

PUBLIC NOTICE

Tennessee Gas Pipeline Company-Station 856 has applied to the Tennessee Air Pollution Control Division (TAPCD) for a renewal of their major source operating permit subject to the provisions of paragraph 1200-03-09-.02(11) of the Tennessee Air Pollution Control Regulations (also frequently referred to as Title V regulations). A major source (Title V) operating permit is required by both the Federal Clean Air Act and the Tennessee Air Pollution Control Regulations. It should be noted that this facility has a current major source (Title V) operating permit.

The applicant is Tennessee Gas Pipeline Company-Station 856 with a site address of 2030 Highway 226, Savannah, TN. They seek to obtain a renewal of their major source operating permit for their natural gas pipeline compressor station.

EPA has agreed to treat this draft Part 70 permit as a proposed Part 70 permit and to perform its 45-day review provided by the law concurrently with the public notice period. If any substantive comments are received, EPA's 45-day review period will cease to be performed concurrently with the public notice period. EPA's 45-day review period will start once the public notice period has been completed and EPA receives notification from the Tennessee Air Pollution Control Division that comments have been received and resolved. Whether EPA's 45-day review period is performed concurrently with the public comment period or after the public comment period has ended, the deadline for citizen's petitions to the EPA Administrator will be determined as if EPA's 45-day review period is performed after the public comment period has ended (i.e., sequentially).

The status regarding EPA's 45-day review of this project and the deadline for submitting a citizen petition can be found at the following website address:

<http://www.epa.gov/caa-permitting/tennessee-proposed-title-v-permits>

A copy of the application materials used by the TAPCD and a copy of the draft permit are available for public inspection during normal business hours at the following locations:

Hardin County Library
1365 Pickwick Street
Savannah, TN 38372-3518

and

Tennessee Department of Environment and Conservation
Division of Air Pollution Control
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 15th Floor
Nashville, Tennessee 37243

Also, if you require a copy of the draft permit it is available electronically by accessing the TDEC internet site located at:

<http://www.tn.gov/environment/topic/ppo-air>

Interested parties are invited to review these materials and comment. In addition, a public hearing may be requested at which written or oral presentations may be made. To be considered, written comments or requests for a public hearing must be made within thirty (30) days of the date of this notice and should be addressed to **Ms. Michelle W. Owenby, Director**, Tennessee Division of Air Pollution Control, William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 15th Floor, Nashville, Tennessee 37243. Questions concerning the source(s) may be addressed to Mrs. Sarosh Kaiser at the same address or by calling (615) 532-0554 or (615) 532-0585. A final determination will be made after weighing all relevant comments.

Individuals with disabilities who wish to participate in these proceedings or review information maintained at the above-mentioned depositories should contact the Tennessee Department of Environment and Conservation to discuss any auxiliary aids or services needed to facilitate such review. Such contact may be in person, by writing, telephone, or other means, and should be made no less than ten days prior to the end of the public comment period to allow time to provide such aid or services. Contact the Tennessee Department of Environment and Conservation ADA Coordinator, William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 2nd Floor, Nashville, Tennessee 37243, 1-866-253-5827. Hearing impaired callers may use the Tennessee Relay Service, 1-(800)-848-0298.

For the Hardin County "Courier" -- publish **once** during the time period of October 6, 2016, through October 27, 2016.

Air Pollution Control

Date: September 30, 2016

Assigned to – Sarosh Kaiser

No alterations to the above are allowed:

Tennessee Gas Pipeline Company- Station 856 must pay to place this advertisement in the newspaper

Air Pollution Control must be furnished with an affidavit from the newspaper stating that the ad was run and the date of the ad or one complete sheet from the newspaper showing this advertisement, the name of the newspaper and the date of publication. Mail to Mrs. Sarosh Kaiser, Air Pollution Control Division, William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 15th Floor, Nashville, Tennessee 37243.

