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

Title V Operating Permit

Permit No.: O-0125-18-V Plant ID: 0125

Effective Date: 11/27/2018 Expiration Date: 11/30/2023

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:	Paddy's Run Station 4600 Bells Lane Louisville, KY 40211	Owner:	Louisville Gas and Electric Company 220 W. Main Street Louisville, KY 40202

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 (18) months and no later than six (6) months prior to the expiration date.

Administratively Complete: 06/28/2017
Date of Public Notice: 08/19/2018
Date of Proposed Permit: 08/19/2018; 10/09/2018

Permit writer: Martin J. Hazelett

Air Pollution Control Officer
11/27/18

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Permit Revisions and Changes

Permit No.	Public Notice Date	Issue Date	Change Type	Description/Scope
130-97-TV	10/17/1999	12/17/1999	Initial	Initial Permit Issuance
130-97-TV (R1)	11/01/2012	12/18/2012	Renewal	Regular Renewal, Incorporated permit 48-00-C
130-97-TV (R2)	NA	11/2/2016	Admin	Administrative revision of operating permit to include: updated permit format, incorporation of Insignificant Activities emission points added 4/29/2015, 7/18/2016, and updated Insignificant Activities emissions to reflect District calculations from 2/26/2010
O-0125-18-V	08/19/2018	11/27/2018	Renewal	Regular Renewal
			Admin	Incorporate the CSAPR applicable requirements, CAIR applicable requirements, calculation methodology, addition and removal of insignificant activities, changed permit number format.

Construction Permit Summary

Permit No.	Issue Date	Description
331-71-C	08/04/1971	Install gas scrubber for #6 generating unit
628-76-C	12/13/1976	One (1) 130,000 gallon fuel oil storage tank
48-00-C	02/25/2002	GT13: one (1) simple cycle combustion turbine, rated capacity 175 MW, Siemens Westinghouse, model V84.3A2, natural gas fueled

Applications and Related Documents

Document Number	Date Received	Description
59003	09/09/2013	Construction application 563 kW emergency generator (IA)

Document Number	Date Received	Description
70989	04/29/2015	Revised insignificant activities
64815	05/13/2015	Revised STAR EA
78133	07/06/2016	Construction application (3) emergency generators (IA)
84854	06/19/2017	Title V Permit Renewal Application
84999	06/27/2017	District requested documents to administratively and technically complete the TV application
85707	06/28/2017	Company response to 06/27/2017 District request for administrative information
85026	06/28/2017	Title V Notice of Administrative Completeness
85665	08/01/2017	Company response to 06/27/2017 District request for technical information
91716	04/24/2018	Request: clarification of equipment, correct and resubmit forms 200J and 200N
91771	04/27/2018	Response: clarification of equipment, correct and resubmit forms 200J and 200N
91812	05/01/2018	Request: further clarification of equipment, correct and resubmit forms 200J and 200N; 20180501
91869	05/07/2018	Response: further clarification of equipment, correct and resubmit forms 200J and 200N; 20180501
91879	05/09/0218	Paddy's Run (0125) 05082018 site visit follow up
92002	05/14/2018	Response: Paddy's Run (0125) 05082018 site visit follow up
93338	08/03/2018	Company comments on pre-draft permit
93338	08/17/2018	District response to pre-draft comments
93810	09/06/2018 10/09/2018	Company comments on draft permit District Response to comments

Abbreviations and Acronyms

AP-42	- AP-42, *Compilation of Air Pollutant Emission Factors, published by U.S.EPA*
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

1. **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]

2. **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

   This certification must be postmarked by 15 April of the year following the year for which the certification is being submitted, or other such due date as required by another applicable regulation.

3. **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.

4. **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.

5. **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]

6. **Emission Fees Payment Requirements** - The owner or operator shall pay annual emission fees in accordance with Regulation 2.08, section 12.3. 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 12.2.4]

7. **Emission Offset Requirements** - The owner or operator shall comply with the requirements of Regulation 2.04.

8. **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]

9. **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]

10. **Hazardous Air Pollutants and Sources Categories** - The owner or operator shall comply with the applicable requirements of Regulations 5.02 and 5.14.

11. **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]

12. **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]

13. **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.

14. **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 postmarked 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	Report Due Date
January 1 - June 30	August 29
July 1 - December 31	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.

15. **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]

16. **Operational Flexibility** - The owner or operator may make changes without permit revision in accordance with Regulation 2.16, section 5.8.

17. **Permit Amendments (Administrative)** - This permit can be administratively amended by the District in accordance with Regulation 2.16, section 5.4.

18. **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.

19. **Permit Duration** - This permit is issued for a fixed term of 5 years, in accordance with Regulation 2.16, section 4.1.8.3.

20. **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.

21. **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]

22. **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.

23. **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.

24. **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.

25. **Permit Shield** - The permit shield shall apply in accordance with Regulation 2.16, section 4.6.1.

26. **Prevention of Significant Deterioration of Air Quality** - The owner or operator shall comply with the requirements of Regulation 2.05.

27. **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.

28. **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.

29. **Reopening For Cause** - This permit shall be reopened and revised by the District in accordance with Regulation 2.16 section 5.9.

30. **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.

31. **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.

32. **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]

33. **Stack Height Considerations** - The owner or operator shall comply with the requirements of Regulation 2.10.

34. **Startups, Shutdowns, and Upset Conditions Requirements** - The owner or operator shall comply with the requirements of Regulation 1.07.

35. **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

36. **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

Regulation	Title
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

37. **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:

The Louisville Gas and Electric Company (LG&E)- Paddy's Run Generating Station is an electricity generating facility located in Jefferson County, Kentucky. The facility consists of three (3) combustion gas turbines (CTs) for the production of electricity.

Plant-wide Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
6.42	Reasonably Available Control Technology Requirements for Major Volatile Organic Compound- and Nitrogen Oxides-Emitting Facilities	1, 4
40 CFR 96	NOx Budget Trading Program and CAIR NOx and SO2 Trading Programs for State Implementation Plans	All
40 CFR 97, Subpart AAAAA	CSAPR NO_x Annual Trading Program	97.401 through 97.435
40 CFR 97, Subpart EEEEE	CSAPR NO_x Ozone Season Group 2 Trading Program	97.801 through 97.835
40 CFR 97, Subpart CCCCC	CSAPR SO_2 Group 1 Trading Program	97.601 through 97.635

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. Cross-State Air Pollution Rule (CSAPR) and Clean Air Interstate Rule (CAIR)

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

ii. The owner or operator shall comply with CAIR applicable requirements in 40 CFR 96. (See Attachment B)

b. NO_x

i. The owner or operator shall not allow the plantwide NO_x emissions to equal or exceed one hundred (100) tons during any twelve (12) consecutive month period. [1, 2] [Reg. 6.42, section 1.2)]

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*.[3] [Regulations 5.00 and 5.21]

ii. For any conditions outside the environmental acceptability analysis, including if a new TAC is introduced or the content of a TAC in a raw material increases above *de minimis*, the owner or operator shall verify and document the environmental acceptability of the revised emissions at the time of the change. Prior approval by the District is not required for a change pursuant to Regulation 5.21, section 4.22.3 if the requirements of 4.23.1 through 4.23.4 are met. Changes to the air dispersion modeling

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1 The company submitted a letter dated October 20, 1998, requesting a plant-wide NO_x limit of less than 100 ton/year in order to avoid NO_x RACT and PSD/Nonattainment NSR. This limit ensures that the company is not required to comply with the RACT requirements of Regulation 6.42.

2 Emission factors average from stacks test, 05/18/2017, for the pollutant NO_x is approximately 0.133 lb /MMbtu.

3 LG&E Paddy's Run submitted their TAC Environmental Acceptability Demonstration to the District on December 11, 2007, and May 12, 2014. Compliance with the STAR EA Goals was demonstrated in the source's EA Demonstrations. Category 1 and 2 TACs generated by the uncontrolled combustion of diesel fuel in both of the diesel cranking engines, cannot exceed the Cat 1 and 2 TAC de minimis levels. The TAC emissions from the combustion of natural gas, liquefied petroleum gas, methane (including landfill gas), or propane are considered to be "de minimis emissions" by the District. [Regulation 5.21, section 2.7]. There has been no new construction or modifications after July 1, 2005, therefore, the company did not have to demonstrate compliance with Category 3 and 4 TACs.

program or meteorological data used in the most recent Environmental Acceptability Demonstration do not trigger the requirement to re-analyze. [Regulation 5.21, Section 4]

iii. If the TAC does not have an established BAC or de minimis value, the owner or operator shall calculate and report these values. The form, located in Attachment D - Determination of Benchmark Ambient Concentration (BAC), may be used for determining BAC and *de minimis* values. [Regulation 5.20, sections 3 and 4]

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 5 years and make the records readily available to the District upon request.

a. Cross-State Air Pollution Rule (CSAPR) and Clean Air Interstate Rule (CAIR)

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

ii. ii. The owner or operator shall comply with CAIR applicable requirements in 40 CFR 96. (See Attachment B)

b. NO_X

i. The owner or operator shall monthly, maintain records of the totals of the amounts and the types of fuel combusted by each affected facility, during each month and each twelve (12) consecutive month period, to demonstrate ongoing compliance with the annual limit for NO_x emissions.

ii. The owner or operator shall monthly calculate and record the twelve (12) consecutive month period plant-wide total of NO_x emitted that is obtained by summing the NO_x emissions produced by E11 plus E12 plus E13 to insure the total NO_x emitted does not exceed the plant-wide limit using emission factors and equations in Attachment C.

iii. The owner or operator shall monthly, maintain records of the hours of operation for the month and the total hours of operation for the twelve (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.

ii. If a new TAC is introduced or the content of a TAC in a raw material increases above *de minimis*, the owner or operator shall verify and document the environmental acceptability of the revised emissions, at the time of the change.

S3. Reporting [4]
[Regulation 2.16 Section 4.1.1)]

The owner or operator shall report the following information, as required by General Condition 14:

a. Cross-State Air Pollution Rule (CSAPR) and Clean Air Interstate Rule (CAIR)

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

ii. The owner or operator shall comply with CAIR applicable requirements in 40 CFR 96. (See Attachment B)

b. NO_X

i. The monthly totals and the monthly twelve (12) consecutive month totals of tons of NO_x emitted from each diesel cranking engine and each turbine. If the company exercises the alternative methodology to AP-42, a fuel analysis indicating the average annual heat content of the combusted fuels shall also be supplied.

ii. The owner or operator shall identify all periods of exceeding the 100 ton/year plant-wide 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;

[4] The annual emission inventory may count as the second semi-annual compliance report, so long as the annual emission inventory is received by the District by the second semi-annual compliance report due date, March 1, of each year and contains the required information. The report periods and due dates for the semi-annual reports required by this emission unit are as listed in General Condition #14, Monitoring and Related Record Keeping and Reporting Requirements.

(3) A description, including the magnitude, of the deviation;

(4) If known, the cause of the deviation; and

(5) A description of all corrective actions taken to abate the deviation.

c. TAC

i. Any conditions that were inconsistent with those conditions analyzed in the most recent Environmental Acceptability Demonstration.

S4. Testing

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. The owner or operator shall use the most recent District-accepted performance test results to demonstrate compliance with the emission limits and in the annual emission inventory reporting. If the performance testing date is missed, then the owner or operator shall calculate emissions using expired test result data, methods such as EPA-approved emission factors and guidance documents such as EIIP and AP-42, or other methods upon written approval by the District, whichever results in the greater (more conservative) emissions.

iii. The District may require retesting if there is reasonable belief that currently-used emission factors or control efficiencies do not accurately reflect the actual performance of the device.

iv. Failure to conduct the required performance test by the required date is a permit violation.

v. 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 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.

vi. The owner or operator shall provide the District at least 10 days prior notice of any performance test to afford the District the opportunity to have an observer present.

vii. The owner or operator shall furnish the District with a written report of the results of the performance test within 60 days following the actual date of completion of the performance test.

