each calendar quarter, submit a report to the District that includes the following data and information for each utility boiler and combustion turbine (GT-7A and GT-7B):

 1. The information and hourly data required in this Appendix, including all emissions and quality assurance data, and
 2. Average NO_x emission rate (lb/mmBtu heat input, rounded to the nearest

hundredth) during the rolling 30-day averaging periods.

- B.** The LG&E/CRGS shall submit a certification in support of each quarterly emissions monitoring report. This certification shall indicate whether the monitoring data submitted were recorded in accordance with the requirements of this Appendix. In the event of any missing data periods, this certification shall include a description of the measures taken to minimize or eliminate the causes for the missing data periods.

Attachment C - 40 CFR 75, Subpart G

The owner or operator shall comply with the following requirements unless there are more current promulgated regulations:

Specific Conditions

S1. Reporting Requirements for Continuous Emission Monitoring

a. General provisions [40 CFR 75.60]

- i. If requested in writing (or by electronic mail) by the applicable EPA Regional Office, appropriate State, and/or appropriate local air pollution control agency, the designated representative shall submit a hardcopy RATA report within 45 days after completing a required semiannual or annual RATA according to section 2.3.1 of appendix B to this part (for standard RATA frequencies and reduced RATA frequencies), or within 15 days of receiving the request, whichever is later. The designated representative shall report the hardcopy information required by 40 CFR 75.59(a)(9), as specified in Condition S1.a.ii., to the applicable EPA Regional Office, appropriate State, and/or appropriate local air pollution control agency that requested the RATA report. [40 CFR 75.60(b)(6)]
- ii. When hardcopy relative accuracy test reports, certification reports, recertification reports, or semiannual or annual reports for gas or flow rate CEMS, the reports shall include, at a minimum, the following elements (as applicable to the type(s) of test(s) performed): [40 CFR 75.59(a)(9)]
 - (1) Summarized test results. [40 CFR 75.59(a)(9)(i)]
 - (2) DAHS printouts of the CEMS data generated during the calibration error, linearity, cycle time, and relative accuracy tests. [40 CFR 75.59(a)(9)(ii)]
 - (3) For pollutant concentration monitor or diluent monitor relative accuracy tests at normal operating load: [40 CFR 75.59(a)(9)(iii)]
 - (a) The raw reference method data from each run, i.e., the data under paragraph (a)(7)(iv)(Q) of 40 CFR 75.59 (usually in the form of a computerized printout, showing a series of one-minute readings and the run average); [40 CFR 75.59(a)(9)(iii)(A)]
 - (b) The raw data and results for all required pre-test, post-test, pre-run and post-run quality assurance checks (i.e., calibration gas injections) of the reference method analyzers, i.e., the data under paragraphs (a)(7)(iv)(E) through (a)(7)(iv)(N) of 40 CFR 75.59 (supporting information for RATA using Method 6C, 7E, or 3A); [40 CFR 75.59(a)(9)(iii)(B)]

- (c) The raw data and results for any moisture measurements made during the relative accuracy testing, i.e., the data under paragraphs (a)(7)(v)(A) through (a)(7)(v)(O) of 40 CFR 75.59 (supporting information for RATA using Method 4); and [40 CFR 75.59(a)(9)(iii)(C)]
 - (d) Tabulated, final, corrected reference method run data (*i.e.*, the actual values used in the relative accuracy calculations), along with the equations used to convert the raw data to the final values and example calculations to demonstrate how the test data were reduced. [40 CFR 75.59(a)(9)(iii)(D)]
- (4) For relative accuracy tests for flow monitors:
[40 CFR 75.59(a)(9)(iv)]
- (a) The raw flow rate reference method data, from Reference Method 2 (or its allowable alternatives) under appendix A to part 60 of this chapter, including auxiliary moisture data (often in the form of handwritten data sheets), i.e., the data under paragraphs (a)(7)(ii)(A) through (a)(7)(ii)(T), paragraphs (a)(7)(iii)(A) through (a)(7)(iii)(M), and, if applicable, paragraphs (a)(7)(v)(A) through (a)(7)(v)(O) of 40 CFR 75.59 (supporting information for RATA using Method 2 and Method 4) ; and [40 CFR 75.59(a)(9)(iv)(A)]
 - (b) The tabulated, final volumetric flow rate values used in the relative accuracy calculations (determined from the flow rate reference method data and other necessary measurements, such as moisture, stack temperature and pressure), along with the equations used to convert the raw data to the final values and example calculations to demonstrate how the test data were reduced.
[40 CFR 75.59(a)(9)(iv)(B)]
- (5) Calibration gas certificates for the gases used in the linearity, calibration error, and cycle time tests and for the calibration gases used to quality assure the gas monitor reference method data during the relative accuracy test audit. [40 CFR 75.59(a)(9)(v)]
- (6) Laboratory calibrations of the source sampling equipment.
[40 CFR 75.59(a)(9)(vi)]
- (7) A copy of the test protocol used for the CEMS certifications or recertifications, including narrative that explains any testing abnormalities, problematic sampling, and analytical conditions that required a change to the test protocol, and/or solutions to technical problems encountered during the testing program.
[40 CFR 75.59(a)(9)(vii)]
- (8) Diagrams illustrating test locations and sample point locations (to verify that locations are consistent with information in the

monitoring plan). Include a discussion of any special traversing or measurement scheme. The discussion shall also confirm that sample points satisfy applicable acceptance criteria.

[40 CFR 75.59(a)(9)(viii)]

- (9) Names of key personnel involved in the test program, including test team members, plant contacts, agency representatives and test observers on site. [40 CFR 75.59(a)(9)(vix)]
- (10) For testing involving use of EPA Protocol gases, the owner or operator shall record in electronic and hardcopy format the following information, as applicable: [40 CFR 75.59(a)(9)(x)]
 - (a) On and after September 26, 2011, for each gas monitor, for both low and high measurement ranges, record the following information for the mid-level or high-level EPA Protocol gas (as applicable) that is used for daily calibration error tests, and the low-, mid-, and high-level gases used for quarterly linearity checks. For O₂, if purified air is used as the high-level gas for daily calibrations or linearity checks, record the following information for the low- and mid-level EPA Protocol gas used for linearity checks, instead:
[40 CFR 75.59(a)(9)(x)(A)]
 - (i) Gas level code; [40 CFR 75.59(a)(9)(x)(A)(1)]
 - (ii) A code for the type of EPA Protocol gas used;
[40 CFR 75.59(a)(9)(x)(A)(2)]
 - (iii) The PGVP vendor ID issued by EPA for the EPA Protocol gas production site that supplied the EPA Protocol gas cylinder;
[40 CFR 75.59(a)(9)(x)(A)(3)]
 - (iv) The expiration date for the EPA Protocol gas cylinder; and [40 CFR 75.59(a)(9)(x)(A)(4)]
 - (v) The cylinder number.
[40 CFR 75.59(a)(9)(x)(A)(5)]
 - (b) On and after September 26, 2011, for each usage of Reference Method 3A in appendix A-2 to part 60 of this chapter, or Method 6C or 7E in appendix A-4 to part 60 of this chapter performed using EPA Protocol gas for the certification, recertification, routine quality assurance or diagnostic testing (reportable diagnostics, only) of a Part 75 monitoring system, record the information required by paragraphs (a)(9)(x)(A)(1) through (5) of 40 CFR 75.59. See Condition S1.a.ii.(10)(a){(i) through (v)}.
[40 CFR 75.59(a)(9)(x)(B)]

- (11) On and after March 27, 2012, for all RATAs performed pursuant to 40 CFR 75.74(c)(2)(ii), section 6.5 of appendix A to this part and section 2.3.1 of appendix B to this part, and for all NO_x emission testing performed pursuant to section 2.1 of appendix E to this part, or 40 CFR 75.19(c)(1)(iv), the owner or operator shall record the following information as provided by the AETB:
[40 CFR 75.59(a)(9)(xi)]
- (a) The name, telephone number and e-mail address of the Air Emission Testing Body; [40 CFR 75.59(a)(9)(xi)(A)]
 - (b) The name of each on-site Qualified Individual, as defined in 40 CFR 72.2 of this chapter;
[40 CFR 75.59(a)(9)(xi)(B)]
 - (c) For the reference method(s) that were performed, the date(s) that each on-site Qualified Individual took and passed the relevant qualification exam(s) required by ASTM D7036-04 (incorporated by reference, *see* 40 CFR 75.6); and [40 CFR 75.59(a)(9)(xi)(C)]
 - (d) The name and e-mail address of each qualification exam provider. [40 CFR 75.59(a)(9)(xi)(D)]

b. Notifications (40 CFR 75.61)

- i. *Initial certification and recertification test notifications.* The owner or operator or designated representative for an affected unit shall submit written notification of initial certification tests and revised test dates as specified in 75.20 (Initial certification and recertification procedures) for continuous emission monitoring systems, for alternative monitoring systems under subpart E of this part, or for excepted monitoring systems under appendix E to this part, except as provided in paragraphs (a)(1)(iii) and (a)(1)(iv) of 40 CFR 75.61. [40 CFR 75.61(a)(1)]
- (1) Notification of initial certification testing and full recertification. Initial certification test notifications and notifications of full recertification testing under 40 CFR 75.20(b)(2) shall be submitted not later than 21 days prior to the first scheduled day of certification or recertification testing. In emergency situations when full recertification testing is required following an uncontrollable failure of equipment that results in lost data, notice shall be sufficient if provided within 2 business days following the date when testing is scheduled. Testing may be performed on a date other than that already provided in a notice under this subparagraph as long as notice of the new date is provided either in writing or by telephone or other means at least 7 days prior to the original scheduled test date or the revised test date, whichever is earlier. [40 CFR 75.61(a)(1)(i)]

- (2) Notification of certification retesting, and partial recertification testing. For retesting required following a loss of certification under 40 CFR 75.20(a)(5) or for partial recertification testing required under 40 CFR 75.20(b)(2), notice of the date of any required RATA testing or any required retesting under section 2.3 in appendix E to this part shall be submitted either in writing or by telephone at least 7 days prior to the first scheduled day of testing; except that in emergency situations when testing is required following an uncontrollable failure of equipment that results in lost data, notice shall be sufficient if provided within 2 business days following the date when testing is scheduled. Testing may be performed on a date other than that already provided in a notice under this subparagraph as long as notice of the new date is provided by telephone or other means at least 2 business days prior to the original scheduled test date or the revised test date, whichever is earlier. [40 CFR75.61(a)(1)(ii)]
 - (3) Repeat of testing without notice. Notwithstanding the above notice requirements, the owner or operator may elect to repeat a certification or recertification test immediately, without advance notification, whenever the owner or operator has determined during the certification or recertification testing that a test was failed or must be aborted, or that a second test is necessary in order to attain a reduced relative accuracy test frequency. [40 CFR75.61(a)(1)(iii)]
- ii. *New unit, newly affected unit, new stack, or new flue gas desulfurization system operation notification.* The designated representative for an affected unit shall submit written notification: For a new unit or a newly affected unit, of the planned date when a new unit or newly affected unit will commence commercial operation, or becomes affected, or, for new stack or flue gas desulfurization system, of the planned date when a new stack or flue gas desulfurization system will be completed and emissions will first exit to the atmosphere. [40 CFR75.61(a)(2)]
- (1) Notification of the planned date shall be submitted not later than 45 days prior to the date the unit commences commercial operation or becomes affected, or not later than 45 days prior to the date when a new stack or flue gas desulfurization system exhausts emissions to the atmosphere. [40 CFR75.61(a)(2)(i)]
 - (2) If the date when the unit commences commercial operation or becomes affected, or the date when the new stack or flue gas desulfurization system exhausts emissions to the atmosphere, whichever is applicable, changes from the planned date, a notification of the actual date shall be submitted not later than 7 days following: The date the unit commences commercial operation or becomes affected, or the date when a new stack or

flue gas desulfurization system exhausts emissions to the atmosphere. [40 CFR75.61(a)(2)(ii)]