Emission Unit U1: Combustion Turbines GT11 and GT12

U1 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS [5, 6]		
Regulation	**Title**	**Applicable Sections**
6.42	Reasonable Available Control Technology Requirements for Major Volatile Organic Compound and Nitrogen Oxides Emitting Facilities	1.2
40 CFR 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	40 CFR63.6603 & 40 CFR63.6625

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		

U1 Equipment:

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
E11	GT11: one (1) simple cycle combustion turbine, rated capacity 19,500 kW, General Electric, model 5001LA, natural gas fueled with a 300 hp diesel fueled cranking engine GT11ce [with 25 gallon diesel day tank (IA)]	1968	STAR, 6.42, 40 CFR 63 Subpart ZZZZ	N/A	S1

[5] 40 CFR 60 Subpart GG – Standards of Performance for Stationary Gas Turbines is not applicable because the two turbines existed prior to Oct. 3, 1977. [40 CFR60.330(b)]

[6] 40 CFR 63 Subpart YYYY – National Emissions Standards for Hazardous Air Pollutants for Stationary Combustion Turbines is not applicable since the source is not a major source for HAPs.

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
E12	GT12: one (1) simple cycle combustion turbine, rated capacity 29,000 kW, Westinghouse, model W-301G, natural gas fueled with a 750 hp diesel fueled cranking engine GT12ce [with 25 gallon diesel day tank (IA)]	1968	STAR, 6.42, 40 CFR 63 Subpart ZZZZ	N/A	S2

U1 Specific Conditions

S1. Standards

[Regulation 2.16, section 4.1.1]

a. HAP [40 CFR 63, Subpart ZZZZ for cranking engines][7]

i. For emission points E11 and E12, the owner or operator of an existing stationary RICE located at an area source of HAP emissions shall comply with the requirements Table 2(d) to this subpart: [40 CFR 63.6603(a)]

(1) The owner or operator shall change the oil and filter every 500 hours of operation or annually, whichever comes first. The owner or operator has the option to utilize an oil analysis program as described in 40 CFR 63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2d of this subpart. [40 CFR 63, Subpart ZZZZ, Table 2d.(4)(a)]

(2) The owner or operator shall inspect the air cleaners every 1,000 hours of operation or annually, whichever comes first, and replace as necessary. [40 CFR 63. Subpart ZZZZ, Table 2d.(4)(b)]

(3) The owner or operator shall inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. [40 CFR 63. Subpart ZZZZ, Table 2d.(4)(c)]

ii. General requirements for complying with 40 CFR 63, Subpart ZZZZ:

For emission points E11 and E12

(1) The owner or operator shall be in compliance with the emission limitations, operating limitations, and other requirements in this subpart that apply to the RICE at all times. [40 CFR 63.6605(a)]

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

[7] For emission points E11 and E12, an existing stationary CI RICE located at an area source of HAP emissions, the regulation required the owner or operator to comply with the applicable emission limitations, operating limitations, and other requirements no later than May 3, 2013. [40 CFR 63.6595(a)(1)]

maintenance records, and inspection of the source. [40 CFR 63.6605(b)]

iii. For emission points E11 and E12, the owner or operator shall demonstrate continuous compliance with each emission limitation, operating limitation and other applicable requirements in Tables 2d to this subpart, that apply according to methods specified in Table 6 to this subpart. [40 CFR 63.6640(a)]

b. NO_x

i. See Plantwide Requirements.

c. TAC

i. See Plantwide Requirements.[8]

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 following records for a minimum of 5 years and make the records readily available to the District upon request.

a. HAP [40 CFR 63, Subpart ZZZZ for cranking engines]

i. Monitoring, installation, collection, operation, and maintenance requirements: [40 CFR 63.6625]

(1) For emission point E11and E12, the owner or operator shall operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 CFR 63.6625(e)]

(2) For emission points E11 and E12, the owner or operator shall minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup. [40 CFR 63.6625(h)]

[8] Category 1 and 2 TACs generated by the uncontrolled combustion of diesel fuel in both of the diesel cranking engines, cannot exceed the Cat 1 and 2 TAC *de minimis* levels. The TAC emissions from the combustion of natural gas, liquefied petroleum gas, methane (including landfill gas), or propane are considered to be "*de minimis* emissions" by the District. [Regulation 5.21, section 2.7]

(3) For emission point E11, the owner or operator has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63.6625(i)]

ii. Recordkeeping requirements: [40 CFR 63.6655]

(1) For emission points E11 and E12, the owner or operator shall keep the following records that apply to your RICE: [40 CFR 63.6655(a)]

(a) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in 40 CFR 63.10(b)(2)(xiv).
[40 CFR 63.6655(a)(1)]

(b) Record of the occurrences, and duration of each malfunction of operation, (i.e., process equipment) or the air pollution control and monitoring equipment.
[40 CFR 63.6655(a)(2)]

(c) Records of performance tests and performance evaluations as required in 40 CFR 63.10(b)(2)(viii).
[40 CFR 63.6655(a)(3)]

(d) Records of all required maintenance performed on the air pollution control and monitoring equipment.
[40 CFR 63.6655(a)(4)]

(e) Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [40 CFR 63.6655(a)(5)]

(2) For emission points E11 and E12, the owner or operator shall keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to the RICE, as the following: [40 CFR 63.6655(d)]

(a) Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or (Table 6, section 9)

(b) Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. (Table 6, section 9)

(3) For emission points E11 and E12, the owner or operator shall keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan.
[40 CFR 63.6655(e)]

b. NO_x

i. See Plantwide Requirements.

c. 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 14:

a. HAP [40 CFR 63, Subpart ZZZZ for cranking engines]

i. The owner or operator shall report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations

in this subpart. These deviations must be reported according to the requirements in 40 CFR 63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE. (40 CFR 63.6640(b))

b. NOx

i. See Plantwide Requirements.

c. TAC

i. See Plantwide Requirements.

Emission Unit U2: Combustion Turbine GT13

U2 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS [9, 10, 11, 12]		
Regulation	**Title**	**Applicable Sections**
6.42	Reasonable Available Control Technology Requirements for Major Volatile Organic Compound and Nitrogen Oxides Emitting Facilities	1.2
6.47	Federal Acid Rain Program Incorporated by Reference	1, 2, 3, 4 & 5
40 CFR 60 Subpart A	General Provisions	40 CFR60.1 through 40 CFR60.19
40 CFR 60 Subpart GG	Standards of Performance for Stationary Gas Turbines	40 CFR60.332, 40 CFR60.333 40 CFR60.334
40 CFR 72 Subpart A	Acid Rain Program General Provisions	40 CFR72.2
40 CFR 73 Subpart B	Allowance Allocations	40 CFR73.10(b) & 40 CFR73.20(d)(2)
40 CFR 75 Appendix E	Optional NOx Emissions Estimation Protocol for Gas-Fired Peaking Units & Oil-Fired Peaking Units	40 CFR1.1
40 CFR 77	Excess Emissions	77.1, 77.2, 77.3, 77.4, 77.5, 77.6

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

[9] 40 CFR 60 Subpart KKKK – Standards of Performance for Stationary Combustion Turbines is not applicable because construction commenced prior to February 18, 2005.

[10] 40 CFR Part 76, Acid Rain Nitrogen Oxides Emission Reduction Program, is not applicable because it applies to nitrogen oxides emissions produced by coal fired units.

[11] 40 CFR Part 78, Appeal Procedures for Acid Rain Program, applies only to appeal procedures pertaining to the acid rain program.

[12] 40 CFR 63 Subpart YYYY – National Emissions Standards for Hazardous Air Pollutants for Stationary Combustion Turbines is not applicable since the source is not a major source for HAPs.

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
STAR regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23		

U2 Equipment:

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
E13	GT13: one (1) simple cycle combustion turbine, rated capacity 175 MW, Siemens Westinghouse, model V84.3A2, natural gas fueled.[13] [14]	2001	STAR, 6.42, 6.47 40 CFR 60 Subpart A 40 CFR 60 Subpart GG, 40 CFR 72, 40 CFR 73, 40 CFR 75 40 CFR 77	N/A	S3

[13] The TAC emissions from the combustion of natural gas, liquefied petroleum gas, methane (including landfill gas), or propane are considered to be "*de minimis* emissions" by the District. [Regulation 5.21, section 2.7]

[14] GT13 does not have a cranking diesel RICE, because the generator is a combination starter/generator.

U2 Specific Conditions

S1. Standards

[Regulation 2.16, section 4.1.1]

a. NOx

i. The owner or operator shall not allow the total NO_x emissions from unit GT13 to exceed ninety (90) tons during any twelve (12) consecutive month period. (Construction Permit 48-00-C, effective date 02/28/2002) [15] [Regulation 6.42, section 1.2]

ii. To meet the definition of a Peaking unit under 40 CFR 72.2:

(1) A unit that has: [40 CFR 72.2, Peaking unit (1)]

(a) An average capacity factor of no more than 10.0 percent during the previous three calendar years, and [40 CFR 72.2, Peaking unit (1)(i)]

(b) A capacity factor of no more than 20.0 percent in each of those calendar years. [40 CFR 72.2, Peaking unit (1)(ii)]

(2) For purposes of 40 CFR 75 of this chapter, a unit may initially qualify as a peaking unit if the designated representative demonstrates to the satisfaction of the Administrator that the requirements of paragraph (1) of this definition are met, or will in the future be met, through one of the following submissions [40 CFR 72.2, Peaking unit (2)]:

(a) For a unit for which a monitoring plan has not been submitted under 40 CFR 75.62 the designated representative submits either: [40 CFR 72.2, Peaking unit (2)(i)]

(i) Capacity factor data for the unit for the three calendar years immediately preceding the date of initial submission of the monitoring plan for the unit under 40 CFR 75.62; or [40 CFR 72.2, Peaking unit (2)(i)(A)]

(ii) If a unit does not have capacity factor data for one or more of the three calendar years immediately preceding the date of initial submission of the monitoring plan for the unit under 40 CFR 75.62, all available capacity factor data, beginning with the date on which the unit commenced commercial

[15] The Title V renewal application signed June 11, 2004, requested the 90/ton/year limit for GT13.

operation; and projected capacity factor data.
[40 CFR 72.2, Peaking unit (2)(i)(B)]

(b) For a unit for which a monitoring plan has already been submitted under 40 CFR 75.62, that has not qualified as a peaking unit under paragraph (2)(a) of this definition, and where capacity factor changes, the designated representative submits either:
[40 CFR 72.2, Peaking unit (2)(ii)]

(i) Three calendar years of data following the change in the unit's capacity factor showing an average capacity factor of no more than 10.0 percent during the three previous calendar years and a capacity factor of no more than 20.0 percent in each of those calendar years; or
[40 CFR 72.2, Peaking unit (2)(ii)(A)]