- iii. *Unit shutdown and recommencement of commercial operation.* For an affected unit that will be shut down on the relevant compliance date specified in 40 CFR 75.4 or in a State or Federal pollutant mass emissions reduction program that adopts the monitoring and reporting requirements of this part, if the owner or operator is relying on the provisions in 40 CFR 75.4(d) to postpone certification testing, the designated representative for the unit shall submit notification of unit shutdown and recommencement of commercial operation as follows: [40 CFR75.61(a)(3)]
- (1) For planned unit shutdowns (e.g., extended maintenance outages), written notification of the planned shutdown date shall be provided at least 21 days prior to the applicable compliance date, and written notification of the planned date of recommencement of commercial operation shall be provided at least 21 days in advance of unit restart. If the actual shutdown date or the actual date of recommencement of commercial operation differs from the planned date, written notice of the actual date shall be submitted no later than 7 days following the actual date of shutdown or of recommencement of commercial operation, as applicable; [40 CFR75.61(a)(3)(i)]
 - (2) For unplanned unit shutdowns (e.g., forced outages), written notification of the actual shutdown date shall be provided no more than 7 days after the shutdown, and written notification of the planned date of recommencement of commercial operation shall be provided at least 21 days in advance of unit restart. If the actual date of recommencement of commercial operation differs from the expected date, written notice of the actual date shall be submitted no later than 7 days following the actual date of recommencement of commercial operation. [40 CFR75.61(a)(3)(ii)]
- iv. *Periodic relative accuracy test audits.* The owner or operator or designated representative of an affected unit shall submit written notice of the date of periodic relative accuracy testing performed under section 2.3.1 of appendix B to this part, no later than 21 days prior to the first scheduled day of testing. Testing may be performed on a date other than that already provided in a notice under this subparagraph as long as notice of the new date is provided either in writing or by telephone or other means acceptable to the respective State agency or office of EPA, and the notice is provided as soon as practicable after the new testing date is known, but no later than twenty-four (24) hours in advance of the new date of testing. [40 CFR75.61(a)(5)]
- (1) Written notification under paragraph (a) (5) of 40 CFR 75.61 may be provided either by mail or by facsimile. In addition, written

notification may be provided by electronic mail, provided that the respective State agency or office of EPA agrees that this is an acceptable form of notification. [40 CFR 75.61(a)(5)(i)]

- (2) Notwithstanding the notice requirements under paragraph (a)(5) of 40 CFR 75.61, the owner or operator may elect to repeat a periodic relative accuracy test, appendix E retest, or low mass emissions unit retest immediately, without additional notification whenever the owner or operator has determined that a test was failed, or that a second test is necessary in order to attain a reduced relative accuracy test frequency. [40 CFR 75.61(a)(5)(ii)]

- v. *Certification deadline date for new or newly affected units.* The designated representative of a new or newly affected unit shall provide notification of the date on which the relevant deadline for initial certification is reached, either as provided in 75.4(b) or 75.4(c), or as specified in a State or Federal SO₂ or NO_x mass emission reduction program that incorporates by reference, or otherwise adopts, the monitoring, recordkeeping, and reporting requirements of subpart F, G, or H of this part. The notification shall be submitted no later than 7 calendar days after the applicable certification deadline is reached. [40 CFR 75.61(a)(8)]

c. **Monitoring plan submittals [40 CFR 75.62]**

- i. Submission [40 CFR 75.62(a)]

- (1) *Electronic.* Using the format specified in paragraph (c) of 40 CFR 75.62, the designated representative for an affected unit shall submit a complete, electronic, up-to-date monitoring plan file (except for hardcopy portions identified in paragraph (a)(2) of 40 CFR 75.62) to the Administrator as follows: no later than 21 days prior to the initial certification tests; at the time of each certification or recertification application submission; and (prior to or concurrent with) the submittal of the electronic quarterly report for a reporting quarter where an update of the electronic monitoring plan information is required, either under 40 CFR 75.53(b) or elsewhere in this part. [40 CFR 75.62(a)(1)]

- (2) *Hardcopy.* The designated representative shall submit all of the hardcopy information required under 40 CFR 75.53 to the appropriate EPA Regional Office and the appropriate State and/or local air pollution control agency prior to initial certification. Thereafter, the designated representative shall submit hardcopy information only if that portion of the monitoring plan is revised. The designated representative shall submit the required hardcopy information as follows: no later than 21 days prior to the initial certification test; with any certification or recertification application, if a hardcopy monitoring plan change is associated with the certification or recertification event; and within 30 days of

any other event with which a hardcopy monitoring plan change is associated, pursuant to 40 CFR 75.53(b). Electronic submittal of all monitoring plan information, including hardcopy portions, is permissible provided that a paper copy of the hardcopy portions can be furnished upon request. [40 CFR 75.62(a)(2)]

- ii. Contents. Monitoring plans shall contain the information specified in 40 CFR 75.53 of this part (Requirements of Monitoring Plan for CEMS). See Condition S1.c.iii. [40 CFR 75.62(b)]
- iii. Monitoring plan [40 CFR 75.53]
 - (1) General provisions [40 CFR 75.53(a)]
 - (a) On and after January 1, 2009, the owner or operator shall meet the requirements of paragraphs (a), (b), (g), and (h) of 40 CFR 75.53 only. In addition, the provisions in paragraphs (g) and (h) of 40 CFR 75.53 that support a regulatory option provided in another section of this part must be followed if the regulatory option is used prior to January 1, 2009. [40 CFR 75.53(a)(1)]
 - (b) The owner or operator of an affected unit shall prepare and maintain a monitoring plan. Except as provided in paragraphs (f) or (h) of 40 CFR 75.53 (as applicable), a monitoring plan shall contain sufficient information on the continuous emission or opacity monitoring systems, excepted methodology under 40 CFR 75.19 (Optional SO₂, NO_x, and CO₂ emissions calculation for low mass emissions units), or excepted monitoring systems under appendix D or E to this part and the use of data derived from these systems to demonstrate that all unit SO₂ emissions, NO_x emissions, CO₂ emissions, and opacity are monitored and reported. [40 CFR 75.53(a)(2)]
 - (2) Whenever the owner or operator makes a replacement, modification, or change in the certified CEMS, continuous opacity monitoring system, excepted methodology under 40 CFR 75.19, excepted monitoring system under appendix D or E to this part, or alternative monitoring system under subpart E of this part, including a change in the automated data acquisition and handling system or in the flue gas handling system, that affects information reported in the monitoring plan (e.g., a change to a serial number for a component of a monitoring system), then the owner or operator shall update the monitoring plan, by the applicable deadline specified in 40 CFR 75.62 (Monitoring plan submittals) or elsewhere in this part. [40 CFR 75.53(b)]
 - (3) Contents of the monitoring plan [40 CFR 75.53(g)]

The requirements of paragraphs (g) and (h) of this section shall be met on and after January 1, 2009. Notwithstanding this requirement, the provisions of paragraphs (g) and (h) of 40 CFR 75.53 may be implemented prior to January 1, 2009, as follows. Each monitoring plan shall contain the information in paragraph (g)(1) of 40 CFR 75.53 in electronic format and the information in paragraph (g)(2) of 40 CFR 75.53 in hardcopy format. Electronic storage of all monitoring plan information, including the hardcopy portions, is permissible provided that a paper copy of the information can be furnished upon request for audit purposes.

(a) Electronic [40 CFR 75.53(g)(1)]

- (i) The facility ORISPL number developed by the Department of Energy and used in the National Allowance Data Base (or equivalent facility ID number assigned by EPA, if the facility does not have an ORISPL number). Also provide the following information for each unit and (as applicable) for each common stacks and/or pipe, and each multiple stack and/or pipe involved in the monitoring plan: [40 CFR 75.53(g)(1)(i)]

[1] A representation of the exhaust configuration for the units in the monitoring plan. On and after April 27, 2011, provide the activation date and deactivation date (if applicable) of the configuration. Provide the ID number of each unit and assign a unique ID number to each common stack, common pipe multiple stack and/or multiple pipe associated with the unit(s) represented in the monitoring plan. For common and multiple stacks and/or pipes, provide the activation date and deactivation date (if applicable) of each stack and/or pipe;

[40 CFR 75.53(g)(1)(i)(A)]

[2] Identification of the monitoring system location(s) (e.g., at the unit-level, on the common stack, at each multiple stack, etc.). Provide an indicator (“flag”) if the monitoring location is at a bypass stack or in the ductwork (breeching);

[40 CFR 75.53(g)(1)(i)(B)]

[3] The stack exit height (ft) above ground level and ground level elevation above sea level, and the inside cross-sectional area (ft²) at the flue exit and at the flow monitoring

- location (for units with flow monitors, only). Also use appropriate codes to indicate the material(s) of construction and the shape(s) of the stack or duct cross-section(s) at the flue exit and (if applicable) at the flow monitor location. On and after April 27, 2011, provide the activation date and deactivation date (if applicable) for the information in this paragraph (g)(1)(i)(C); [40 CFR 75.53(g)(1)(i)(C)]
- [4] The type(s) of fuel(s) fired by each unit. Indicate the start and (if applicable) end date of combustion for each type of fuel, and whether the fuel is the primary, secondary, emergency, or startup fuel; [40 CFR 75.53(g)(1)(i)(D)]
- [5] The type(s) of emission controls that are used to reduce SO₂, NO_X, and particulate emissions from each unit. Also provide the installation date, optimization date, and retirement date (if applicable) of the emission controls, and indicate whether the controls are an original installation; [40 CFR 75.53(g)(1)(i)(E)]
- [6] Maximum hourly heat input capacity of each unit. On and after April 27, 2011, provide the activation date and deactivation date (if applicable) for this parameter; and [40 CFR 75.53(g)(1)(i)(F)]
- [7] A non-load based unit indicator (if applicable) for units that do not produce electrical or thermal output. [40 CFR 75.53(g)(1)(i)(G)]
- (ii) For each monitored parameter (e.g., SO₂, NO_X, flow, etc.) at each monitoring location, specify the monitoring methodology and the missing data approach for the parameter. If the unmonitored bypass stack approach is used for a particular parameter, indicate this by means of an appropriate code. Provide the activation date/hour, and deactivation date/hour (if applicable) for each monitoring methodology and each missing data approach. [40 CFR 75.53(g)(1)(ii)]
- (iii) For each required continuous emission monitoring system, each fuel flowmeter system, and each continuous opacity monitoring system, identify and

describe the major monitoring components in the monitoring system (e.g., gas analyzer, flow monitor, opacity monitor, moisture sensor, fuel flowmeter, DAHS software, etc.). Other important components in the system (e.g., sample probe, PLC, data logger, etc.) may also be represented in the monitoring plan, if necessary. Provide the following specific information about each component and monitoring system: [40 CFR 75.53(g)(1)(iii)]

- [1] For each required monitoring system:
 - [40 CFR 75.53(g)(1)(iii)(A)]
 - [a] Assign a unique, 3-character alphanumeric identification code to the system;
 - [40 CFR 75.53(g)(1)(iii)(A)(1)]
 - [b] Indicate the parameter monitored by the system;
 - [40 CFR 75.53(g)(1)(iii)(A)(2)]
 - [c] Designate the system as a primary, redundant backup, non-redundant backup, data backup, or reference method backup system, as provided in 40 CFR 75.10(e) (Optional backup monitor requirements); and
 - [40 CFR 75.53(g)(1)(iii)(A)(3)]
 - [d] Indicate the system activation date/hour and deactivation date/hour (as applicable).
 - [40 CFR 75.53(g)(1)(iii)(A)(4)]
- [2] For each component of each monitoring system represented in the monitoring plan:
 - [40 CFR 75.53(g)(1)(iii)(B)]
 - [a] Assign a unique, 3-character alphanumeric identification code to the component;
 - [40 CFR 75.53(g)(1)(iii)(B)(1)]
 - [b] Indicate the manufacturer, model and serial number;
 - [40 CFR 75.53(g)(1)(iii)(B)(3)]
 - [c] Designate the component type;
 - [40 CFR 75.53(g)(1)(iii)(B)(3)]
 - [d] For dual-span applications, indicate whether the analyzer component ID represents a high measurement scale, a low scale, or a dual range;
 - [40 CFR 75.53(g)(1)(iii)(B)(4)]

- [e] For gas analyzers, indicate the moisture basis of measurement; [40 CFR 75.53(g)(1)(iii)(B)(5)]
 - [f] Indicate the method of sample acquisition or operation, (e.g., extractive pollutant concentration monitor or thermal flow monitor); and [40 CFR 75.53(g)(1)(iii)(B)(6)]
 - [g] Indicate the component activation date/hour and deactivation date/hour (as applicable). [40 CFR 75.53(g)(1)(iii)(B)(7)]
- (iv) Explicit formulas, using the component and system identification codes for the primary monitoring system, and containing all constants and factors required to derive the required mass emissions, emission rates, heat input rates, etc. from the hourly data recorded by the monitoring systems. Formulas using the system and component ID codes for backup monitoring systems are required only if different formulas for the same parameter are used for the primary and backup monitoring systems (e.g., if the primary system measures pollutant concentration on a different moisture basis from the backup system). Provide the equation number or other appropriate code for each emissions formula (e.g., use code F-1 if Equation F-1 in appendix F to this part is used to calculate SO₂ mass emissions). Also identify each emissions formula with a unique three character alphanumeric code. The formula effective start date/hour and inactivation date/hour (as applicable) shall be included for each formula. The owner or operator of a unit for which the optional low mass emissions excepted methodology in 40 CFR 75.19 is being used is not required to report such formulas. [40 CFR 75.53(g)(1)(iv)]
- (v) For each parameter monitored with CEMS, provide the following information: [40 CFR 75.53(g)(1)(v)]
 - [1] Measurement scale (high or low); [40 CFR 75.53(g)(1)(v)(A)]
 - [2] Maximum potential value (and method of calculation). If NO_x emission rate in lb/mmBtu is monitored, calculate and provide the maximum potential NO_x emission rate in addition to the maximum

- potential NO_x concentration;
[40 CFR 75.53(g)(1)(v)(B)]
- [3] Maximum expected value (if applicable) and method of calculation;
[40 CFR 75.53(g)(1)(v)(C)]
- [4] Span value(s) and full-scale measurement range(s); [40 CFR 75.53(g)(1)(v)(D)]
- [5] Daily calibration units of measure;
[40 CFR 75.53(g)(1)(v)(E)]
- [6] Effective date/hour, and (if applicable) inactivation date/hour of each span value. On and after April 27, 2011, provide the activation date and deactivation date (if applicable) for the measurement scale and dual span information in paragraphs (g)(1)(v)(A), (g)(1)(v)(G), and (g)(1)(v)(H) of 40 CFR 75.53;
[40 CFR 75.53(g)(1)(v)(F)]
- [7] An indication of whether dual spans are required. If two span values are required, then, on and after April 27, 2011, indicate whether an autoranging analyzer is used to represent the two measurement scales; and
[40 CFR 75.53(g)(1)(v)(G)]
- [8] The default high range value (if applicable) and the maximum allowable low-range value for this option.
[40 CFR 75.53(g)(1)(v)(H)]
- (vi) If the monitoring system or excepted methodology provides for the use of a constant, assumed, or default value for a parameter under specific circumstances, then include the following information for each such value for each parameter:
[40 CFR 75.53(g)(1)(vi)]
- [1] Identification of the parameter;
[40 CFR 75.53(g)(1)(vi)(A)]
- [2] Default, maximum, minimum, or constant value, and units of measure for the value;
[40 CFR 75.53(g)(1)(vi)(B)]
- [3] Purpose of the value;
[40 CFR 75.53(g)(1)(vi)(C)]
- [4] Indicator of use, i.e., during controlled hours, uncontrolled hours, or all operating hours; [40 CFR 75.53(g)(1)(vi)(D)]
- [5] Type of fuel; [40 CFR 75.53(g)(1)(vi)(E)]

- [6] Source of the value;
[40 CFR 75.53(g)(1)(vi)(F)]
 - [7] Value effective date and hour;
[40 CFR 75.53(g)(1)(vi)(G)]
 - [8] Date and hour that the value is no longer effective (if applicable);
[40 CFR 75.53(g)(1)(vi)(H)]
 - [9] For units using the excepted methodology under 40 CFR 75.19, the applicable SO₂ emission factor; and
[40 CFR 75.53(g)(1)(vi)(I)]
 - [10] On and after April 27, 2011, group identification code.
[40 CFR 75.53(g)(1)(vi)(J)]
- (vii) Unless otherwise specified in section 6.5.2.1 of appendix A to this part, for each unit or common stacks on which hardware CEMS are installed:
[40 CFR 75.53(g)(1)(vii)]
- [1] Maximum hourly gross load (in MW, rounded to the nearest MW, or steam load in 1000 lb/hr (i.e., klb/hr), rounded to the nearest klb/hr, or thermal output in mmBtu/hr, rounded to the nearest mmBtu/hr), for units that produce electrical or thermal output;
[40 CFR 75.53(g)(1)(vii)(A)]
 - [2] The upper and lower boundaries of the range of operation (as defined in section 6.5.2.1 of appendix A to this part), expressed in megawatts, thousands of lb/hr of steam, mmBtu/hr of thermal output, or ft/sec (as applicable); [40 CFR 75.53(g)(1)(vii)(B)]
 - [3] Except for peaking units, identify the most frequently and second most frequently used load (or operating) levels (i.e., low, mid, or high) in accordance with section 6.5.2.1 of appendix A to this part, expressed in megawatts, thousands of lb/hr of steam, mmBtu/hr of thermal output, or ft/sec (as applicable); [40 CFR 75.53(g)(1)(vii)(C)]
 - [4] Except for peaking units, an indicator of whether the second most frequently used load (or operating) level is designated as normal in section 6.5.2.1 of appendix A to this part; [40 CFR 75.53(g)(1)(vii)(D)]

- [5] The date of the data analysis used to determine the normal load (or operating) level(s) and the two most frequently-used load (or operating) levels (as applicable); and [40 CFR 75.53(g)(1)(vii)(E)]
 - [6] Activation and deactivation dates and hours, when the maximum hourly gross load, boundaries of the range of operation, normal load (or operating) level(s) or two most frequently-used load (or operating) levels change and are updated.
[40 CFR 75.53(g)(1)(vii)(F)]
- (b) Hardcopy (40 CFR 75.53(g)(2))
- (i) Information, including (as applicable): Identification of the test strategy; protocol for the relative accuracy test audit; other relevant test information; calibration gas levels (percent of span) for the calibration error test and linearity check; calculations for determining maximum potential concentration, maximum expected concentration (if applicable), maximum potential flow rate, maximum potential NO_x emission rate, and span; and apportionment strategies under 40 CFR 75.10 through 75.18. [40 CFR 75.53(g)(2)(i)]
 - (ii) Description of site locations for each monitoring component in the continuous emission or opacity monitoring systems, including schematic diagrams and engineering drawings specified in paragraphs (e)(2)(iv) and (e)(2)(v) of 40 CFR 75.53 and any other documentation that demonstrates each monitor location meets the appropriate siting criteria. [40 CFR 75.53(g)(2)(ii)]
 - (iii) A data flow diagram denoting the complete information handling path from output signals of CEMS components to final reports.
[40 CFR 75.53(g)(2)(iii)]
 - (iv) For units monitored by a continuous emission or opacity monitoring system, a schematic diagram identifying entire gas handling system from boiler to stack for all affected units, using identification numbers for units, monitoring systems and components, and stacks corresponding to the identification numbers provided in paragraphs (g)(1)(i) and (g)(1)(iii) of 40 CFR 75.53. The schematic diagram must depict stack height and the

height of any monitor locations. Comprehensive and/or separate schematic diagrams shall be used to describe groups of units using a common stack.

[40 CFR 75.53(g)(2)(iv)]

- (v) For units monitored by a continuous emission or opacity monitoring system, stack and duct engineering diagrams showing the dimensions and location of fans, turning vanes, air preheaters, monitor components, probes, reference method sampling ports, and other equipment that affects the monitoring system location, performance, or quality control checks. [40 CFR 75.53(g)(2)(v)]

d. **Initial certification or recertification application [40 CFR 75.63]**

i. Submission [40 CFR 75.63(a)]

The designated representative for an affected unit or a combustion source shall submit applications and reports as follows:

(1) Recertifications and diagnostic testing [40 CFR 75.63(a)(2)]

- (a) Within 45 days after completing all recertification tests under 40 CFR 75.20(b), submit to the Administrator the electronic information required by paragraph (b)(1) of 40 CFR 75.63. Except for subpart E applications for alternative monitoring systems or unless specifically requested by the Administrator, do not submit a hardcopy of the test data and results to the Administrator.