(ii) One calendar year of data following the change in the unit's capacity factor showing a capacity factor of no more than 10.0 percent and a statement that this changed pattern of operation resulting in a capacity factor less than 10.0 percent is considered permanent and is projected to continue for the foreseeable future.
[40 CFR 72.2, Peaking unit (2)(ii)(B)]

iii. For compliance with Part 75, a unit that initially qualifies as a peaking unit must meet the criteria in paragraph (1) of the definition each year in order to continue to qualify as a peaking unit. If such a unit fails to meet such criteria for a given year, the unit no longer qualifies as a peaking unit starting January 1 of the year after the year for which the criteria are not met. If a unit failing to meet the criteria in paragraph (1) of this definition initially qualified as a peaking unit under paragraph (2) of this definition, the unit may qualify as a peaking unit for a subsequent year only if the designated representative submits the data specified in paragraph (2)(a)(i) of this definition. [40 CFR 72.2, Peaking unit (3)]

iv. An alternate NO_X emissions estimation procedure may be used in lieu of a continuous NO_X emission monitoring system (lb/mmBtu) for determining the average NO_X emission rate and hourly NO_X rate from gas-fired peaking units and oil-fired peaking units as defined in §72.2 of this chapter. If a unit's operations exceed the levels required to be a peaking unit, the owner or operator shall install and certify a NO_X-diluent continuous emission monitoring system no later than December 31 of the following calendar year. If the required CEMS has not been installed and certified by that date, the owner or operator shall report the maximum potential NO_X emission rate (MER) (as defined in §72.2 of this chapter) for each unit operating hour, starting with the first unit operating hour

after the deadline and continuing until the CEMS has been provisionally certified. The provision of §75.12 apply to excepted monitoring systems under this appendix. [40 CFR 75 Appendix E, 1.1]

v. The owner or operator shall not cause to be discharged into the atmosphere from emission point GT13, any gases which contain nitrogen oxides in excess of 158 ppmv at 15% O_2 and on a dry basis. [16]
[40 CFR 60.332 (a)(1)]

vi. See Plantwide Requirements.

b. SO_2

i. The owner or operator shall comply with either one of the following standards: [40 CFR 60.333]

(1) The owner or operator shall not cause to be discharged into the atmosphere (from emission point GT13) any gases which contain sulfur dioxide in excess of 0.015 percent by volume at 15% O_2 and on a dry basis [17], or [40 CFR 60.333(a)]

(2) The owner or operator shall not burn in emission point GT13 any fuel which contains sulfur in excess of eight tenths of a percent (0.8%) by weight. [18] [40 CFR 60.333(b)]

ii. For Emission Point E13, Turbine GT13: Attachment E, Phase II Acid Rain Requirements is attached and considered part of this Title V operating permit.
[Reg. 6.47, Section 3.5, referring to 40 CFR Part 76]

c. TAC

i. See Plantwide Requirements.[19]

[16] A stack test performed on 02/07/18 through 02/08/2018, indicated the NO_x emissions based on 98% load to be 23.3 ppmv at 15% O_2 and on a dry basis. Therefore, there is no monitoring, recordkeeping, or reporting requirements for this Standard.

[17] The sulfur dioxide is assumed to be emitted at a rate of 0.0026 lb/MMbtu, which is the default value from 40 CFR 75, Appendix D, section 2.3.2.1.1. This equates to 0.00298% SO_2, which is well below the standard of 0.015%. Therefore, there is no monitoring, record keeping, or reporting requirements for this Standard.

[18] The percent sulfur in natural gas was tested on 03/09/2000, 06/08/2000, 09/28/2000, and 12/13/2000. The values for sulfur content were 0.00026%, 0.00029%, 0.00020%, and 0.00027% respectively. The average was 0.000255%, which is well below the standard of 0.8%. Therefore, there is no monitoring, record keeping, or reporting requirements for this Standard.

[19] The TAC emissions from the combustion of natural gas, liquefied petroleum gas, methane (including landfill gas), or propane are considered to be "de minimis emissions" by the District. [Regulation 5.21, section 2.7]

S2. Monitoring and Record Keeping

[Regulation 2.16, section 4.1.1]

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

a. NO_x

i. The owner or operator shall monthly, maintain records of the amounts of electrical power produced by the unit for the month and the total electrical power produced by the unit for the calendar year, to insure the unit is meeting the definition of a peaking unit.

ii. The owner or operator shall each year calculate and record, the three year average capacity factor for the previous three years rolling block period to show the compliance with the definition of a peaking unit.

iii. The owner or operator shall monthly calculate and record the twelve (12) consecutive month period total of NO_x emissions from the GT13 utilizing one of the two following methods:

(1) The emission factor obtained from the NO_x Heat Rate Curve/CEM Data sheet submitted with the latest stack test received by District and the formula found in Attachment C , unless the another method is approved in writing by the District, so as long as the unit meets the definition of a peaking unit in 40 CFR 72.2, or

(2) The certified CEMS data to calculate the monthly NO_x emissions from GT13, in lieu of the formula contained in the Calculation Methodology (Attachment C), if the unit exceeds the limits of the definition of a peaking unit.

iv. The owner or operator shall, if required, install, certify, maintain, operate, and quality – assure a NO_x - diluent continuous emission monitoring system (CEMS) consisting of NO_x and O_2 monitors. As an alternative, a CO_2 monitor may be used to adjust the measured NO_x concentrations to 15 percent O_2 by either converting the CO_2 hourly averages to equivalent O_2 concentrations using Equation F-14a or F-14b in Appendix F to Part 75 of this chapter and making the adjustments to 15 percent O_2, or by using the CO_2 readings directly to make the adjustments, as described in Method 20. If the option to use a CEMS is required, the CEMS shall be installed, certified, maintained and operated as follows: [40 CFR 60.334(b)]

(1) Each CEMS must be installed and certified according to PS 2 and 3 (for diluent) of 40 CFR part 60, appendix B, except the 7-day calibration drift is based on unit operating days, not calendar days. Appendix F, Procedure 1 is not required. The relative accuracy test audit (RATA) of the NO_x and diluent monitors may be performed individually or on a combined basis, i.e., the relative

accuracy tests of the CEMS may be performed either:
[40 CFR 60.334(b)(1)]

(a) On a ppm basis (for NO_x) and percent O_2 basis for oxygen; or [40 CFR 60.334(b)(i)]

(b) On a ppm at 15 percent O_2 basis; or [40 CFR 60.334(b)(ii)]

(c) On a ppm basis (for NO_x) and percent CO_2 basis (for a CO_2 monitor that uses the procedures in Method 20 to correct the NO_x data to 15 percent O_2). [40 CFR 60.334(b)(iii)]

(2) As specified in 40 CFR60.13(e)(2), during each full unit operating hour, each monitor must complete a minimum of one cycle of operation (sampling, analyzing, and date recording) for each 15-minute quadrant of the hour, to validate the hour. For partial unit operating hours, as least one valid data point must be obtained 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 to validate the hour. [40 CFR 60.334(b)(2)]

(3) For purposes of identifying excess emissions, CEMS data must be reduced to hourly averages as specified in 40 CFR60.13(h).
[40 CFR 60.334(b)(3)]

(a) For each unit operating hour in which a valid hourly average, as described in paragraph (b)(2) of this section, is obtained for both NO_x and diluent, the data acquisition and handling system must calculate and record the hourly NO_x emissions in the units of the applicable NO_x emission standard under 40 CFR60.332(a), i.e., percent NO_x by volume, dry basis, corrected to 15 percent O_2 and International Organization for Standardization (ISO) standard conditions (if required as given in 40 CFR60.335(b)(1)). For any hour in which the hourly average O_2 concentration exceeds 19.0 percent O_2, a diluent cap value of 19.0 percent O_2, may be used in the emission calculations. [40 CFR 60.334(b)(3)(i)]

(b) A worst case ISO correction factor may be calculated and applied using historical ambient data. For the purpose of this calculation, substitute the maximum humidity of ambient air (Ho), minimum ambient temperature (T_a), and minimum combustor inlet absolute pressure (P_o) into the ISO correction equation. [40 CFR 60.334(b)(3)(ii)]

(c) If the owner or operator has installed a NO_x CEMS to meet the requirements of Part 75 of this chapter, and is continuing to meet the ongoing requirements of Part 75 of

this chapter, the CEMS may be used to meet the requirements of this section, except that the missing data substitution methodology provided for at CFR Part 75, Subpart D, is not required for purposes of identifying excess emissions. Instead, periods of missing CEMS data are to be reported as monitor downtime in the excess emissions and monitoring performance report required in 40 CFR60.7(c). [40 CFR 60.334(b)(3)(iii)]

v. See Plantwide Requirements.

b. SO_2

i. There are no required monitoring or record keeping requirements.

c. 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 14:

a. NOx

i. The monthly totals and the monthly twelve (12) consecutive month period totals of tons of NO_x emitted from GT13.

ii. The owner or operator shall identify all periods of exceeding the 90 ton/year 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; and

(5) A description of all corrective actions taken to abate the deviation.

iii. The owner or operator shall notify the District within 60 calendar days of the unit exceeding the limits of the definition of a peaking unit and provide the date that certified CEMs data will be available for calculating NO_x emissions.

iv. See Plantwide Requirements.

b. SO_2

i. There are no compliance reporting requirements.

ii. The owner or operator shall report excess emissions, that exceed the allowances transferred, and the necessary plans and procedures as required by 40 CFR Subpart 77, Excess Emissions.

c. TAC

i. See Plantwide Requirements.

S4. Testing
[Regulation 2.16, section 4.3.1]

a. General Requirements

i. See Plantwide Requirements.

b. NO_x

i. The owner or operator shall perform the required EPA Reference method performance test on GT13 emissions to determine a NO_x emission factor in lb/MMbtu at a frequency of at least once every 20 calendar quarters, or as required by the current regulations, to be used in the alternate method for calculating NO_x emissions as allowed by 40 CFR 75 Appendix E.

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

There are no off-permit documents associated with this Title V permit.

Alternative Operating Scenario

The District has approved the following alternative operating scenarios:

1. Relocation of equipment within the facility.
3. Utilization of new coolants and additives in the coolant systems.

Insignificant Activities

Equipment	Qty	PTE (tpy)	Regulation Basis
Brazing, soldering or welding, plant maintenance use only	1 portable	N/A	Regulation 1.02, Appendix A
Emergency relief vents	1	N/A	Regulation 1.02, Appendix A
Diesel Fuel Storage tank, 500 gallons [supplies GT11ce, cranking engine] (See IA1)	1	VOC = 9.50E-4	Regulation 1.02, Appendix A
Diesel Fuel Storage (day) tank, 25 gallons [supplies GT11ce, cranking engine]	1	VOC = 1.38E-04	Regulation 1.02, Appendix A
50/50 Glycol-water tank, 1,238 gal, pressurized	1	VOC =5.00E-6	Regulation 1.02, Appendix A
Lube Oil tank, 4,630 gallons [supplies GT13] (See IA1)	1	VOC = 5.00E-05	Regulation 1.02, Appendix A
Lube Oil tank, 1,730 gallons [supplies GT12] (See IA1)	1	VOC = 2.00E-05	Regulation 1.02, Appendix A
Lube Oil tank,1,500 gallons [supplies GT11] (See IA1)	1	VOC = 1.50E-05	Regulation 1.02, Appendix A
Diesel Fuel Storage tank, make Cummins, 600 gallons [supplies GT12ce, cranking engine and EG1] (See IA1)	1	VOC = 1.50E-04	Regulation 1.02, Appendix A
Diesel Fuel Storage (day) tank, 25 gallons [supplies GT12ce, cranking engine and EG1]	1	VOC = 1.38E-04	Regulation 1.02, Appendix A
Cummins, model DFEK 500, 6-cylinder, 4-stroke, emergency generator for E12, diesel fuel, installed 2012 (See IA2)	1	NOX = 2.14	Regulation 1.02
Kohler, Unit 1, model 40REZG, electric start, 4-stroke, 6-cylinder, natural gas emergency generator, installed 2016 (See IA3)	1	NOX = 0.58	Regulation 1.02
Parts Washer, Kleen Tec, KT 1045, cold cleaner equipped with a 45 gallon secondary reservoir (See IA4)	1	VOC = 0.025	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.