[40 CFR 75.63(a)(2)(i)]

- (b) Within 45 days after completing all recertification tests under 40 CFR 75.20(b), submit the hardcopy information required by paragraph (b)(2) of 40 CFR 75.63 to the applicable EPA Regional Office and the appropriate State and/or local air pollution control agency. The applicable EPA Regional Office or appropriate State or local air pollution control agency may waive the requirement to provide hardcopy recertification test and data results. The applicable EPA Regional Office or the appropriate State or local air pollution control agency may also discontinue the waiver and reinstate the requirement of this paragraph to provide a hardcopy report of the recertification test data and results. [40 CFR 75.63(a)(2)(ii)]

- (c) Notwithstanding the requirements of paragraphs (a)(2)(i) and (a)(2)(ii) of 40 CFR 75.63, for an event for which the Administrator determines that only diagnostic tests (*see* 40 CFR 75.20(b)) are required rather than recertification

testing, no hardcopy submittal is required; however, the results of all diagnostic test(s) shall be submitted prior to or concurrent with the electronic quarterly report required under 40 CFR 75.64. Notwithstanding the requirement of 40 CFR 75.59(e), for DAHS (missing data and formula) verifications, no hardcopy submittal is required; the owner or operator shall keep these test results on-site in a format suitable for inspection. [40 CFR 75.63(a)(2)(iii)]

ii. Contents [40 CFR 75.63(b)]

Each application for recertification shall contain the following information, as applicable:

(1) Electronic [75.63(b)(1)]

- (a) A complete, up-to-date version of the electronic portion of the monitoring plan, according to 40 CFR 75.53(e) and (f), in the format specified by the Administrator. [75.63(b)(1)(i)]
- (b) The results of the test(s) required by 40 CFR 75.20, including the type of test conducted, testing date, information required by 40 CFR 75.59 (Certification, quality assurance, and quality control record provisions), and the results of any failed tests that affect data validation. [75.63(b)(1)(ii)]

(2) Hardcopy [75.63(b)(2)]

- (a) Any changed portions of the hardcopy monitoring plan information required under 40 CFR 75.53(e) and (f). Electronic submittal of all monitoring plan information, including the hardcopy portions, is permissible, provided that a paper copy can be furnished upon request. [75.63(b)(2)(i)]
- (b) The results of the test(s) required by 40 CFR 75.20, including the type of test conducted, testing date, information required by 40 CFR 75.59(a)(9) (See Condition S1.a.ii.), and the results of any failed tests that affect data validation. [75.63(b)(2)(ii)]
- (c) Designated representative signature certifying the accuracy of the submission. [75.63(b)(2)(ii)]

iii. Format [40 CFR 75.63(c)]

The electronic portion of each certification or recertification application shall be submitted in a format to be specified by the Administrator. The hardcopy test results shall be submitted in a format suitable for review and shall include the information in 40 CFR 75.59(a)(9) (See Condition

S1.a.ii.)

e. **Quarterly reports [40 CFR 75.64]**

i. Electronic submission [40 CFR 75.64(a)]

The designated representative for an affected unit shall electronically report the data and information in paragraphs (a) and (c) of 40 CFR 75.64 to the Administrator quarterly, beginning with the data from the earlier of the calendar quarter corresponding to the date of provisional certification or the calendar quarter corresponding to the relevant deadline for initial certification in 40 CFR 75.4(a), and (c). The initial quarterly report shall contain hourly data beginning with the hour of provisional certification or the hour corresponding to the relevant certification deadline, whichever is earlier. For any provisionally-certified monitoring system, 40 CFR 75.20(a)(3) shall apply for initial certifications, and 40 CFR 75.20(b)(5) shall apply for recertifications. Each electronic report must be submitted to the Administrator within 30 days following the end of each calendar quarter. On and after January 1, 2009, the owner or operator shall meet the requirements of paragraphs (a)(3) through (a)(15) of 40 CFR 75.64 only. Each electronic report shall also include the date of report generation. (The electronic quarterly reports are submitted to EPA)

- (1) Facility identification information, including: [40 CFR 75.64(a)(3)]
 - (a) Facility/ORISPL number; [40 CFR 75.64(a)(3)(i)]
 - (b) Calendar quarter and year for the data contained in the report; and [40 CFR 75.64(a)(3)(ii)]
 - (c) Version of the electronic data reporting format used for the report. [40 CFR 75.64(a)(3)(iii)]
- (2) In accordance with 40 CFR 75.62(a)(1), if any monitoring plan information required in 40 CFR 75.53 (monitoring plan requirements) requires an update, either under 40 CFR 75.53(b) or elsewhere in this part, submission of the electronic monitoring plan update shall be completed prior to or concurrent with the submittal of the quarterly electronic data report for the appropriate quarter in which the update is required. [40 CFR 75.64(a)(4)]
- (3) The daily calibration error test and daily interference check information required in 75.59(a)(1) and (a)(2) must always be included in the electronic quarterly emissions report. All other certification, quality assurance, and quality control information in 75.59 that is not excluded from electronic reporting under paragraph (a)(2) or (a)(7) of 40 CFR 75.64 shall be submitted separately, either prior to or concurrent with the submittal of the relevant electronic quarterly emissions report. However, reporting of the information in 75.59(a)(9)(x) is not required until September 26, 2011, and reporting of the information in 75.59(a)(15), (b)(6),

and (d)(4) is not required until March 27, 2012.
[40 CFR 75.64(a)(5)]

- (4) The information and hourly data required in 40 CFR 75.57 through 75.59 (General recordkeeping provisions; General recordkeeping for specific situations; Certification, quality assurance, and quality control record provisions), and daily calibration error test data, daily interference check, and off-line calibration demonstration information required in 40 CFR 75.59(a)(1) and (2).
[40 CFR 75.64(a)(6)]
- (5) Notwithstanding the requirements of paragraphs (a)(4) through (a)(6) of 40 CFR 75.64, the following information is excluded from electronic reporting: [40 CFR 75.64(a)(7)]
- (a) Descriptions of adjustments, corrective action, and maintenance; [40 CFR 75.64(a)(7)(i)]
 - (b) Information which is incompatible with electronic reporting (e.g., field data sheets, lab analyses, quality control plan); [40 CFR 75.64(a)(7)(ii)]
 - (c) Opacity data listed in 40 CFR 75.57(f), and in 40 CFR 75.59(a)(8); [40 CFR 75.64(a)(7)(iii)]
 - (d) For units with SO₂ or NO_x add-on emission controls that do not elect to use the approved site-specific parametric monitoring procedures for calculation of substitute data, the information in 40 CFR 75.58(b)(3); [40 CFR 75.64(a)(7)(iv)]
 - (e) Information required by 40 CFR 75.57(h) concerning the causes of any missing data periods and the actions taken to cure such causes; [40 CFR 75.64(a)(7)(v)]
 - (f) Hardcopy monitoring plan information required by 40 CFR 75.53 and hardcopy test data and results required by 40 CFR 75.59; [40 CFR 75.64(a)(7)(vi)]
 - (g) Records of flow monitor and moisture monitoring system polynomial equations, coefficients, or “K” factors required by 40 CFR 75.59(a)(5)(vi) or 40 CFR 75.59(a)(5)(vii); [40 CFR 75.64(a)(7)(vii)]
 - (h) Daily fuel sampling information required by 40 CFR 75.58(c)(3)(i) for units using assumed values under appendix D of this part; [40 CFR 75.64(a)(7)(viii)]
 - (i) Information required by 40 CFR 75.59(b)(1)(vi), (vii), (viii), (ix), and (xiii), and (b)(2)(iii) and (iv) concerning fuel flowmeter accuracy tests and transmitter/transducer accuracy tests; [40 CFR 75.64(a)(7)(ix)]

- (j) Stratification test results required as part of the RATA supplementary records under 40 CFR 75.59(a)(7);
[40 CFR 75.64(a)(7)(x)]
- (k) Data and results of RATAs that are aborted or invalidated due to problems with the reference method or operational problems with the unit and data and results of linearity checks that are aborted or invalidated due to problems unrelated to monitor performance;
[40 CFR 75.64(a)(7)(xi)]
- (l) Supplementary RATA information required under 40 CFR 75.59(a)(7)(i) through 40 CFR 75.59(a)(7)(v) (supporting information for RATA), except that:
[40 CFR 75.64(a)(7)(xii)]
 - (i) The applicable data elements under 40 CFR 75.59(a)(7)(ii)(A) through (T) and under 40 CFR 75.59(a)(7)(iii)(A) through (M) (supporting information for RATA using Method 2) shall be reported for flow RATAs at circular or rectangular stacks (or ducts) in which angular compensation for yaw and/or pitch angles is used (*i.e.*, Method 2F or 2G in appendices A-1 and A-2 to part 60 of this chapter), with or without wall effects adjustments;
[40 CFR 75.64(a)(7)(xii)(A)]
 - (ii) The applicable data elements under 40 CFR 75.59(a)(7)(ii)(A) through (T) and under 40 CFR 75.59(a)(7)(iii)(A) through (M) (supporting information for RATA using Method 2) shall be reported for any flow RATA run at a circular stack in which Method 2 in appendices A-1 and A-2 to part 60 of this chapter is used and a wall effects adjustment factor is determined by direct measurement; [40 CFR 75.64(a)(7)(xii)(B)]
 - (iii) The data under 40 CFR 75.59(a)(7)(ii)(T) (supporting information for RATA using Method 2) shall be reported for all flow RATAs at circular stacks in which Method 2 in appendices A-1 and A-2 to part 60 of this chapter is used and a default wall effects adjustment factor is applied.
[40 CFR 75.64(a)(7)(xii)(C)]
- (6) Tons (rounded to the nearest tenth) of SO₂ emitted during the quarter and cumulative SO₂ emissions for the calendar year.
[40 CFR 75.64(a)(8)]

- (7) Average NO_x emission rate (lb/mmBtu, rounded to the nearest thousandth) during the quarter and cumulative NO_x emission rate for the calendar year. [40 CFR 75.64(a)(9)]
- (8) Tons of CO₂ emitted during quarter and cumulative CO₂ emissions for calendar year. [40 CFR 75.64(a)(10)]
- (9) Total heat input (mmBtu) for quarter and cumulative heat input for calendar year. [40 CFR 75.64(a)(11)]
- (10) Unit or stack or common pipe header operating hours for quarter and cumulative unit or stack or common pipe header operating hours for calendar year. [40 CFR 75.64(a)(12)]

ii. Compliance certification [40 CFR 75.64(c)]

The designated representative shall submit a certification in support of each quarterly emissions monitoring report based on reasonable inquiry of those persons with primary responsibility for ensuring that all of the unit's emissions are correctly and fully monitored. The certification shall indicate whether the monitoring data submitted were recorded in accordance with the applicable requirements of this part including the quality control and quality assurance procedures and specifications of this part and its appendices, and any such requirements, procedures and specifications of an applicable excepted or approved alternative monitoring method. For a unit with add-on emission controls, the designated representative shall also include a certification, for all hours where data are substituted following the provisions of 40 CFR 75.34(a)(1) (missing data substitution procedures for units with add-on emission controls), that the add-on emission controls were operating within the range of parameters listed in the monitoring plan and that the substitute values recorded during the quarter do not systematically underestimate SO₂ or NO_x emissions, pursuant to 40 CFR 75.34 (Missing Data Substitution Procedure).

iii. Method of submission [40 CFR 75.64(f)]

Beginning with the quarterly report for the first quarter of the year 2001, all quarterly reports shall be submitted to EPA by direct computer-to-computer electronic transfer via EPA-provided software, unless otherwise approved by the Administrator.

iv. At his or her discretion, the DR may include important explanatory text or comments with an electronic quarterly report submittal, so long as the information is provided in a format that is compatible with the other data required to be reported under 40 CFR 75.64. [40 CFR 75.64(g)]

f. **Opacity reports [40 CFR 75.65]**

The owner or operator or designated representative shall report excess emissions of opacity recorded under 40 CFR 75.57(f) (opacity recordkeeping requirements) to the applicable State or local air pollution control agency.

Attachment D – Cross-State Air Pollution Rule (CSAPR)

The owner or operator shall comply with the following requirements unless there are more current promulgated regulations:

I. Description of CSAPR Monitoring Provisions

The CSAPR subject units, and the unit-specific monitoring provisions at this source, are identified in the following tables. These units are subject to the requirements for the CSAPR NO_x Annual Trading Program, CSAPR NO_x Ozone Season Group 2 Trading Program, and CSAPR SO₂ Group 1 Trading Program.