Emission Unit IA1: Storage Tanks

IA1 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
7.12	Standard of Performance for New Storage Vessels for Volatile Organic Compounds	1 through 4

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		

IA1 Equipment:

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
IE1	Diesel Fuel Storage tank, 500 gallons [supplies GT11ce, cranking engine]	1968	STAR, 7.12	NA	NA
IE2	Lube Oil tank, 4630 gallons [supplies GT13]	2001		NA	NA
IE3	Lube Oil tank, 1730 gallons [supplies GT12]	1968		NA	NA
IE4	Lube Oil tank, 1500 gallons [supplies GT11]	1968		NA	NA
IE5	Diesel Fuel Storage tank, 600 gallons, [supplies GT12ce, cranking engine and EG1]	2001		NA	NA

IA1 Specific Conditions

S1. Standard
[Regulation 2.16, section 4.1.1]

a. TAC

i. See Plantwide Requirements[20].

b. VOC

i. The owner or operator shall not store materials with an as stored vapor pressure of greater than or equal to 1.5 psia in the storage vessel(s), unless the storage tank is equipped with a permanent submerged fill pipe. [Regulation 7.12, section 3.3]

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 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 of the storage vessel(s) shall maintain records of the material stored and the vapor pressure in each storage vessel and if the contents of the storage vessel(s) are changed a record shall be made of the new contents, the date of the change, and the new vapor pressure in order to demonstrate compliance.

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

[20] TAC emissions from an insignificant activity are *de minimis*. [Regulation 5.21, section 2.3]

S3. Reporting
[Regulation 2.16, section 4.1.1]

The owner or operator shall report the following information, as required by General Condition 14:

a. TAC

i. See Plantwide Requirements.

b. VOC

i. There are no routine compliance reporting requirements.

Emission Unit IA2: Compression-Ignition Emergency Generator

IA2 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
6.42	Reasonable Available Control Technology Requirements for Major Volatile Organic Compound and Nitrogen Oxides Emitting Facilities	1.2
40 CFR 63, Subpart ZZZZ [21]	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	6585,6590, 6640, 6675
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
5.20	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		

IA2 Equipment:

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
IE6	Cummins, model DFEK 500, 6-cylinder, 4-stroke, diesel engine, 563 kW (750 hp)	2012	STAR, 40 CFR 60 Subpart IIII 40 CFR 63 Subpart ZZZZ	NA	NA

[21] The new stationary RICE meets the definition in 40 CFR 63.6675 of an emergency stationary RICE, which, per 40 CFR 63.6590(c)(1), must meet the requirements of 40 CFR 63, Subpart ZZZZ by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines.

IA2 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.[22]

b. NOx

i. See Plantwide Requirements[23].

c. TAC

i. See Plantwide Requirements[24].

d. Unit Operation

i. Fuel Requirements

(1) 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))

(a) Sulfur content: 15 parts per million (ppm) maximum for NR diesel fuel. (40 CFR 80.510(b)(1)(i))

(b) A minimum cetane index of 40; or (40 CFR 80.510(b)(2)(i))

(c) A maximum aromatic content of 35 volume percent. [40 CFR 80.510(b)(2)(ii)]

ii. 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

[22] This emergency generator is subject to 40 CFR 63 Subpart ZZZZ, because it involves stationary RICE located at an area source of HAP emissions.

[23] Potential emissions for the permitted operation(s) in this emission unit are greatest for nitrogen oxides (NO_x). Based on AP-42 Emission Factors and 500 hours per year for an emergency generator, as defined by the EPA, the potential NO_x emissions for each permitted operation in this emission unit are less than 5 tons per year.

[24] TAC emissions from an insignificant activity are *de minimis*. [Regulation 5.21, section 2.3]

model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE. [40 CFR 60.4205(b)]

(1) Engine manufacturers shall certify the engines with the exhaust emission standards contained in Table 1:[25]
[40 CFR 60.4202(a) refers to 40 CFR 89.112 and 113]

Table 1. Emission Standards (g/kW-hr) [40 CFR 89.112(a)]

Maximum Engine Power	Tier	Model Year	NO_x	HC	NMHC +NO_x	CO	PM
kW>560	Tier 2	2006	_____	_____	6.4	3.5	0.20

(2) In lieu of the NO_X standards, NMHC + NO_X standards, and PM standards Table 1, manufacturers may elect to include engine families in the averaging, banking, and trading program or the voluntary standards for "Blue Sky Series" engines. The manufacturer must set a family emission limit (FEL) not to exceed the levels contained in Table 2:

Table 2. Upper Limit for Family Emission Limits (g/kW-hr) [40 CFR 89.112(d)]

Maximum Engine Power	Tier	Model Year	NO_x	NMHC +NO_x	PM
kW>560	Tier 2	2006	----	10.5	0.54

(3) Exhaust opacity from compression-ignition nonroad engines for which this subpart is applicable must not exceed:

Table 3. EPA Teir 1-4 Smoke Emission Standards [40 CFR 89.113(a)]

Maximum Engine Power	Tier	Smoke Emission Standards
kW>560	Tier 1	(1) 20% during the acceleration mode (2) 15% during the lugging mode; or (3) 50% during the peaks in either the acceleration or lugging modes.
	Tier 2	
	Tier 3	
	Tier 4	

iii. 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]

[25] The District received engine certification of compliance on 9/16/2013.

iv. The owner or operator that must 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 60 CFR 60.4211(f)(1) through (3), is prohibited. If the owner or operator does not operate the engine according to the requirements in 60 CFR 60.4211(f)(1) through (3), the engine will not be considered an emergency engine under this subpart and must 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 (EG1) 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 40 CFR 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, section 4.1.9.1 and 4.1.9.2]

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

a. HAP

i. There are no compliance monitoring or record keeping requirements.

b. NOx

i. See Plantwide Requirements.

c. TAC

i. See Plantwide Requirements.

d. Unit Operation

i. 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.

ii. 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)]

iii. 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)]

S3. Reporting
[Regulation 2.16, section 4.1.9.3]

The owner or operator shall report the following information, as required by General Condition 14:

a. HAP

i. There are no routine compliance reporting requirements.

b. NOx

i. See Plantwide Requirements.

c. TAC

i. See Plantwide Requirements.

d. Unit Operation

i. The owner or operator shall identify all periods of exceeding the hour limits specified in the Standard section 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.

Emission Unit IA3: Spark-Ignition Emergency Generators

IA3 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
6.42	Reasonable Available Control Technology Requirements for Major Volatile Organic Compound and Nitrogen Oxides Emitting Facilities	1.2
40 CFR 63, Subpart ZZZZ [26]	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 JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	60.4230 – 4248

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		

IA3 Equipment:

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
IE7	Kohler, model 40REZG, electric start, 4-stroke, 6-cylinder, 4.3 L displacement, natural gas, 72 HP	2016	STAR, 40 CFR 60 Subpart JJJJ, 40 CFR 63 Subpart ZZZZ	NA	NA

[26] The new stationary RICE meets the definition in 40 CFR 63.6675 of an emergency stationary RICE, which, per 40 CFR 63.6590(c)(1), must meet the requirements of 40 CFR 63, Subpart ZZZZ by meeting the requirements of 40 CFR part 60 subpart JJJJ, for spark ignition engines.

IA3 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.[27]

b. NOx

i. See Plantwide Requirements.

c. TAC

i. See Plantwide Requirements.[28]

d. Unit Operation

i. Owners and operators of stationary spark-ignition internal combustion engine that commence construction after June 12, 2006, where the stationary SI ICE are manufactured on or after July 1, 2008, for engines with a maximum engine power less than 500 HP; are subject to the provisions of 40 CFR 60, Subpart JJJJ. [40 CFR 60.4230(a)(4) and 40 CFR 60.4230(a)(4)(iii)]

Table 4. Emission Standards and related requirements.

Engine displacement	manufacturing dates	Emission standards and related requirements
(1) below 225 cc	July 1, 2008 to December 31, 2011	40 CFR part 90
(2) below 225 cc	January 1, 2012 or later	40 CFR part 1054
(3) at or above 225 cc	July 1, 2008 to December 31, 2010	40 CFR part 90.
(4) at or above 225 cc	January 1, 2011 or later	40 CFR part 1054

ii. For Emission Point EG2: Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards in Table 1 to this subpart for their

[27] This emergency generator is subject to 40 CFR 63 Subpart ZZZZ because it involves a stationary RICE located at an area source of HAP emissions. The new stationary RICE meets the definition in 40 CFR 63.6675 of an emergency stationary RICE, which, per 40 CFR 63.6590(c)(1), must meet the requirements of 40 CFR 63, Subpart ZZZZ by meeting the requirements of 40 CFR part 60 subpart JJJJ, for spark ignition engines.

[28] TAC emissions from an insignificant activity are *de minimis*. [Regulation 5.21, section 2.3]

emergency stationary SI ICE, as the following:
[40 CFR 60.4233(d)]

Table 5. NO_X, CO, and VOC Emission Standards for Stationary Emergency Engines >25 HP [Table 1 to Subpart JJJ of Part 60]

Engine type	Maximum engine power	Manufacture date, after	Emission standards [a]					
			g/HP-hr			ppmvd at 15% O_2		
			NO_X	CO	VOC [d]	NO_X	CO	VOC [d]
Emergency	25<HP<130	1/1/2009	10	387	N/A	N/A	N/A	N/A

iii. Owners and operators of stationary spark-ignition internal combustion engine must operate and maintain stationary SI ICE that achieve the emission standards as required in 40 CFR 60.4233 over the entire life of the engine. [40 CFR 60.4234]

iv. For Emission Point EG2: If you are an owner or operator of a stationary SI internal combustion engine and must comply with the emission standards specified in 40 CFR 60.4233(d) or (e), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) and (2) of this section. [40 CFR 60.4243(b)]

(1) Purchasing an engine certified according to procedures specified in this subpart, for the same model year and demonstrating compliance according to one of the methods specified in 40 CFR 60.4243(a).[29] [40 CFR 60.4243(b)(1)]

(2) Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in 40 CFR 60.4233(d) or (e) and according to the requirements specified in 40 CFR 60.4244, as applicable, and according to paragraphs (b)(2)(i) and (ii) of this section. [40 CFR 60.4243(b)(2)]

(a) If you are an owner or operator of a stationary SI internal combustion engine greater than 25 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance. [40 CFR 60.4243(b)(2)(i)]

v. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation,

[29] The District received engine certification of conformity for EG2 on 7/20/2016.

maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described 40 CFR 60.4243(d), is prohibited. If the owner or operator does not operate the engine according to the requirements in 40 CFR 60.4243(d), the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines. [40 CFR 60.4243(d)]

(1) There is no time limit on the use of emergency stationary ICE (EG2) in emergency situations.
[40 CFR 60.4243(d)(1)]

(2) The owner or operator may operate the emergency stationary ICE for any combination of the purposes specified in 40 CFR 60.4243(d)(2) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed 40 CFR 60.4243(d)(3) counts as part of the 100 hours per calendar year allowed by this paragraph. [40 CFR 60.4243(d)(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 60.4243(d)(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 60.4243(d)(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 60.4243(d)(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 60.4243(d)(2). Except as provided in 40 CFR 60.4243(d) (3)(i), the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [40 CFR 60.4243(d)(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 60.4243(d)(3)(i)]

(i) The engine is dispatched by the local balancing authority or local transmission and distribution system operator; [40 CFR 60.4243(d)(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 60.4243(d)(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 60.4243(d)(3)(i)(C)]

(iv) The power is provided only to the facility itself or to support the local transmission and distribution system. [40 CFR 60.4243(d)(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 60.4243(d)(3)(i)(E)]

vi. Owners and operators of stationary SI natural gas fired engines may operate their engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but, must keep records of such use. If propane is used for more than 100 hours per year in

an engine that is not certified to the emission standards when using propane, the owners and operators are required to conduct a performance test to demonstrate compliance with the emission standards of 40 CFR 60.4233. [40 CFR 60.4243(e)]

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 5 years and make the records readily available to the District upon request.

a. HAP

i. There are no compliance monitoring or record keeping requirements.

b. NOx

i. See Plantwide Requirements.

c. TAC

i. See Plantwide Requirements.

d. Unit Operation

i. If you are an owner or operator of an emergency stationary SI internal combustion engine that is less than 130 HP, was built on or after July 1, 2008, and does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter upon startup of your emergency engine. [40 CFR 60.4237(c)]

ii. Owners and operators of all stationary SI ICE must keep records of the information in paragraphs (a)(1) through (4) of this section.
[40 CFR 60.4245(a)]

(1) All notifications submitted to comply with this subpart and all documentation supporting any notification.
[40 CFR 60.4245(a)(1)]

(2) Maintenance conducted on the engine. [40 CFR 60.4245(a)(2))

(3) If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable.
[40 CFR 60.4245(a)(3)]

(4) If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner

and subject to 40 CFR 60.4243(a)(2), documentation that the engine meets the emission standards. [40 CFR 60.4245(a)(4)]

iii. The owner or operator of an emergency SI Internal Combustion Engine greater than 25 HP and less than 130 HP (EG2) manufactured on or after July 1, 2008, that do not meet the standards applicable to non-emergency engines, the owner or operator of 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 60.4245(b)]

S3. Reporting
[Regulation 2.16 Section 4.1.1]

The owner or operator shall report the following information, as required by General Condition 14:

a. HAP

i. There are no routine compliance reporting requirements.

b. NOx

i. See Plantwide Requirements.

c. TAC

i. See Plantwide Requirements.

d. Unit Operation

i. The owner or operator shall identify all periods of exceeding the hour 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.