Unit ID: GT-7A, non-peaking natural gas-fired combustion turbine					
Parameter	CEMS requirements pursuant to 40 CFR part 75, subpart B (for SO ₂ monitoring) and 40 CFR part 75, subpart H (for NO _x monitoring)	Excepted monitoring system requirements for gas- and oil-fired units pursuant to 40 CFR part 75, appendix D	Excepted monitoring system requirements for gas- and oil-fired peaking units pursuant to 40 CFR part 75, appendix E	Low Mass Emissions excepted monitoring (LME) requirements for gas- and oil-fired units pursuant to 40 CFR 75.19	EPA-approved alternative monitoring system requirements pursuant to 40 CFR part 75, subpart E
SO ₂		X	-----		
NO _x	X	-----			
Heat input		X	-----		

Unit ID: GT-7B, non-peaking natural gas-fired combustion turbine					
Parameter	CEMS requirements pursuant to 40 CFR part 75, subpart B (for SO ₂ monitoring) and 40 CFR part 75, subpart H (for NO _x monitoring)	Excepted monitoring system requirements for gas- and oil-fired units pursuant to 40 CFR part 75, appendix D	Excepted monitoring system requirements for gas- and oil-fired peaking units pursuant to 40 CFR part 75, appendix E	Low Mass Emissions excepted monitoring (LME) requirements for gas- and oil-fired units pursuant to 40 CFR 75.19	EPA-approved alternative monitoring system requirements pursuant to 40 CFR part 75, subpart E
SO ₂		X	-----		
NO _x	X	-----			
Heat input		X	-----		

1. The above description of the monitoring used by a unit does not change, create an exemption from, or otherwise affect the monitoring, recordkeeping, and reporting requirements applicable to the unit under 40 CFR 97.430 through 97.435 (CSAPR NO_x Annual Trading Program), 97.830 through 97.835 (CSAPR NO_x Ozone Season Group 2 Trading Program), and 97.630 through 97.635 (CSAPR SO₂ Group 1 Trading Program). The monitoring, recordkeeping and reporting requirements applicable to each unit are included below in the standard conditions for the applicable CSAPR trading programs.
2. Owners and operators must submit to the Administrator a monitoring plan for each unit in accordance with 40 CFR 75.53, 75.62 and 75.73, as applicable. The monitoring plan for each unit is available at the EPA's website at <http://www.epa.gov/airmarkets/emissions/monitoringplans.html>.
3. Owners and operators that want to use an alternative monitoring system must submit to the Administrator a petition requesting approval of the alternative monitoring system in accordance with 40 CFR part 75, subpart E and 40 CFR 75.66 and 97.435 (CSAPR NO_x Annual Trading Program), 97.835 (CSAPR NO_x Ozone Season Group 2 Trading Program), and 97.635 (CSAPR SO₂ Group 1 Trading Program). The Administrator's response approving or disapproving any petition for an alternative monitoring system is available on the EPA's website at <http://www.epa.gov/airmarkets/emissions/petitions.html>.
4. Owners and operators that want to use an alternative to any monitoring, recordkeeping, or reporting requirement under 40 CFR 97.430 through 97.434 (CSAPR NO_x Annual Trading Program), 97.830 through 97.834 (CSAPR NO_x Ozone Season Group 2 Trading Program), and 97.630 through 97.634 (CSAPR SO₂ Group 1 Trading Program) must submit to the Administrator a petition requesting approval of the alternative in accordance with 40 CFR 75.66 and 97.435 (CSAPR NO_x Annual Trading Program), 97.835 (CSAPR NO_x Ozone Season Group 2 Trading Program), and 97.635 (CSAPR SO₂ Group 1 Trading Program). The Administrator's response approving or disapproving any petition for an alternative to a monitoring, recordkeeping, or reporting requirement is available on EPA's website at <http://www.epa.gov/airmarkets/emissions/petitions.html>.
5. The descriptions of monitoring applicable to the unit included above meet the requirement of 40 CFR 97.430 through 97.434 (CSAPR NO_x Annual Trading Program), 97.830 through 97.834 (CSAPR NO_x Ozone Season Group 2 Trading Program), and 97.630 through 97.634 (CSAPR SO₂ Group 1 Trading Program), and therefore minor permit modification procedures, in accordance with 40 CFR 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B), may be used to add to or change this unit's monitoring system description.

II. CSAPR NO_x Annual Trading Program requirements (40 CFR 97, Subpart AAAAA)

(a) Designated representative requirements.

The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR 97.413 through 97.418.

(b) Emissions monitoring, reporting, and recordkeeping requirements.

- (1) The owners and operators, and the designated representative, of each CSAPR NO_x Annual source and each CSAPR NO_x Annual unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.430 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), 97.431 (initial monitoring system certification and recertification procedures), 97.432 (monitoring system out-of-control periods), 97.433 (notifications concerning monitoring), 97.434 (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and 97.435 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).
- (2) The emissions data determined in accordance with 40 CFR 97.430 through 97.435 shall be used to calculate allocations of CSAPR NO_x Annual allowances under 40 CFR 97.411(a)(2) and (b) and 97.412 and to determine compliance with the CSAPR NO_x Annual emissions limitation and assurance provisions under paragraph (c) below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR 97.430 through 97.435 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

(c) NO_x emissions requirements.

- (1) CSAPR NO_x Annual emissions limitation.
 - (i). As of the allowance transfer deadline for a control period in a given year, the owners and operators of each CSAPR NO_x Annual source and each CSAPR NO_x Annual unit at the source shall hold, in the source's compliance account, CSAPR NO_x Annual allowances available for deduction for such control period under 40 CFR 97.424(a) in an amount not less than the tons of total NO_x emissions for such control period from all CSAPR NO_x Annual units at the source.
 - (ii). If total NO_x emissions during a control period in a given year from the CSAPR NO_x Annual units at a CSAPR NO_x Annual source are

in excess of the CSAPR NO_x Annual emissions limitation set forth in paragraph (c)(1)(i) above, then:

- (A). The owners and operators of the source and each CSAPR NO_x Annual unit at the source shall hold the CSAPR NO_x Annual allowances required for deduction under 40 CFR 97.424(d); and
 - (B). The owners and operators of the source and each CSAPR NO_x Annual unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart AAAAA and the Clean Air Act.
- (2) CSAPR NO_x Annual assurance provisions.
- (i). If total NO_x emissions during a control period in a given year from all CSAPR NO_x Annual units at CSAPR NO_x Annual sources in the state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such NO_x emissions during such control period exceeds the common designated representative's assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) CSAPR NO_x Annual allowances available for deduction for such control period under 40 CFR 97.425(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR 97.425(b), of multiplying— (A) The quotient of the amount by which the common designated representative's share of such NO_x emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state for such control period, by which each common designated representative's share of such NO_x emissions exceeds the respective common designated representative's assurance level; and (B) The amount by which total NO_x emissions from all CSAPR NO_x Annual units at CSAPR NO_x Annual sources in the state for such control period exceed the state assurance level.
 - (ii). The owners and operators shall hold the CSAPR NO_x Annual allowances required under paragraph (c)(2)(i) above, as of

midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.

- (iii). Total NO_x emissions from all CSAPR NO_x Annual units at CSAPR NO_x Annual sources in the State during a control period in a given year exceed the state assurance level if such total NO_x emissions exceed the sum, for such control period, of the state NO_x Annual trading budget under 40 CFR 97.410(a) and the state's variability limit under 40 CFR 97.410(b).
- (iv). It shall not be a violation of 40 CFR part 97, subpart AAAAA or of the Clean Air Act if total NO_x emissions from all CSAPR NO_x Annual units at CSAPR NO_x Annual sources in the State during a control period exceed the state assurance level or if a common designated representative's share of total NO_x emissions from the CSAPR NO_x Annual units at CSAPR NO_x Annual sources in the state during a control period exceeds the common designated representative's assurance level.
- (v). To the extent the owners and operators fail to hold CSAPR NO_x Annual allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii) above,
 - (A). The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and
 - (B). Each CSAPR NO_x Annual allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii) above and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart AAAAA and the Clean Air Act.

(3) Compliance periods.

- (i). A CSAPR NO_x Annual unit shall be subject to the requirements under paragraph (c)(1) above for the control period starting on the later of January 1, 2015, or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.430(b) and for each control period thereafter.
- (ii). A CSAPR NO_x Annual unit shall be subject to the requirements under paragraph (c)(2) above for the control period starting on the later of January 1, 2017 or the deadline for meeting the unit's

monitor certification requirements under 40 CFR 97.430(b) and for each control period thereafter.

- (4) Vintage of allowances held for compliance.
 - (i). A CSAPR NO_x Annual allowance held for compliance with the requirements under paragraph (c)(1)(i) above for a control period in a given year must be a CSAPR NO_x Annual allowance that was allocated for such control period or a control period in a prior year.
 - (ii). A CSAPR NO_x Annual allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through (iii) above for a control period in a given year must be a CSAPR NO_x Annual allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.
- (5) Allowance Management System requirements. Each CSAPR NO_x Annual allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR part 97, subpart AAAAA.
- (6) Limited authorization. A CSAPR NO_x Annual allowance is a limited authorization to emit one ton of NO_x during the control period in one year. Such authorization is limited in its use and duration as follows:
 - (i). Such authorization shall only be used in accordance with the CSAPR NO_x Annual Trading Program; and
 - (ii). Notwithstanding any other provision of 40 CFR part 97, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.
- (7) Property right. A CSAPR NO_x Annual allowance does not constitute a property right.

(d) Title V permit revision requirements.

- (1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of CSAPR NO_x Annual allowances in accordance with 40 CFR part 97, subpart AAAAA.
- (2) This permit incorporates the CSAPR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR 97.430 through 97.435,

and the requirements for a continuous emission monitoring system (pursuant to 40 CFR part 75, subparts B and H), an excepted monitoring system (pursuant to 40 CFR part 75, appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR 75.19), and an alternative monitoring system (pursuant to 40 CFR part 75, subpart E). Therefore, the Description of CSAPR Monitoring Provisions table for units identified in this permit may be added to, or changed, in this title V permit using minor permit modification procedures in accordance with 40 CFR 97.406(d)(2) and 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B).

(e) Additional recordkeeping and reporting requirements.

- (1) Unless otherwise provided, the owners and operators of each CSAPR NO_x Annual source and each CSAPR NO_x Annual unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.
 - (i). The certificate of representation under 40 CFR 97.416 for the designated representative for the source and each CSAPR NO_x Annual unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR 97.416 changing the designated representative.
 - (ii). All emissions monitoring information, in accordance with 40 CFR part 97, subpart AAAAA.
 - (iii). Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the CSAPR NO_x Annual Trading Program.
- (2) The designated representative of a CSAPR NO_x Annual source and each CSAPR NO_x Annual unit at the source shall make all submissions required under the CSAPR NO_x Annual Trading Program, except as provided in 40 CFR 97.418. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a title V operating permit program in 40 CFR parts 70 and 71.

(f) Liability.

- (1) Any provision of the CSAPR NO_x Annual Trading Program that applies to a CSAPR NO_x Annual source or the designated representative of a CSAPR NO_x Annual source shall also apply to the owners and operators of such source and of the CSAPR NO_x Annual units at the source.
- (2) Any provision of the CSAPR NO_x Annual Trading Program that applies to a CSAPR NO_x Annual unit or the designated representative of a CSAPR NO_x Annual unit shall also apply to the owners and operators of such unit.

(g) Effect on other authorities.

No provision of the CSAPR NO_x Annual Trading Program or exemption under 40 CFR 97.405 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a CSAPR NO_x Annual source or CSAPR NO_x Annual unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

(h) Allowance allocations for new unit set-asides.

- (1) In accordance with 40 CFR 97.411(b)(1)(i), by June 1, 2015 and June 1 of each year thereafter, the Administrator will calculate the CSAPR NO_x Annual allowance allocation to each CSAPR NO_x Annual unit in a State, in accordance with 40 CFR 97.412(a)(2) through (7) and (12), for the control period in the year of the applicable calculation deadline under this paragraph and will promulgate a notice of data availability of the results of the calculations.
- (2) Current CSAPR NO_x annual allowances for CSAPR subject units at LG&E, Cane Run are summarized in the following table:³²

CSAPR NO _x Annual Allocations						
	2015 (tons)	2016 (tons)	2017 (tons)	2018 (tons)	2019 (tons)	2020 (tons)
GT-7A	84	139	170	216	216	
GT-7B	64	141	176	214	214	

III. CSAPR NO_x Ozone Season Group 2 Trading Program Requirements (40 CFR 97, Subpart EEEEE)

³² According to new unit set-aside notice of data availability (NODA) issued at CSAPR site: <https://www.epa.gov/csapr/new-unit-set-aside-notices-data-availability-nusa-noda-cross-state-air-pollution-rule>. This table is included for informational purposes and is subject to change. These allocations can be bought, sold, or traded as necessary.

(a) Designated representative requirements.

The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR 97.813 through 97.818.

(b) Emissions monitoring, reporting, and recordkeeping requirements.

(1) The owners and operators, and the designated representative, of each CSAPR NOX Ozone Season Group 2 source and each CSAPR NOX Ozone Season Group 2 unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.830 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), 97.831 (initial monitoring system certification and recertification procedures), 97.832 (monitoring system out-of-control periods), 97.833 (notifications concerning monitoring), 97.834 (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and 97.835 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).

(2) The emissions data determined in accordance with 40 CFR 97.830 through 97.835 shall be used to calculate allocations of CSAPR NOX Ozone Season Group 2 allowances under 40 CFR 97.811(a)(2) and (b) and 97.812 and to determine compliance with the CSAPR NOX Ozone Season Group 2 emissions limitation and assurance provisions under paragraph (c) below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR 97.830 through 97.835 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

(c) NO_x emissions requirements.

(1) CSAPR NOX Ozone Season Group 2 emissions limitation.

(i) As of the allowance transfer deadline for a control period in a given year, the owners and operators of each CSAPR NOX Ozone Season Group 2 source and each CSAPR NOX Ozone Season Group 2 unit at the source shall hold, in the source's compliance account, CSAPR NOX Ozone Season Group 2 allowances available for deduction for such control period under 40 CFR 97.824(a) in an amount not less than the tons of total NO_x

emissions for such control period from all CSAPR NOX Ozone Season Group 2 units at the source.

(ii). If total NO_x emissions during a control period in a given year from the CSAPR NOX Ozone Season Group 2 units at a CSAPR NOX Ozone Season Group 2 source are in excess of the CSAPR NOX Ozone Season Group 2 emissions limitation set forth in paragraph (c)(1)(i) above, then:

(A). The owners and operators of the source and each CSAPR NOX Ozone Season Group 2 unit at the source shall hold the CSAPR NOX Ozone Season Group 2 allowances required for deduction under 40 CFR 97.824(d); and

(B). The owners and operators of the source and each CSAPR NOX Ozone Season Group 2 unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart EEEEE and the Clean Air Act.

(2) CSAPR NOX Ozone Season Group 2 assurance provisions.

(i). If total NO_x emissions during a control period in a given year from all CSAPR NOX Ozone Season Group 2 units at CSAPR NOX Ozone Season Group 2 sources in the state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such NO_x emissions during such control period exceeds the common designated representative's assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) CSAPR NOX Ozone Season Group 2 allowances available for deduction for such control period under 40 CFR 97.825(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR 97.825(b), of multiplying—

(A). The quotient of the amount by which the common designated representative's share of such NO_x emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all

common designated representatives for such sources and units in the state for such control period, by which each common designated representative's share of such NO_x emissions exceeds the respective common designated representative's assurance level; and

- (B). The amount by which total NO_x emissions from all CSAPR NO_x Ozone Season Group 2 units at CSAPR NO_x Ozone Season Group 2 sources in the state for such control period exceed the state assurance level.
- (ii). The owners and operators shall hold the CSAPR NO_x Ozone Season Group 2 allowances required under paragraph (c)(2)(i) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.
- (iii). Total NO_x emissions from all CSAPR NO_x Ozone Season Group 2 units at CSAPR NO_x Ozone Season Group 2 sources in the state during a control period in a given year exceed the state assurance level if such total NO_x emissions exceed the sum, for such control period, of the State NO_x Ozone Season Group 2 trading budget under 40 CFR 97.810(a) and the state's variability limit under 40 CFR 97.810(b).
- (iv). It shall not be a violation of 40 CFR part 97, subpart EEEEE or of the Clean Air Act if total NO_x emissions from all CSAPR NO_x Ozone Season Group 2 units at CSAPR NO_x Ozone Season Group 2 sources in the state during a control period exceed the state assurance level or if a common designated representative's share of total NO_x emissions from the CSAPR NO_x Ozone Season Group 2 units at CSAPR NO_x Ozone Season Group 2 sources in the state during a control period exceeds the common designated representative's assurance level.
- (v). To the extent the owners and operators fail to hold CSAPR NO_x Ozone Season Group 2 allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii) above,
 - (A). The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and
 - (B). Each CSAPR NO_x Ozone Season Group 2 allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii)

above and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart EEEEE and the Clean Air Act.

- (3) Compliance periods.
 - (i). A CSAPR NOX Ozone Season Group 2 unit shall be subject to the requirements under paragraph (c)(1) above for the control period starting on the later of May 1, 2015 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.830(b) and for each control period thereafter.
 - (ii). A CSAPR NOX Ozone Season Group 2 unit shall be subject to the requirements under paragraph (c)(2) above for the control period starting on the later of May 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.830(b) and for each control period thereafter.
- (4) Vintage of allowances held for compliance.
 - (i). A CSAPR NOX Ozone Season Group 2 allowance held for compliance with the requirements under paragraph (c)(1)(i) above for a control period in a given year must be a CSAPR NOX Ozone Season Group 2 allowance that was allocated for such control period or a control period in a prior year.
 - (ii). A CSAPR NOX Ozone Season Group 2 allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through (iii) above for a control period in a given year must be a CSAPR NOX Ozone Season Group 2 allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.
- (5) Allowance Management System requirements. Each CSAPR NOX Ozone Season Group 2 allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR part 97, subpart EEEEE.
- (6) Limited authorization. A CSAPR NOX Ozone Season Group 2 allowance is a limited authorization to emit one ton of NO_x during the control period in one year. Such authorization is limited in its use and duration as follows:
 - (i). Such authorization shall only be used in accordance with the CSAPR NOX Ozone Season Group 2 Trading Program; and

(ii). Notwithstanding any other provision of 40 CFR part 97, subpart EEEEE, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.

(7) Property right. A CSAPR NOX Ozone Season Group 2 allowance does not constitute a property right.

(d) Title V permit revision requirements.

(1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of CSAPR NOX Ozone Season Group 2 allowances in accordance with 40 CFR part 97, subpart EEEEE.

(2) This permit incorporates the CSAPR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR 97.830 through 97.835, and the requirements for a continuous emission monitoring system (pursuant to 40 CFR part 75, subparts B and H), an excepted monitoring system (pursuant to 40 CFR part 75, appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR 75.19), and an alternative monitoring system (pursuant to 40 CFR part 75, subpart E). Therefore, the Description of CSAPR Monitoring Provisions table for units identified in this permit may be added to, or changed, in this title V permit using minor permit modification procedures in accordance with 40 CFR 97.806(d)(2) and 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B).

(e) Additional recordkeeping and reporting requirements.

(1) Unless otherwise provided, the owners and operators of each CSAPR NOX Ozone Season Group 2 source and each CSAPR NOX Ozone Season Group 2 unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.

(i). The certificate of representation under 40 CFR 97.816 for the designated representative for the source and each CSAPR NOX Ozone Season Group 2 unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR 97.816 changing the designated representative.

- (ii). All emissions monitoring information, in accordance with 40 CFR part 97, subpart EEEEE.
 - (iii). Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the CSAPR NOX Ozone Season Group 2 Trading Program.
- (2) The designated representative of a CSAPR NOX Ozone Season Group 2 source and each CSAPR NOX Ozone Season Group 2 unit at the source shall make all submissions required under the CSAPR NOX Ozone Season Group 2 Trading Program, except as provided in 40 CFR 97.818. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a title V operating permit program in 40 CFR parts 70 and 71.

(f) Liability.

- (1) Any provision of the CSAPR NOX Ozone Season Group 2 Trading Program that applies to a CSAPR NOX Ozone Season Group 2 source or the designated representative of a CSAPR NOX Ozone Season Group 2 source shall also apply to the owners and operators of such source and of the CSAPR NOX Ozone Season Group 2 units at the source.
- (2) Any provision of the CSAPR NOX Ozone Season Group 2 Trading Program that applies to a CSAPR NOX Ozone Season Group 2 unit or the designated representative of a CSAPR NOX Ozone Season Group 2 unit shall also apply to the owners and operators of such unit.

(g) Effect on other authorities.

No provision of the CSAPR NOX Ozone Season Group 2 Trading Program or exemption under 40 CFR 97.805 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a CSAPR NOX Ozone Season Group 2 source or CSAPR NOX Ozone Season Group 2 unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

(h) Allowance allocations for new unit set-asides.

- (1) In accordance with 40 CFR 97.811(b)(1)(i), by June 1, 2015 and June 1 of each year thereafter, the Administrator will calculate the CSAPR NOX Ozone Season Group 2 allowance allocation to each CSAPR NOx Ozone Season Group 2 unit in a State, in accordance with 40 CFR 97.812(a)(2) through (7) and (12), for the control period in the year of the applicable

calculation deadline under this paragraph and will promulgate a notice of data availability of the results of the calculations.

- (2) Current CSAPR NO_x Ozone Season Group 2 allowances for CSAPR subject units at LG&E, Cane Run are summarized in the following table:³³

CSAPR NO _x Ozone Season Group 2 Allocations						
	2015 (tons)	2016 (tons)	2017 (tons)	2018 (tons)	2019 (tons)	2020 (tons)
GT-7A	21	N/A	N/A	76	76	
GT-7B	13	N/A	N/A	77	77	

IV. CSAPR SO₂ Group 1 Trading Program requirements (40 CFR 97, Subpart CCCCC)

(a) **Designated representative requirements.**

The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR 97.613 through 97.618.