Emission Unit IA4: Parts washer with secondary reservoir

IA4 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		

IA4 Equipment:

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
IE8 (E14)	One (1) parts washer, Kleen Tec, KT 1045, cold cleaner equipped with a 45 gallon secondary reservoir	2017	STAR 6.18	N/A	N/A

IA4 Control Devices

There are no control devices associated with emission unit IA4.

IA4 Specific Conditions

S1. Standards
[Regulation 2.16, section 4.1.1]

a. TAC

i. See Plantwide Requirements[30].

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 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

[30] TAC emissions from an insignificant activity are *de minimis*. [Regulation 5.21, section 2.3]

any visible liquid leaks, visible tears, or cracks.
[Regulation 6.18, section 4.1.8]

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°C (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 following 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°C (68°F).

ii. All records required in Regulation 6.18, section 4.4.2, 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 14:

a. TAC

i. See Plantwide Requirements.

b. VOC

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

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

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

1. 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 NOx Ozone Season Group 2 Trading Program, and CSAPR SO_2 Group 1 Trading Program.

Unit ID: GT-12, 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	----------	----------	----------	----------	----------
NO_X	----------	----------	----------	-------X------	----------
Heat input	----------	----------	----------	----------	----------

Unit ID: GT-13, 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	----------	----------	----------	----------	----------
NO_X	X	----------	X	----------	----------
Heat input	----------	----------	----------	----------	----------

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 NOx Ozone Season Group 2 Trading Program), and 97.630 through 97.635 (CSAPR SO_2 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 NOx Ozone Season Group 2 Trading Program), and 97.635 (CSAPR SO_2 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 NOx Ozone Season Group 2 Trading Program), and 97.630 through 97.634 (CSAPR SO_2 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 NOx Ozone Season Group 2 Trading Program), and 97.635 (CSAPR SO_2 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 NOx Ozone Season Group 2 Trading Program), and 97.630 through 97.634 (CSAPR SO_2 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.

I. 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 NOX 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, Paddy's Run are summarized in the following table:[31]

[31] According to notice of data availability issued in 80 FR 77591 December 15, 2015 and 81 FR 50630 August 2, 2016. This table is included for informational purposes and is subject to change. These allocations can be bought, sold, or traded as necessary.

CSAPR NO_X Annual Allocations						
	2015 (tons)	2016 (tons)	2017 (tons)	2018 (tons)	2019 (tons)	2020 (tons)
E12	2	2	2	2	2	2
E13	45	45	41	41	41	41

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

(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 97.897.830 (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 NOx Ozone Season Group 2 units at CSAPR NOx 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 NOx 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 NOx Ozone Season Group 2 units at CSAPR NOx 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 NOx 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 NOx Ozone Season Group 2 units at CSAPR NOx 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 NOx Ozone Season Group 2 units at CSAPR NOx 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 NOx 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 NOx 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 NOx Ozone Season Group 2 allowances for CSAPR subject units at LG&E, Paddy'sRun are summarized in the following table:[32]

CSAPR NOx Ozone Season Group 2 Allocations						
	2015 (tons)	2016 (tons)	2017 (tons)	2018 (tons)	2019 (tons)	2020 (tons)
E12	3	3	1	1	1	1
E13	39	39	23	23	23	23

III. CSAPR SO_2 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 SO_2 Group 1 source and each CSAPR SO_2 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

[32] According to notice of data availability issued in 80 FR 77591 December 15, 2015 and 81 FR 50630 August 2, 2016. This table is included for informational purposes and is subject to change. These allocations can be bought, sold, or traded as necessary.

(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 SO_2 Group 1 allowances under 40 CFR 97.611(a)(2) and (b) and 97.612 and to determine compliance with the CSAPR SO_2 Group 1 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 97.630 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) SO_2 emissions requirements.

(1) CSAPR SO_2 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 SO_2 Group 1 source and each CSAPR SO2 Group 1 unit at the source shall hold, in the source's compliance account, CSAPR SO_2 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 SO_2 emissions for such control period from all CSAPR SO_2 Group 1 units at the source.

(ii). If total SO_2 emissions during a control period in a given year from the CSAPR SO_2 Group 1 units at a CSAPR SO_2 Group 1 source are in excess of the CSAPR SO_2 Group 1 emissions limitation set forth in paragraph (c)(1)(i) above, then:

(A). The owners and operators of the source and each CSAPR SO_2 Group 1 unit at the source shall hold the CSAPR SO_2 Group 1 allowances required for deduction under 40 CFR 97.624(d); and

(B). The owners and operators of the source and each CSAPR SO_2 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 SO_2 Group 1 assurance provisions.

(i). If total SO_2 emissions during a control period in a given year from all CSAPR SO_2 Group 1 units at CSAPR SO_2 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 SO_2 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 SO_2 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 SO_2 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 SO_2 emissions exceeds the respective common designated representative's assurance level; and

(B). The amount by which total SO_2 emissions from all CSAPR SO_2 Group 1 units at CSAPR SO_2 Group 1 sources in the state for such control period exceed the state assurance level.

(ii). The owners and operators shall hold the CSAPR SO_2 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 SO_2 emissions from all CSAPR SO_2 Group 1 units at CSAPR SO_2 Group 1 sources in the state during a control period in a given year exceed the state assurance level if such total SO_2 emissions exceed the sum, for such control period, of the state SO_2

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 SO_2 emissions from all CSAPR SO_2 Group 1 units at CSAPR SO_2 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 SO_2 emissions from the CSAPR SO_2 Group 1 units at CSAPR SO_2 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 SO_2 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 SO_2 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 SO_2 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 SO_2 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 SO_2 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 SO_2 Group 1 allowance that was allocated for such control period or a control period in a prior year.

(ii). A CSAPR SO_2 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 SO_2 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 SO_2 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 SO_2 Group 1 allowance is a limited authorization to emit one ton of SO_2 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 SO_2 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 SO_2 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 SO_2 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 SO_2 Group 1 source and each CSAPR SO_2 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 SO_2 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 SO_2 Group 1 Trading Program.

(2) The designated representative of a CSAPR SO_2 Group 1 source and each CSAPR SO_2 Group 1 unit at the source shall make all submissions required under the CSAPR SO_2 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 SO_2 Group 1 Trading Program that applies to a CSAPR SO_2 Group 1 source or the designated representative of a CSAPR SO_2 Group 1 source shall also apply to the owners and operators of such source and of the CSAPR SO_2 Group 1 units at the source.

(2) Any provision of the CSAPR SO_2 Group 1 Trading Program that applies to a CSAPR SO_2 Group 1 unit or the designated representative of a

CSAPR SO_2 Group 1 unit shall also apply to the owners and operators of such unit.

(g) Effect on other authorities.

No provision of the CSAPR SO_2 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 SO_2 Group 1 source or CSAPR SO_2 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 SO_2 Group 1 allowance allocation to each CSAPR SO_2 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 SO_2 Group 1 allowances for CSAPR subject units at LG&E, Cane Run are summarized in the following table:[33]

CSAPR SO_2 Group 1 Allocations						
	2015 (tons)	2016 (tons)	2017 (tons)	2018 (tons)	2019 (tons)	2020 (tons)
E11	0	0	0	0	0	0
E12	0	0	0	0	0	0

[33] According to notice of data availability issued in 80 FR 77591 December 15, 2015 and 81 FR 50630 August 2, 2016. This table is included for informational purposes and is subject to change. These allocations can be bought, sold, or traded as necessary.

Attachment B – Clean Air Interstate Rule (CAIR)

1. Statement of Basis

Statutory and Regulatory Authorities: CAIR requirements are incorporated into this Title V permit pursuant to the CAIR Kentucky SIP approved on 10/4/2007. The CAIR Kentucky SIP establishes State budgets for SO2 and NOx in accordance with 40 CFR 96, CAIR NOx Annual Trading Program, CAIR NOx Ozone season trading program, and CAIR SO_2 Trading Program. On September 7, 2016, the EPA finalized an update to the Cross-State Air Pollution Rule (CSAPR) for the 2008 ozone National Ambient Air Quality Standards (NAAQS) by issuing the final CSAPR Update. CSAPR Phase I implementation is now in place and replaces requirements under EPA's 2005 Clean Air Interstate Rule.

2. CAIR Application

The CAIR application for two combustion turbines GT-12 and GT13 was received on April 02, 2008. Requirements contained in that application are hereby incorporated into and made part of this Title V Permit. Pursuant to Regulation 2.16, Section 4.1.3, the source shall operate in compliance with those requirements. On September 7, 2016, the EPA finalized an update to the Cross-State Air Pollution Rule (CSAPR) for the 2008 ozone National Ambient Air Quality Standards (NAAQS) by issuing the final CSAPR Update. CSAPR Phase I implementation is now in place and replaces requirements under EPA's 2005 Clean Air Interstate Rule.

3. Comments, notes, justifications regarding permit decisions and changes made to the permit application forms during the review process, and any additional requirements or conditions.

Affected units are two (2) natural gas-fired combustion turbines, designated as GT-12 and GT13. These natural gas-fired single cycle units have a capacity to generate 29 megawatts electricity, from GT12, and a capacity to generate 175 megawatts electricity, from GT13, which is offered for sale.

4. Summary of Actions

The CAIR requirements are being incorporated as part of the revised Title V permit for this source. Public, affected state and US EPA review shall follow procedures.

A December 2008 court decision kept the requirements of CAIR in place temporarily but directed EPA to issue a new rule to implement Clean Air Act requirements concerning the transport of air pollution across state boundaries. On July 6, 2011, the U.S. EPA finalized the Cross-State Air Pollution Rule (CSAPR). On December 30, 2011, CSAPR was stayed prior to implementation. On April 29, 2014, the U.S. Supreme Court issued an opinion reversing an August 21, 2012 D.C. Circuit decision that had vacated CSAPR. Following the remand of the case to the D.C. Circuit, EPA requested that the court lift the CSAPR stay and toll the CSAPR compliance deadlines by three years. On October 23, 2014, the D.C. Circuit granted EPA's

request. On September 7, 2016, the EPA finalized an update to the Cross-State Air Pollution Rule (CSAPR) for the 2008 ozone National Ambient Air Quality Standards (NAAQS) by issuing the final CSAPR Update. CSAPR Phase I implementation is now in place and replaces requirements under EPA's 2005 Clean Air Interstate Rule.