(b) **Emissions monitoring, reporting, and recordkeeping requirements.**

- (1) The owners and operators, and the designated representative, of each CSAPR SO₂ Group 1 source and each CSAPR SO₂ Group 1 unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.630 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), 97.631 (initial monitoring system certification and recertification procedures), 97.632 (monitoring system out-of-control periods), 97.633 (notifications concerning monitoring), 97.634 (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and 97.635 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).
- (2) The emissions data determined in accordance with 40 CFR 97.630 through 97.635 shall be used to calculate allocations of CSAPR SO₂ Group 1 allowances under 40 CFR 97.611(a)(2) and (b) and 97.612 and to determine compliance with the CSAPR SO₂ Group 1 emissions limitation and assurance provisions under paragraph (c) below, provided that, for

³³ According to new unit set-aside notice of data availability (NODA) issued at CSAPR site: <https://www.epa.gov/csapr/new-unit-set-aside-notices-data-availability-nusa-noda-cross-state-air-pollution-rule>. This table is included for informational purposes and is subject to change. These allocations can be bought, sold, or traded as necessary.

each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR 97.630 through 97.635 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

(c) SO₂ emissions requirements.

(1) CSAPR SO₂ Group 1 emissions limitation.

(i). As of the allowance transfer deadline for a control period in a given year, the owners and operators of each CSAPR SO₂ Group 1 source and each CSAPR SO₂ Group 1 unit at the source shall hold, in the source's compliance account, CSAPR SO₂ Group 1 allowances available for deduction for such control period under 40 CFR 97.624(a) in an amount not less than the tons of total SO₂ emissions for such control period from all CSAPR SO₂ Group 1 units at the source.

(ii). If total SO₂ emissions during a control period in a given year from the CSAPR SO₂ Group 1 units at a CSAPR SO₂ Group 1 source are in excess of the CSAPR SO₂ Group 1 emissions limitation set forth in paragraph (c)(1)(i) above, then:

(A). The owners and operators of the source and each CSAPR SO₂ Group 1 unit at the source shall hold the CSAPR SO₂ Group 1 allowances required for deduction under 40 CFR 97.624(d); and

(B). The owners and operators of the source and each CSAPR SO₂ Group 1 unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation 40 CFR part 97, subpart CCCCC and the Clean Air Act.

(2) CSAPR SO₂ Group 1 assurance provisions.

(i). If total SO₂ emissions during a control period in a given year from all CSAPR SO₂ Group 1 units at CSAPR SO₂ Group 1 sources in the state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's

share of such SO₂ emissions during such control period exceeds the common designated representative's assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) CSAPR SO₂ Group 1 allowances available for deduction for such control period under 40 CFR 97.625(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR 97.625(b), of multiplying—

- (A). The quotient of the amount by which the common designated representative's share of such SO₂ emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state for such control period, by which each common designated representative's share of such SO₂ emissions exceeds the respective common designated representative's assurance level; and
 - (B). The amount by which total SO₂ emissions from all CSAPR SO₂ Group 1 units at CSAPR SO₂ Group 1 sources in the state for such control period exceed the state assurance level.
- (ii). The owners and operators shall hold the CSAPR SO₂ Group 1 allowances required under paragraph (c)(2)(i) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.
 - (iii). Total SO₂ emissions from all CSAPR SO₂ Group 1 units at CSAPR SO₂ Group 1 sources in the state during a control period in a given year exceed the state assurance level if such total SO₂ emissions exceed the sum, for such control period, of the state SO₂ Group 1 trading budget under 40 CFR 97.610(a) and the state's variability limit under 40 CFR 97.610(b).
 - (iv). It shall not be a violation of 40 CFR part 97, subpart CCCCC or of the Clean Air Act if total SO₂ emissions from all CSAPR SO₂ Group 1 units at CSAPR SO₂ Group 1 sources in the state during a control period exceed the state assurance level or if a common designated representative's share of total SO₂ emissions from the CSAPR SO₂ Group 1 units at CSAPR SO₂ Group 1 sources in the state during a control period exceeds the common designated representative's assurance level.

- (v). To the extent the owners and operators fail to hold CSAPR SO₂ Group 1 allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii) above,
 - (A). The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and
 - (B). Each CSAPR SO₂ Group 1 allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii) above and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart CCCCC and the Clean Air Act.
- (3) Compliance periods.
 - (i). A CSAPR SO₂ Group 1 unit shall be subject to the requirements under paragraph (c)(1) above for the control period starting on the later of January 1, 2015 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.630(b) and for each control period thereafter.
 - (ii). A CSAPR SO₂ Group 1 unit shall be subject to the requirements under paragraph (c)(2) above for the control period starting on the later of January 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.630(b) and for each control period thereafter.
- (4) Vintage of allowances held for compliance.
 - (i). A CSAPR SO₂ Group 1 allowance held for compliance with the requirements under paragraph (c)(1)(i) above for a control period in a given year must be a CSAPR SO₂ Group 1 allowance that was allocated for such control period or a control period in a prior year.
 - (ii). A CSAPR SO₂ Group 1 allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through (iii) above for a control period in a given year must be a CSAPR SO₂ Group 1 allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.
- (5) Allowance Management System requirements. Each CSAPR SO₂ Group 1 allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR part 97, subpart CCCCC.

- (6) Limited authorization. A CSAPR SO₂ Group 1 allowance is a limited authorization to emit one ton of SO₂ during the control period in one year. Such authorization is limited in its use and duration as follows:
- (i). Such authorization shall only be used in accordance with the CSAPR SO₂ Group 1 Trading Program; and
 - (ii). Notwithstanding any other provision of 40 CFR part 97, subpart CCCCC, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.
- (7) Property right. A CSAPR SO₂ Group 1 allowance does not constitute a property right.

(d) Title V permit revision requirements.

- (1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of CSAPR SO₂ Group 1 allowances in accordance with 40 CFR part 97, subpart CCCCC.
- (2) This permit incorporates the CSAPR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR 97.630 through 97.635, and the requirements for a continuous emission monitoring system (pursuant to 40 CFR part 75, subparts B and H), an excepted monitoring system (pursuant to 40 CFR part 75, appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR part 75.19), and an alternative monitoring system (pursuant to 40 CFR part 75, subpart E). Therefore, the Description of CSAPR Monitoring Provisions table for units identified in this permit may be added to, or changed, in this title V permit using minor permit modification procedures in accordance with 40 CFR 97.606(d)(2) and 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B).

(e) Additional recordkeeping and reporting requirements.

- (1) Unless otherwise provided, the owners and operators of each CSAPR SO₂ Group 1 source and each CSAPR SO₂ Group 1 unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.
 - (i). The certificate of representation under 40 CFR 97.616 for the designated representative for the source and each CSAPR SO₂

Group 1 unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR 97.616 changing the designated representative.

- (ii). All emissions monitoring information, in accordance with 40 CFR part 97, subpart CCCCC.
 - (iii). Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the CSAPR SO₂ Group 1 Trading Program.
- (2) The designated representative of a CSAPR SO₂ Group 1 source and each CSAPR SO₂ Group 1 unit at the source shall make all submissions required under the CSAPR SO₂ Group 1 Trading Program, except as provided in 40 CFR 97.618. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a title V operating permit program in 40 CFR parts 70 and 71.

(f) Liability.

- (1) Any provision of the CSAPR SO₂ Group 1 Trading Program that applies to a CSAPR SO₂ Group 1 source or the designated representative of a CSAPR SO₂ Group 1 source shall also apply to the owners and operators of such source and of the CSAPR SO₂ Group 1 units at the source.
- (2) Any provision of the CSAPR SO₂ Group 1 Trading Program that applies to a CSAPR SO₂ Group 1 unit or the designated representative of a CSAPR SO₂ Group 1 unit shall also apply to the owners and operators of such unit.

(g) Effect on other authorities.

No provision of the CSAPR SO₂ Group 1 Trading Program or exemption under 40 CFR 97.605 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a CSAPR SO₂ Group 1 source or CSAPR SO₂ Group 1 unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

(h) Allowance allocations for new unit set-asides.

- (1) In accordance with 40 CFR 97.611(b)(1)(i), by June 1, 2015 and June 1 of each year thereafter, the Administrator will calculate the CSAPR SO₂ Group 1 allowance allocation to each CSAPR SO₂ Group 1 unit in a State, in accordance with 40 CFR 97.612(a)(2) through (7) and (12), for the control period in the year of the applicable calculation deadline under this paragraph and will promulgate a notice of data availability of the results of the calculations.
- (2) Current CSAPR SO₂ Group 1 allowances for CSAPR subject units at LG&E, Cane Run are summarized in the following table:³⁴

CSAPR SO ₂ Group 1 Allocations						
	2015 (tons)	2016 (tons)	2017 (tons)	2018 (tons)	2019 (tons)	2020 (tons)
GT-7A	2	3	2	5	5	
GT-7B	2	3	2	5	5	

³⁴ According to new unit set-aside notice of data availability (NODA) issued at CSAPR site: <https://www.epa.gov/csapr/new-unit-set-aside-notice-data-availability-nusa-noda-cross-state-air-pollution-rule>. This table is included for informational purposes and is subject to change. These allocations can be bought, sold, or traded as necessary.

Attachment E - Control Device Efficiencies and Determination Methods

Unit ID	Control ID	Description	Control Efficiency	Control Efficiency Determination Methods ^{1, 2}
U15	C23	Catalytic Oxidizer	50%	Option 1
	C24	Catalytic Oxidizer	50%	Option 1

Note:

1. Options for control efficiency determination:
 - Option 1: Use District pre-approved control efficiency
 - Option 2: Perform stack test. See Plantwide Requirements for general testing requirements.

2. Until the District receives an approved stack test report (Option 2), the pre-approved efficiency (Option 1) will be used in all calculations to demonstrate compliance with applicable standards and calculations for emission inventory.

Attachment F – Calculation Methodologies and Emission Factors

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

Table A1. U15 - Natural Gas-fired Combined Cycle Unit (EGU7)

Pollutant	CAS No.	EF (lb/MMBtu)	Source
CO			CEMS
NOx			CEMS
PM		5.100E-04	2011 NEI
PM condensable		3.10E-04	2011 NEI
PM10		2.00E-04	2011 NEI
PM2.5		1.10E-04	2011 NEI
SO2			CEMS
VOC		2.100E-03	AP-42, 3.1-2a
Single HAP			
1,3-Butadiene	106-99-0	4.30E-07	AP-42, 3.1-3
Acetaldehyde	75-07-0	4.00E-05	AP-42, 3.1-3
Acrolein	107-02-8	6.40E-06	AP-42, 3.1-3
Benzene	71-43-2	1.20E-05	AP-42, 3.1-3
Ethyl Benzene	100-41-4	3.20E-05	AP-42, 3.1-3
Formaldehyde (for GT-7A)	50-00-0	1.32E-02	lb/hr, stack test
Formaldehyde (for GT-7B)	50-00-0	2.21E-02	lb/hr, stack test
Mercury	7439-97-6	6.36E-06	FIRE
Naphthalene	91-20-3	1.30E-06	AP-42, 3.1-3
PAH	43116	2.20E-06	
Propylene Oxide	75-56-9	2.90E-05	AP-42, 3.1-3
Toluene	108-88-3	1.30E-04	AP-42, 3.1-3
Xylene	1330-20-7	6.40E-05	AP-42, 3.1-3

Table A2. U16 - Natural Gas-fired Auxiliary Boiler (E33)

Pollutant	CAS No.	EF (lb/mmcf)	EF Source
NH3		0.49	2011 NEI
CO		84	AP-42, 1.4-1
NOx		50	AP-42, 1.4-1

Pollutant	CAS No.	EF (lb/mmcf)	EF Source
PM (TSP)		0.52	
PM-Con		0.32	2011 NEI
PM10-Fil		0.20	2011 NEI
PM2.5-Fil		0.11	2011 NEI
SO2		0.60	AP-42, 1.4-2
VOC		5.50	AP-42, 1.4-2
Single HAP			
2-Methylnaphthalene	91-57-6	2.40E-05	AP-42, 1.4-3
3-Methylchloranthrene	56-49-5	1.80E-06	AP-42, 1.4-3
DMBA	57-97-6	1.60E-05	AP-42, 1.4-3
Acenaphthene	83-32-9	1.80E-06	AP-42, 1.4-3
Acenaphthylene	208-96-8	1.80E-06	AP-42, 1.4-3
Anthracene	120-12-7	2.40E-06	AP-42, 1.4-3
Benz(a)anthracene	56-55-3	1.80E-06	AP-42, 1.4-3
Benzene	71-43-2	2.10E-03	AP-42, 1.4-3
Benzo(a)pyrene	50-32-8	1.20E-06	AP-42, 1.4-3
Benzo(b)fluoranthene	205-99-2	1.80E-06	AP-42, 1.4-3
Benzo(g,h,i)perylene	191-24-2	1.20E-06	AP-42, 1.4-3
Benzo(k)fluoranthene	205-82-3	1.80E-06	AP-42, 1.4-3
Chrysene	218-01-9	1.80E-06	AP-42, 1.4-3
Dibenzo(a,h)anthracene	53-70-3	1.20E-06	AP-42, 1.4-3
Dichlorobenzene	25321-22-6	1.20E-03	AP-42, 1.4-3
Fluoranthene	206-44-0	3.00E-06	AP-42, 1.4-3
Fluorene	86-73-7	2.80E-06	AP-42, 1.4-3
Formaldehyde	50-00-0	7.50E-02	AP-42, 1.4-3
Hexane	110-54-3	1.80E+00	AP-42, 1.4-3
Indeno(1,2,3-cd)pyrene	193-39-5	1.80E-06	AP-42, 1.4-3
Naphthalene	91-20-3	6.10E-04	AP-42, 1.4-3
Phenanathrene	85-01-8	1.70E-05	AP-42, 1.4-3
Pyrene	129-00-0	5.00E-06	AP-42, 1.4-3
Toluene	108-88-3	3.40E-03	AP-42, 1.4-3
Arsenic	7440-38-2	2.00E-04	AP-42, 1.4-4
Beryllium	7440-41-7	1.20E-05	AP-42, 1.4-4
Cadmium	7440-43-9	1.10E-03	AP-42, 1.4-4
Chromium	7440-47-3	1.40E-03	AP-42, 1.4-4
Cobalt	7440-48-4	8.40E-05	AP-42, 1.4-4
Lead	7439-92-1	5.00E-04	

Pollutant	CAS No.	EF (lb/mmcf)	EF Source
Manganese	7439-96-5	3.80E-04	AP-42, 1.4-4
Mercury	7439-97-6	2.60E-04	AP-42, 1.4-4
Nickel	7440-02-0	2.10E-03	AP-42, 1.4-4
Selenium	7782-49-2	2.40E-05	AP-42, 1.4-4

Table A3. U18 – Emergency Generators (E35, E38-A, B, C, D)

Pollutant	CAS No.	> 600 HP	
		EF (lb/MMBtu)	Source
NOx		3.20	AP-42, 3.4-1
CO		0.85	AP-42, 3.4-1
SOx		1.01S1	AP-42, 3.3-1, S1- % sulfur in fuel
PM10		0.100	AP-42, 3.4-2
VOC		0.09	AP-42, 3.4-1
Single HAP			
Benzene	71-43-2	7.76E-04	AP-42, 3.4-3
Toluene	108-88-3	2.81E-04	AP-42, 3.4-3
xylene	1330-20-7	1.93E-04	AP-42, 3.4-3
Formaldehyde	50-00-0	7.89E-05	AP-42, 3.4-3
Acetaldehyde	75-07-0	2.52E-05	AP-42, 3.4-3
Acrolein	107-02-8	7.88E-06	AP-42, 3.4-3
Naphthalene	91-20-3	1.30E-04	AP-42, 3.4-4
Acenaphthylene (POM, 208-96-8)		9.23E-06	AP-42, 3.4-4
Acenaphthene (POM, 83-32-9)		4.68E-06	AP-42, 3.4-4
Fluorene (POM, 86-73-7)		1.28E-05	AP-42, 3.4-4
Phenanthrene (POM, 85-01-8)		4.08E-05	AP-42, 3.4-4
Anthracene (POM, 120-12-7)		1.23E-06	AP-42, 3.4-4
Fluoranthene (POM, 206-44-0)		4.03E-06	AP-42, 3.4-4
Pyrene (POM, 129-00-0)		3.71E-06	AP-42, 3.4-4
Benzo(a)anthracene	56-55-3	6.22E-07	AP-42, 3.4-4
Chrysene	218-01-9	1.53E-06	AP-42, 3.4-4
Benzo(b)fluoranthene	205-99-2	1.11E-06	AP-42, 3.4-4
Benzo(k)fluoranthene	207-08-9	2.18E-07	AP-42, 3.4-4
Benzo(a)pyrene	50-32-8	2.57E-07	AP-42, 3.4-4
Indeno(1,2,3-cd)pyrene	193-39-5	4.14E-07	AP-42, 3.4-4
Dibenz(a,h)anthracene	53-70-3	3.46E-07	AP-42, 3.4-4

Pollutant	CAS No.	> 600 HP	
		EF (lb/MMBtu)	Source
Benzo(g,h,i)perylene (POM, 191-24-2)		5.56E-07	AP-42, 3.4-4

Table A4. UIA3 PM Emissions

Unit	Emi. Point	Processes Description	Uncontrolled Emission Factors			Control Efficiency	Calculation Methodologies, Emission Factor Sources
			PM EF (lb/ton)	PM10 EF (lb/ton)	PM2.5 EF (lb/ton)		
UIA3	E36-A	Paved road	0.765	0.153	0.038	N/A	AP-42, 13.2.1, Eq.1
	E36-B	Unpaved road	5.512	1.352	0.135	N/A	AP-42, 13.2.2, Eq.1a

Table A5. Miscellaneous Insignificant Activities and Equipment not Regulated

Unit	Emission Point	Process Description	Calculation Methodologies, Emission Factor Sources
IA1	IE1	Cooling tower	0.08 lb/hr, AP-42, 13.4
IA2	IE3-IE7	Storage tanks (diesel, kerosene, gasoline)	EPA TANK4.0 Program, based on fuel properties and usage
U21	E39	Parts washer	Mass balance method, based on cleaning material usage
Equipment Not Regulated	IE2	Lube oil demister vents	Mass balance method, based on lubricant oil usage

Attachment G – Determination of Benchmark Ambient Concentration (BAC)

Category _____ Number _____

Compound name _____ CAS No. _____

Molecular weight _____

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

I. Carcinogen Risk - BAC_C (annual averaging period)

Carcinogen YES NO

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

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

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

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

III. De minimis calculations

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

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

[Regulation 5.22, table 1]

Prepared by _____ Date _____



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



TITLE IV PHASE II ACID RAIN PERMIT

Permit No.: 144-97-AR (R5)

Plant ID: 0126

Effective Date: 05/11/2020

Expiration Date: 05/31/2025

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

Owner: Louisville Gas & Electric Company
Source: Cane Run Generating Station
5252 Cane Run Road
Louisville, KY 40216

Statutory and Regulatory Authorities: In accordance with KRS Chapter 77 and Titles IV and V of the Clean Air Act, the Air Pollution Control District of Jefferson County issues this permit pursuant to Regulations 2.16, 6.47, and 7.82.

Application No.: N/A

Application Received: 12/13/1995

Permit Writer: Yiqiu Lin

Administratively Complete: 2/7/1996

Acid Rain Permit Revisions/Changes

Permit No.	Public Notice Date	Issue Date	Change Type	Description/Scope
144-97-AR	N/A	12/17/1997	Initial	Initial Issuance
144-97-AR (R1)	N/A	1/13/1999	Significant	Added language and SO2 allowances to the tables for each unit
144-97-AR (R2)	N/A	08/30/2012	Reissuance	Reissuance of the permit
144-97-AR (R3)	08/30/2014	11/18/2014	Renewal	Renewal of the permit
144-97-AR (R4)	03/05/2017	05/30/2017	Admin.	Remove U4, 5, and 6 from permit
144-97-AR (R5)	03/26/2020	05/11/2020	Renewal	Renewal of the permit

Acid Rain Permit Conditions

1. SO₂ Allowance Allocations and NO_x Requirements for Unit U15

Unit U15: SO2 Allowances	SO2 Allowances for Years 2008 – 2009 (tons)	SO2 Allowances for Years 2010 and Beyond (tons)
Table 2 of 40 CFR 73	0*	0*

Unit U15: NOx Requirements	
NOx Limit	This emission unit currently does not have applicable NOx limits set by 40 CFR 76.

* For newly constructed emission unit, there are no SO₂ allowances per EPA Acid Rain Program. A minimum balance of “0” SO₂ allowances shall be maintained in the account. If there are not enough SO₂ allowances to cover the SO₂ produced by U15 for the calendar year, SO₂ allowances shall be transferred to the U15 account by the allowance transfer deadline by March 1 of the following calendar year, to maintain a minimum balance of “0” SO₂ allowances.

Allowable transfer deadline by definition is midnight of March 1 and is the deadline by which allowances may be submitted for recordation in an affected source’s compliance account for the purposes of meeting the source’s Acid Rain emissions limitation requirements for the sulfur dioxide for the previous calendar year.(CFR 72 Subpart A §72.2, CFR 73 Subpart B §73.20(d)(2))

The number of allowances actually held by an affected source in a unit account may differ from the number allocated by U.S. EPA. Neither of the aforementioned conditions necessitates a revision to the unit SO₂ allowance allocations identified in this permit (See 40 CFR 72.84). The number of allowances allocated to Phase II affected units by US EPA may change under 40 CFR Part 73.

Comments, Notes, and Justifications:

- (1) Affected emission unit is one (1) new natural gas-fired combined cycle (NGCC) electricity generating unit.
- (2) A revised Phase II NO_x Compliance Plan was received on June 27, 2008, including the existing emission unit.
- (3) All previously issued Acid Rain permits are hereby null and void.

Permit Application:

The Louisville Gas & Electric Company submitted Phase II Permit Application for the Mill Creek Generating Station, dated December 7, 1995, and signed by Chris Hermann. The owners and operators of Louisville Gas and Electric Company must comply with the standard requirements and special provisions set forth in the application.

NO_x Compliance Plan:

Pursuant to 40 CFR 76, the Kentucky Division for Air Quality approves a Phase II NO_x Compliance Plan for Louisville Gas & Electric Company. The owners and operators of Louisville Gas & Electric Company must comply with the alternative contemporaneous emissions limitation for NO_x 0.40 lb/MMBtu for tangentially fired boilers and 0.46 lb/MMBtu for dry bottom wall-fired boilers. Each affected unit in an approved averaging plan is in compliance with the Acid Rain emission limitation for NO_x under the plan only if the requirements under 40 CFR 76.11(d)(1) are met.