Attachment C - Calculation Methodology 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.

Natural Gas: The emission factor conversions are based on the average natural gas heating value (HHV) of 1020 Btu/scf. The conversion of AP-42 emission factors from (lb/MMBtu) to ($lb/10^6$ scf) are calculated by multiplying by 1020 (AP-42, 3.1-1 footnote c).

Diesel: The emission factor conversions are based on the average distillate oil heating value of 139 $MMBtu/10^3$ gallons. The conversion of AP-42 emission factors from (lb/MMBtu) to ($lb/10^3$ gallon) are calculated by multiplying by 139 (AP-42, 3.1-1 footnote f). The conversion of A-42 emission factors from (lb/MMBtu) to (lb/gallon) are calculated by multiplying by 0.139.

> As an alternative to using published AP-42, table 3.1-1, notes c and f, fuel heat content factors, the owner or operator may use the average yearly heat content based on actual data or vendor certified fuel data.
>
> The AP-42, table 3.1-1 emission factors may be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to the average heating value, as stated in note b of AP-42, table 3.1-1.

Emission Unit U1: Combustion Turbines GT11 and GT12

Emission Unit 1 Natural Gas Emission Factors for Combustion Turbines GT11 and GT12

Emission Source	Pollutant	Natural Gas Emission Factor			Emission Factor Source
		$lb/10^6$ scf natural gas combusted		lb/MMBtu natural gas combusted	
		Uncontrolled	Controlled		
E11, E12	NO_X	326	326	0.3200	AP-42, 3.1-1
	CO	84	84	0.0820	AP-42, 3.1-1
	PM total	0.52	0.52	5.1E-04	Roy Huntley, EPA [34]
	PM condensable	0.32	0.32	3.1E-04	Roy Huntley, EPA
	PM_{10} filterable	0.20	0.20	2.0E-04	Roy Huntley, EPA
	$PM_{2.5}$ filterable	0.11	0.11	1.1E-04	Roy Huntley, EPA
	SO_2	3.47	3.47	0.0034	AP-42, 3.1-2a, h [35]

[34] The revised PM emission factors are from: "EPA's Emission Inventory and Analysis Group guidance 3/30/2012".

[35] AP-42 3.1-2a h: All sulfur in the fuel is assumed to be converted to SO2. S = percent sulfur in fuel. Example, if sulfur content in the fuel is 3.4 percent, then S = 3.4. If S is not available, use 3.4 E-03 lb/MMBtu for natural gas turbines, and 3.3 E-02 lb/MMBtu for distillate oil turbines (the equations are more accurate).

Emission Source	Pollutant	Natural Gas Emission Factor			Emission Factor Source
		lb/10^6 scf natural gas combusted		lb/MMBtu natural gas combusted	
		Uncontrolled	Controlled		
	VOC	2.14	2.14	0.0021	AP-42, 3.1-2a
	NH_3	3.26	3.26	0.0032	EPA Web FIRE

E = (X)(EF lb/10^6 scf)(1 ton/2000 lb.)

Where: E = emissions (tons)
X = the amount of natural gas combusted (10^6 scf)
[AP-42 EF (lb/MMBtu) converted to (lb/10^6 scf natural gas combusted]

Emission Unit 1 Natural Gas Combustion HAP/TAC Emission Factors for Combustion Turbines GT11 and GT12

Emission Source	Individual HAP/TAC	CAS	Natural Gas Emission Factor			Emission Factor Source
			lb/10^6 scf natural gas combusted		lb/MMBtu natural gas combusted	
			Uncontrolled	Controlled		
E11, E12	1,3-Butadiene	106-99-0	4.39E-04	4.39E-04	4.30E-07	AP-42, 3.1-3
	Acetaldehyde	75-07-0	4.08E-02	4.08E-02	4.00E-05	AP-42, 3.1-3
	Acrolein	107-02-8	6.53E-03	6.53E-03	6.40E-06	AP-42, 3.1-3
	Benzene	71-43-2	1.22E-02	1.22E-02	1.20E-05	AP-42, 3.1-3
	Ethylbenzene	100-41-4	3.26E-02	3.26E-02	3.20E-05	AP-42, 3.1-3
	Formaldehyde)	50-00-00	7.24E-01	7.24E-01	7.10E-04	AP-42, 3.1-3
	Naphthalene	91-20-3	1.33E-03	1.33E-03	1.30E-06	AP-42, 3.1-3
	Propylene Oxide	75-56-9	2.96E-02	2.96E-02	2.90E-05	AP-42, 3.1-3
	Toluene	108-88-3	1.33E-01	1.33E-01	1.30E-04	AP-42, 3.1-3
	Xylene	1330-20-7	6.53E-02	6.53E-02	6.40E-05	AP-42, 3.1-3

$E_{(HAP)}$ = (X)(EF lb/10^6 scf)(1 ton/2000 lb.)

Where: $E_{(HAP)}$ = emissions (tons)
X = the amount of natural gas combusted (10^6 scf)
[AP-42 EF (lb/MMBtu) converted to (lb/10^6 scf natural gas combusted]

Emission Unit 1 Diesel Emission Factors for Combustion cranking engine for GT11

Emission Source	Pollutant	Diesel Fuel Emission Factor			Emission Factor Source
		lb/gallon diesel fuel combusted		lb/MMBtu diesel fuel combusted	
		Uncontrolled	Controlled		
E11 cranking engine	NO_X	6.13E-01	6.13E-01	4.41	AP-42, 3.3-1
	CO	1.32E-01	1.32E-01	0.95	AP-42, 3.3-1
	PM total	4.31E-02	4.31E-02	0.31	AP-42, 3.3-1, b
	PM condensable	4.31E-02	4.31E-02	0.31	AP-42, 3.3-1, b
	PM_{10} filterable	4.31E-02	4.31E-02	0.31	AP-42, 3.3-1
	$PM_{2.5}$ filterable	4.31E-02	4.31E-02	0.31	AP-42, 3.3-1, b
	SO_2	4.03E-02	4.03E-02	0.290	AP-42, 3.3-1
	VOC	5.00E-02	5.00E-02	0.36	AP-42, 3.3-1

E = (X)(EF lb/gallon)(1 ton/2,000 lb)

Where: E = emissions (tons) annually
X = the amount of diesel fuel (gallons) combusted annually

Emission Unit 1 Diesel Combustion HAP/TAC Emission Factors for Combustion cranking engine for GT11

Emission Source	Individual HAP/TAC	CAS	Diesel Fuel Emission Factor			Emission Factor Source
			lb/gallon diesel fuel combusted		lb/MMBtu diesel fuel combusted	
			Uncontrolled	Controlled		
E11, E12	1,3-Butadiene	106-99-0	5.43E-06	5.43E-06	3.91E-05	AP-42, 3.3-2
	Acenaphthene	83-32-9	1.97E-07	1.97E-07	1.42E-06	AP-42, 3.3-2
	Acenaphthylene	203-96-8	7.03E-07	7.03E-07	5.06E-06	AP-42, 3.3-2
	Acetaldehyde	75-07-0	1.07E-04	1.07E-04	7.67E-04	AP-42, 3.3-2
	Acrolein	107-02-8	1.28E-05	1.28E-05	9.25E-05	AP-42, 3.3-2
	Anthracene	120-12-7	2.60E-07	2.60E-07	1.87E-06	AP-42, 3.3-2
	Benzo(a)anthracene	56-55-3	2.33E-07	2.33E-07	1.68E-06	AP-42, 3.3-2
	Benzene	71-43-2	1.30E-04	1.30E-04	9.33E-04	AP-42, 3.3-2
	Benzo(a)pyrene	50-32-8	2.61E-08	2.61E-08	1.88E-07	AP-42, 3.3-2
	Benzo(b)fluoranthene	205-99-2	1.38E-08	1.38E-08	9.91E-08	AP-42, 3.3-2
	Benzo(g,h,i)perylene	191-24-2	6.79E-08	6.79E-08	4.89E-07	AP-42, 3.3-2
	Benzo(k)fluoranthene	205-82-3	2.15E-08	2.15E-08	1.55E-07	AP-42, 3.3-2
	Chrysene	218-01-9	4.90E-08	4.90E-08	3.53E-07	AP-42, 3.3-2
	Dibenz(a,h)anthracene	53-70-3	8.10E-08	8.10E-08	5.83E-07	AP-42, 3.3-2
	Fluoranthene	206-44-0	1.06E-06	1.06E-06	7.61E-06	AP-42, 3.3-2

Emission Source	Individual HAP/TAC	CAS	Diesel Fuel Emission Factor			Emission Factor Source
			lb/gallon diesel fuel combusted		lb/MMBtu diesel fuel combusted	
			Uncontrolled	Controlled		
	Fluorene	86-73-7	4.06E-06	4.06E-06	2.92E-05	AP-42, 3.3-2
	Formaldehyde	50-00-00	1.64E-04	1.64E-04	1.18E-03	AP-42, 3.3-2
	Indeno (1,2,3-cd) pyrene	193-39-5	5.21E-08	5.21E-08	3.75E-07	AP-42, 3.3-2
	Naphthalene	91-20-3	1.18E-05	1.18E-05	8.48E-05	AP-42, 3.3-2
	Phenanathrene	85-01-8	4.08E-06	4.08E-06	2.94E-05	AP-42, 3.3-2
	Pyrene	129-00-0	6.64E-07	6.64E-07	4.78E-06	AP-42, 3.3-2
	Toluene	108-88-3	5.68E-05	5.68E-05	4.09E-04	AP-42, 3.3-2
	xylenes	1330-20-7	3.96E-05	3.96E-05	2.85E-04	AP-42, 3.3-2

$E_{(HAP)}$ = (X)(EF lb/gallon)(1 ton/2,000 lb)

Where: $E_{(HAP)}$ = HAP emissions (tons) annually
X = the amount of diesel fuel (gallons) combusted annually

Emission Unit 1 Diesel Emission Factors for Combustion cranking engine for GT12

Emission Source	Pollutant	Diesel Fuel Emission Factor			Emission Factor Source
		lb/gallon diesel fuel combusted		lb/MMBtu diesel fuel combusted	
		Uncontrolled	Controlled		
E12 cranking engine	NO_X	4.44E-01	4.44E-01	3.20	AP-42, 3.4-1
	CO	1.18E-01	1.18E-01	0.85	AP-42, 3.4-1
	PM total	1.39E-02	1.39E-02	0.10	AP-42, 3.4-1
	PM condensable	1.07E-03	1.07E-03	0.0077	AP-42, 3.4-2
	PM_{10} filterable	6.89E-03	6.89E-03	0.0496	AP-42, 3.4-2
	$PM_{2.5}$ filterable	6.65E-03	6.65E-03	0.0479	AP-42, 3.4-2
	SO_2	7.01E-02	7.01E-02	0.51	AP-42, 3.4-1
	VOC	1.25E-02	1.25E-02	0.09	AP-42, 3.4-1

E = (X)(EF lb/gallon)(1 ton/2,000 lb)

Where: E = emissions (tons) annually
X = the amount of diesel fuel (gallons) combusted annually

Emission Unit 1 Diesel Combustion HAP/TAC Emission Factors for Combustion cranking engine for GT12

Emission Source	Individual HAP/TAC	CAS	Diesel Fuel Emission Factor			Emission Factor Source
			lb/gallon diesel fuel combusted		lb/MMBtu diesel fuel combusted	
			Uncontrolled	Controlled		
E11, E12	Acenaphthene	83-32-9	6.50E-07	6.50E-07	4.68E-06	AP-42, 3.4-4
	Acenaphthylene	203-96-8	1.28E-06	1.28E-06	9.23E-06	AP-42, 3.4-4
	Acetaldehyde	75-07-0	3.50E-06	3.50E-06	2.52E-05	AP-42, 3.4-3
	Acrolein	107-02-8	1.09E-06	1.09E-06	7.88E-06	AP-42, 3.4-3
	Anthracene	120-12-7	1.71E-07	1.71E-07	1.23E-06	AP-42, 3.4-4
	Benzo(a)anthracene	56-55-3	8.64E-08	8.64E-08	6.22E-07	AP-42, 3.4-4
	Benzene	71-43-2	1.08E-04	1.08E-04	7.76E-04	AP-42, 3.4-3
	Benzo(a)pyrene	50-32-8	3.57E-08	3.57E-08	2.57E-07	AP-42, 3.4-4
	Benzo(b)fluoranthene	205-99-2	1.54E-07	1.54E-07	1.11E-06	AP-42, 3.4-4
	Benzo(g,h,i)perylene)	191-24-2	7.72E-08	7.72E-08	5.56E-07	AP-42, 3.4-4
	Benzo(k)fluoranthene	205-82-3	3.03E-08	3.03E-08	2.18E-07	AP-42, 3.4-4
	Chrysene	218-01-9	2.13E-07	2.13E-07	1.53E-06	AP-42, 3.4-4
	Dibenz(a,h)anthracene	53-70-3	4.81E-08	4.81E-08	3.46E-07	AP-42, 3.4-4
	Fluoranthene	206-44-0	5.60E-07	5.60E-07	4.03E-06	AP-42, 3.4-4
	Fluorene	86-73-7	1.78E-06	1.78E-06	1.28E-05	AP-42, 3.4-4
	Formaldehyde	50-00-00	1.10E-05	1.10E-05	7.89E-05	AP-42, 3.4-3
	Indeno(1,2,3-cd) pyrene	193-39-5	4.26E-04	4.26E-04	4.14E-07	AP-42, 3.4-4
	Naphthalene	91-20-3	1.81E-05	1.81E-05	1.30E-04	AP-42, 3.4-4
	Phenanathrene)	85-01-8	5.67E-06	5.67E-06	4.08E-05	AP-42, 3.4-4
	Pyrene	129-00-0	5.15E-07	5.15E-07	3.71E-06	AP-42, 3.4-4
	Toluene	108-88-3	3.90E-05	3.90E-05	2.81E-04	AP-42, 3.4-3
	xylenes	1330-20-7	2.68E-05	2.68E-05	1.93E-04	AP-42, 3.4-3

$E_{(HAP)}$ = (X)(EF lb/gallon)(1 ton/2,000 lb)

Where: $E_{(HAP)}$ = HAP emissions (tons) annually
X = the amount of diesel fuel (gallons) combusted annually
[AP-42 EF (lb/MMBtu) converted to (lb/10^6 scf natural gas combusted]

Emission Unit U2: Combustion Turbine GT13

Emission Unit 2 Natural Gas Emission Factors for Combustion Turbines GT13

Emission Source	Pollutant	Natural Gas Emission Factor			Emission Factor Source
		lb/10^6 scf natural gas combusted		lb/MMBtu natural gas combusted	
		Uncontrolled	Controlled		
E13	NO_X	89/326[36]	89	0.3200	AP-42, 3.1-1, stack test 02/2017,
	CO	84	84	0.0820	AP-42, 3.1-1
	PM total	0.52	0.52	0.0005	Roy Huntley, EPA*
	PM condensable	0.32	0.32	0.0003	Roy Huntley, EPA*
	PM_{10} filterable	0.20	0.20	0.0002	Roy Huntley, EPA*
	$PM_{2.5}$ filterable	0.11	0.11	0.0001	Roy Huntley, EPA*
	SO_2	3.47	3.47	0.0034	AP-42, 3.1-2a
	VOC	2.14	2.14	0.0021	AP-42, 3.1-2a
	NH_3	3.26	3.26	0.0032	EPA Web FIRE

E = (X)(EF lb/10^6 scf)(1 ton/2000 lb.)

Where: E = emissions (tons)
X = the amount of natural gas combusted (10^6 scf)
[AP-42 EF (lb/MMBtu) converted to (lb/10^6 scf natural gas combusted]

Emission Unit 2 Natural Gas Combustion HAP/TAC Emission Factors for Combustion Turbines GT13

Emission Source	Individual HAP/TAC	CAS	Natural Gas Emission Factor			Emission Factor Source
			lb/10^6 scf natural gas combusted		lb/MMBtu natural gas combusted	
			Uncontrolled	Controlled		
E13	1,3-Butadiene	106-99-0	4.39E-04	4.39E-04	4.30E-07	AP-42, 3.1-3
	Acetaldehyde	75-07-0	4.08E-02	4.08E-02	4.00E-05	AP-42, 3.1-3
	Acrolein	107-02-8	6.53E-03	6.53E-03	6.40E-06	AP-42, 3.1-3
	Benzene	71-43-2	1.22E-02	1.22E-02	1.20E-05	AP-42, 3.1-3
	Ethylbenzene	100-41-4	3.26E-02	3.26E-02	3.20E-05	AP-42, 3.1-3
	Formaldehyde	50-00-00	7.24E-01	7.24E-01	7.10E-04	AP-42, 3.1-3
	Naphthalene	91-20-3	1.33E-03	1.33E-03	1.30E-06	AP-42, 3.1-3

[36] If a NOx stack test is not performed within ten (10) years from the last test then the AP-42 emission factor for NOx shall be used to determine emissions.

Emission Source	Individual HAP/TAC	CAS	Natural Gas Emission Factor			Emission Factor Source
			lb/10^6 scf natural gas combusted		lb/MMBtu natural gas combusted	
			Uncontrolled	Controlled		
	Propylene Oxide	75-56-9	2.96E-02	2.96E-02	2.90E-05	AP-42, 3.1-3
	Toluene	108-88-3	1.33E-01	1.33E-01	1.30E-04	AP-42, 3.1-3
	Xylene	1330-20-7	6.53E-02	6.53E-02	6.40E-05	AP-42, 3.1-3

$E_{(HAP)} = (X)(EF\ lb/10^6\ scf)(1\ ton/2000\ lb.)$

Where: $E_{(HAP)}$ = emissions (tons)
X = the amount of natural gas combusted (10^6 scf)
[AP-42 EF (lb/MMBtu) converted to (lb/10^6 scf natural gas combusted]

Emission Unit IA1: Storage Tanks

Emission Unit IA1 Diesel Fuel Tank Emission Factors

Emission Source	Pollutant	Diesel Fuel Emission Factor (lb/gallon)	Emission Factor Source
IE1	VOC	N/A	Emissions accounted for in the working losses for the storage tanks below using AP-42 evaporative losses.
IE2	VOC	N/A	Emissions accounted for in the working losses for the storage tanks below using AP-42 evaporative losses.
IE3	VOC	N/A	Emissions accounted for in the working losses for the storage tanks below using AP-42 evaporative losses.
IE4	VOC	N/A	Emissions accounted for in the working losses for the storage tanks below using AP-42 evaporative losses.
IE5	VOC	N/A	Emissions accounted for in the working losses for the storage tanks below using AP-42 evaporative losses.

Emission Unit IA2: Emergency Generator

Emission Unit IA2 Diesel Combustion Emission Factors for Emergency Generator IE6

Emission Source	Pollutant	Diesel Emission Factor			Emission Factor Source
		lb/hp-hr	lb/gallon diesel fuel combusted	lb/MMBtu diesel fuel combusted	
IE6	NO_X	1.13E-02	2.23E-01	1.60E+00	Vender Spec
	CO	9.03E-04	1.78E-02	1.28E-01	Vender Spec
	PM total	4.93E-04	9.69E-03	0.090	AP-42, 3.4-2
	PM condensable	5.44E-05	1.07E-03	0.0077	AP-42, 3.4-2
	PM_{10} filterable	3.51E-04	6.89E-03	0.0496	AP-42, 3.4-2
	$PM_{2.5}$ filterable	3.39E-04	6.66E-03	0.0479	AP-42, 3.4-2
	SO_2	1.07E-05	2.11E-04	0.002	AP-42, 3.4-1
	VOC	1.76E-04	3.46E-03	2.49E-02	Vender Spec

E = (X)(EF lb/gallon)(1 ton/2,000 lb)

Where: E = emissions (tons) annually
X = the amount of diesel fuel (gallons) combusted annually
[AP-42 EF (lb/MMBtu) converted to (lb/gallon diesel fuel combusted)]

Emission Unit IA2 Diesel Combustion HAP/TAC Emission Factors for Emergency Generator IE6

Emission Source	Individual HAP/TAC	CAS	Diesel Emission Factor			Emission Factor Source
			lb/hp-hr	lb/gallon diesel fuel combusted	lb/MMBtu diesel fuel combusted	
IE6	Acenaphthene	83-32-9	3.31E-08	6.50E-07	4.68E-06	AP-42, 3.4-4
	Acenaphthylene	203-96-8	6.53E-08	1.28E-06	9.23E-06	AP-42, 3.4-4
	Acetaldehyde	75-07-0	1.78E-07	3.50E-06	2.52E-05	AP-42, 3.4-3
	Acrolein	107-02-8	5.57E-08	1.09E-06	7.88E-06	AP-42, 3.4-3
	Anthracene	120-12-7	8.70E-09	1.71E-07	1.23E-06	AP-42, 3.4-4
	Benzo(a)anthracene	56-55-3	4.40E-09	8.64E-08	6.22E-07	AP-42, 3.4-4
	Benzene	71-43-2	5.49E-06	1.08E-04	7.76E-04	AP-42, 3.4-3
	Benzo(a)pyrene	50-32-8	1.82E-09	3.57E-08	2.57E-07	AP-42, 3.4-4
	Benzo(b)fluoranthene	205-99-2	7.85E-09	1.54E-07	1.11E-06	AP-42, 3.4-4
	Benzo(g,h,i)perylene	191-24-2	3.93E-09	7.72E-08	5.56E-07	AP-42, 3.4-4
	Benzo(k)fluoranthene	205-82-3	1.54E-09	3.03E-08	2.18E-07	AP-42, 3.4-4
	Chrysene	218-01-9	1.08E-08	2.13E-07	1.53E-06	AP-42, 3.4-4
	Dibenz(a,h)anthracene	53-70-3	2.45E-09	4.81E-08	3.46E-07	AP-42, 3.4-4
	Fluoranthene	206-44-0	2.85E-08	5.60E-07	4.03E-06	AP-42, 3.4-4
	Fluorene	86-73-7	9.05E-08	1.78E-06	1.28E-05	AP-42, 3.4-4
	Formaldehyde	50-00-00	5.58E-07	1.10E-05	7.89E-05	AP-42, 3.4-3

Emission Source	Individual HAP/TAC	CAS	Diesel Emission Factor			Emission Factor Source
			lb/hp-hr	lb/gallon diesel fuel combusted	lb/MMBtu diesel fuel combusted	
	Indeno(1,2,3-cd) pyrene	193-39-5	2.93E-09	5.75E-08	4.14E-07	AP-42, 3.4-4
	Naphthalene	91-20-3	9.19E-07	1.81E-05	1.30E-04	AP-42, 3.4-4
	Phenanathrene	85-01-8	2.88E-07	5.67E-06	4.08E-05	AP-42, 3.4-4
	Pyrene	129-00-00	2.62E-08	5.15E-07	3.71E-06	AP-42, 3.4-4
	Toluene	108-88-3	1.99E-06	3.90E-05	2.81E-04	AP-42, 3.4-3
	Xylenes	1330-20-7	1.36E-06	2.68E-05	1.93E-04	AP-42, 3.4-3

$E_{(HAP)}$ = (X)(EF lb/gallon)(1 ton/2,000 lb)

Where: $E_{(HAP)}$ = HAP emissions (tons) annually
X = the amount of diesel fuel (gallons) combusted annually
[AP-42 EF (lb/MMBtu) converted to (lb/gallon diesel fuel combusted)]

Emission Unit IA3: Spark-Ignition Emergency Generators

Emission Unit IA3 Natural Gas Combustion Emission Factors for Emergency Generator IE7

Emission Source	Pollutant	Natural Gas Emission Factor		Emission Factor Source
		lb/10^6 scf natural gas combusted	lb/MMBtu natural gas combusted	
IE7	NO_X	4.16E+03	4.08E+00	AP-42, 3.2-2
	CO	3.23E+02	3.17E-01	AP-42, 3.2-2
	PM total	5.30E-01	0.0005	Roy Huntley, EPA*
	PM condensable	3.16E-01	0.0003	Roy Huntley, EPA*
	PM_{10} filterable	2.04E-01	0.0002	Roy Huntley, EPA*
	$PM_{2.5}$ filterable	1.12E-01	0.0001	Roy Huntley, EPA*
	SO_2	6.00E-01	5.88E-04	AP-42, 3.2-2
	VOC	1.20E+02	1.18E-01	AP-42, 3.2-2
	NH_3	3.26E+00	3.20E-03	EPA WebFIRE

$E = (X)(EF\ lb/10^6\ scf)(1\ ton/2000\ lb.)$

Where: E = emissions (tons)
X = the amount of natural gas combusted (10^6 scf)
[AP-42 EF (lb/MMBtu) converted to (lb/10^6 scf natural gas combusted]

Emission Unit IA3 Natural Gas Combustion HAP/TAC Emission Factors for Emergency Generator IE7

Emission Source	Individual HAP/TAC	CAS	Natural Gas Emission Factor		Emission Factor Source
			lb/10^6 scf natural gas combusted	lb/MMBtu natural gas combusted	
IE7	1,1,2,2-Tetrachloroethane	79-34-5	4.08E-02	4.00E-05	AP-42, 3.2-2
	1,1,2-Trichloroethane	79-00-5	3.24E-02	3.18E-05	AP-42, 3.2-2
	1,1-Dichloroethane	75-34-3	2.41E-02	2.36E-05	AP-42, 3.2-2
	1,2-Dichloroethane	107-06-2	2.41E-02	2.36E-05	AP-42, 3.2-2
	1,3-Dichloropropene	542-75-6	2.69E-02	2.64E-05	AP-42, 3.2-2
	2-Methylnaphthalene	91-57-6	3.26E-02	3.20E-05	AP-42, 3.2-2
	2,2,4-Trimethylpentane	540-84-1	2.55E-01	2.50E-04	AP-42, 3.2-2
	Acenaphthene	83-32-9	1.28E-03	1.25E-06	AP-42, 3.2-2
	Acenaphthylene	203-96-8	5.64E-03	5.53E-06	AP-42, 3.2-2
	Acetaldehyde	75-07-0	8.53E+00	8.36E-03	AP-42, 3.2-2

Emission Source	Individual HAP/TAC	CAS	Natural Gas Emission Factor		Emission Factor Source
			lb/10^6 scf natural gas combusted	lb/MMBtu natural gas combusted	
	Acrolein	107-02-8	5.24E+00	5.14E-03	AP-42, 3.2-2
	Benzene	71-43-2	4.49E-01	4.40E-04	AP-42, 3.2-2
	Benzo(b)fluoranthene	205-99-2	1.69E-04	1.66E-07	AP-42, 3.2-2
	Benzo(g,h,i)perylene	191-24-2	4.22E-04	4.14E-07	AP-42, 3.2-2
	Biphenyl	92-52-4	2.16E-01	2.12E-04	AP-42, 3.2-2
	Carbon Tetrachloride	56-23-5	3.74E-02	3.67E-05	AP-42, 3.2-2
	Chlorobenzene	108-90-7	3.10E-02	3.04E-05	AP-42, 3.2-2
	Chloroform	67-66-3	2.91E-02	2.85E-05	AP-42, 3.2-2
	Chrysene	218-01-9	7.07E-04	6.93E-07	AP-42, 3.2-2
	Ethylbenzene	100-41-4	4.05E-02	3.97E-05	AP-42, 3.2-2
	Ethylene Dibromide	106-93-4	4.52E-02	4.43E-05	AP-42, 3.2-2
	Fluoranthene	206-44-0	1.13E-03	1.11E-06	AP-42, 3.2-2
	Fluorene	86-73-7	5.78E-03	5.67E-06	AP-42, 3.2-2
	Formaldehyde	50-00-00	5.39E+01	5.28E-02	AP-42, 3.2-2
	Hexane	110-54-3	1.13E+00	1.11E-03	AP-42, 3.2-2
	Methanol	67-56-1	2.55E+00	2.50E-03	AP-42, 3.2-2
	Methylene Chloride	75-09-2	2.04E-02	2.00E-05	AP-42, 3.2-2
	Naphthalene	91-20-3	7.59E-02	7.44E-05	AP-42, 3.2-2
	Phenanathrene	85-01-8	1.06E-02	1.04E-05	AP-42, 3.2-2
	Phenol	108-95-2	2.45E-02	2.40E-05	AP-42, 3.2-2
	Pyrene	129-00-0	1.39E-02	1.36E-05	AP-42, 3.2-2
	Styrene	100-42-5	2.41E-02	2.36E-05	AP-42, 3.2-2
	Tetrachloroethane	79-34-5	2.53E-03	2.48E-06	AP-42, 3.2-2
	Toluene	108-88-3	4.16E-01	4.08E-04	AP-42, 3.2-2
	Vinyl Chloride	75-01-4	1.52E-02	1.49E-05	AP-42, 3.2-2
	Xylene	1330-20-7	1.88E-01	1.84E-04	AP-42, 3.2-2

$E_{(HAP)}$ = (X)(EF lb/10^6 scf)(1 ton/2000 lb.)
Where: $E_{(HAP)}$ = emissions (tons)
X = the amount of natural gas combusted (10^6 scf)
[AP-42 EF (lb/MMBtu) converted to (lb/10^6 scf natural gas combusted]

Emission Unit IA4: Parts Washer

VOC Emissions (tpy) = amount of solvent used (gallons) × VOC Content (lb/gal) × (1 ton/2000 lb)

Insignificant Activity Table: Equipment not coverd in any other emission unit

Equipment	Qty	Emission Calculation
Brazing, soldering or welding, plant maintenance use only	1 portable	AP-42 Emission Factors Chapter 12.19, Tables 12.19-1 & 12.19-2
Emergency relief vents	1	None
Diesel Fuel Storage (day) tank, 25 gallons [supplies GT11ce, cranking engine]	1	Emissions accounted for in the working losses for the storage tanks below using AP-42 evaporative losses.
50/50 Glycol-water tank, 1,238 gal, pressurized	1	None
Diesel Fuel Storage (day) tank, 25 gallons [supplies GT12ce, cranking engine and EG1]	1	Emissions accounted for in the working losses for the storage tanks below using AP-42 evaporative losses.

Attachment D – Determination of Benchmark Ambient Concentration (BAC)

Category _____ Number _____

Compound name _____ CAS No. _____

Molecular weight _____

BAC_C = _____ µg/m^3, annual BAC_{NC} = _____ µg/m^3, _____ (avg period)

de minimis _____ lb/hr; _____ lb/_____; _____ lb/year

I. Carcinogen Risk - BAC_C (annual averaging period) Carcinogen ☐ YES ☐ NO

1. ☐ IRIS 10^{-6} risk = _____ µg/m^3 URE = _____ (µg/m^3)$^{-1}$ Date _____
2. ☐ Cal 10^{-6} risk = _____ µg/m^3 IUR = _____ (µg/m^3)$^{-1}$ Date _____
3. ☐ Mich 10^{-6} risk = _____ µg/m^3 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/m^3 Date _____
8. ☐ Default 0.0004 µg/m^3

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

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

[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/m^3 × 0.54 = _____ lb/hour
   BAC_C _____ µg/m^3 × 480 = _____ lb/year

2. ☐ Chronic Noncancer Risk _____ (averaging period)
   BAC_{NC} _____ µg/m^3 × 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 _____

Attachment E - Title IV Phase II Acid Rain Requirements

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 and 6.47.

Acid Rain Conditions

1. **SO_2 Allowance Allocations for Unit U2**

Unit U2: SO2 Allowances	SO2 Allowances for Years 2008 - 2009	SO2 Allowances for Years 2010 and Beyond
Table 2 of 40 CFR 73	0*	0*
	GT13 was a new unit and is not eligible for an SO_2 allowance allocation under 40 CFR 73 Subpart B, 40 CFR73.10(b) Phase II Allowances. A minimum balance of "0" SO_2 allowances shall be maintained in the account. If there are not enough SO_2 allowances to cover the SO_2 produced by GT13 for the calendar year, SO_2 allowances shall be transferred to the GT13 account by the allowance transfer deadline[1] by March 1 of the following calendar year, to maintain a minimum balance of "0" SO_2 allowances.	

[1] 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 40 CFR72.2, CFR 73 Subpart B 40 CFR73.20(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 SO_2 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.

In May 2002, the unit obtained 29 vintage 2002 SO_2 allowances from Cane Run Unit 3 and obtained 50 vintage 2001 SO_2 allowances from Mill Creek Unit 1.

2. **NO_x Requirements for Unit U2**

Unit U2: NO_x Requirements	
NO_x Limit	The owner/operator requested a synthetic NO_x limit for the unit of less than or equal to 90 ton/year. NO_x emissions shall be calculated per the alternate method allowed by 40 CFR 75 Appendix E for peaking units. If the operations exceed the levels required to be a peaking unit, per the definition of a peaking unit per regulation 72.2,

Unit U2: NO_x Requirements	
	the owner/operator shall install and certify a NO_x – diluent continuous emission monitoring system, no later than December 31 of the following calendar year, that shall then be used to calculate the NO_x emissions.

Comments, Notes, and Justifications:

(1) The affected emission unit GT13 is one (1) natural gas-fired, simple cycle, turbine powered, peaking, electrical generating unit. Units GT11 and GT12 are existing simple cycle combustion turbines that commenced commercial operation before November 15, 1990 and are exempt from the Acid Rain Program. (40CFR72 Subpart A 40 CFR72.6(b)(1))

Permit Application:

The Louisville Gas & Electric Company submitted the Title V Permit Renewal Application for the Paddy's Run Station, dated June 15, 2004, and signed by Paul Thompson. 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 75, the owners and operators of Louisville Gas & Electric Company shall comply with the alternative method of calculating NO_x emissions per the alternate method allowed by 40 CFR 75 Appendix E for peaking units. If the limits of a peaking unit definition are exceeded, certified CEMS shall be installed and the CEMS data shall be used to calculate the NO_x emissions.

Plant ID: 0125

Attachment F - 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 the District will need final notice 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 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)

Fee Comment

1. Louisville Gas and Electric – Paddy's Run Station is required to pay annual emission fees.

2. Louisville Gas and Electric – Paddy's Run Station paid an Administrative Revision fee of $518.85 for the addition of Insignificant Activities to operating permit 130-97-TV (R1). Louisville Gas and Electric – Paddy's Run Station paid a NESHAP Review Per Area Source MACT fee of $518.85 for the 40 CFR 63, Subpart ZZZZ analysis performed in adding the Compression-Ignition Emergency Generator (I.A.-2 unit EG1) to operating permit 130-97-TV (R1). Louisville Gas and Electric – Paddy's Run Station paid two NSPS Review Per Major Source MACT fees of $1,037.69 each for the 40 CFR 60, Subpart JJJJ analysis performed in adding the two Spark-Ignition Emergency Generators (I.A.-3 units EG2 and EG3) to operating permit 130-97-TV (R1). Total permit fees paid for this revision was $3113.08.

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