TITLE V PERMIT STATEMENT

Facility Name: Tennessee Gas Pipeline Company, L.L.C. – Station 856
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City: Savannah

County: Hardin

Date Letter Received: March 18, 2016

Date Request Deemed Complete: March 18, 2016

Emission Source Reference No.: 36-0061

Permit No.: 571462

INTRODUCTION

This narrative is being provided to assist the reader in understanding the content of the attached Title V operating permit. This Title V Permit Statement is written pursuant to Tennessee Air Pollution Control Rule 1200-03-09-.02(11)(f)1.(v). The primary purpose of the Title V operating permit is to consolidate and identify existing state and federal air requirements applicable to *Tennessee Gas Pipeline Company, L.L.C. - Station 856* and to provide practical methods for assuring compliance with these requirements. The following narrative is designed to accompany the Title V Operating Permit. It initially describes the facility receiving the permit, then the applicable requirements and their significance, and finally the compliance status with those applicable requirements. This narrative is intended only as an adjunct for the reviewer and has no legal standing. Any revisions made to the permit in response to comments received during the public participation process will be described in an addendum to this narrative.

Acronyms

PSD - Prevention of Significant Deterioration

NESHAP - National Emission Standards for Hazardous Air Pollutants

NSPS - New Source Performance Standards

MACT - Maximum Achievable Control Technology

NSR - New Source Review

GHGs – Greenhouse Gases

I. Identification Information

A. Source Description

Tennessee Gas Pipeline Company, L.L.C. (TGP) owns and operates Station 856 in Savannah, TN in Hardin County. This is a compressor station for transporting natural gas through the transmission pipeline system. The station has two natural gas-fired turbine engines rated at 5000 hp and 7500 hp (Source 01) and an emergency natural gas-fired generator driven by a 225 hp SI engine (Source 02).

B. Facility Classification

1. Attainment or Non-Attainment Area Location

Area is designated as an attainment area for all criteria pollutants.

2. Company is located in a Class II area.

C. Regulatory Status

1. PSD/NSR

This facility is a major source above the PSD threshold of 250 tpy based on PTE for NO_x at 346.3 tons/yr.

2. Title V Major Source Status by Pollutant

Pollutant	Is the pollutant emitted?	If emitted, what is the facility's status?	
		Major Source Status	Non-Major Source Status
PM	Yes	No	
PM ₁₀	Yes	N/A	
SO ₂	Yes	No	
VOC	Yes	No	
NO _x	Yes	Yes	
CO	Yes	Yes	
Individual HAP	Yes	No	
Total HAPs	Yes	No	
CO ₂ (e)	Yes	No	

3. MACT Standards

None currently requiring compliance.

4. Program Applicability

Are the following programs applicable to the facility?

PSD (*No*): No PSD has occurred to date but above the 250 tpy PSD threshold allowable

NESHAP (*Yes*)

NSPS (*No*)

II. Compliance Information

A. Compliance Status

Is the facility currently in compliance with all applicable requirements? *Yes*

Are there any applicable requirements that will become effective during the permit term? *No*

III. Other Requirements

A. Emissions Trading

The facility is not involved in an emission trading program.

B. Acid Rain Requirements

This facility is not subject to any requirements in Title IV of the Clean Air Act.

C. Prevention of Accidental Releases

Applicable

D. Greenhouse Gases

This facility is not a major source for GHGs.

IV. Public Participation Procedures

Notification of this draft permit was mailed to the following environmental agencies:

1. EPA Region IV
2. State of Mississippi and State of Alabama

V. Plant wide Allowable Emissions (or Potential to Emit if no allowable)

Source ID	Tons of Allowable (or potential if no allowable is set) Emissions per 12 Months					
	PM	SO2	CO	VOC	NOx	HAP-total
36-0061						
Source 36-0061-01	27.6	0.44	49.2	Neg.	228	Neg.
Source 36-0061-02	0.41	0.0004	2.51	0.02	1.49	Neg.

V. Public Participation Important Dates:

EPA concurrent review requested Yes

Public Notice publication date _____

Public Notice period completion date _____

Public Notice publication comments _____

EPA Notification date _____

EPA review period completion date _____

EPA review comments _____

VI. Changes Since Previous Permit Issuance

The following represent the changes to the Title V Operating Permit No. 562542 issued September 22, 2011

1. Change in Responsible Official from John R. Pannell to Gary M. Buchler, Vice-President of Operations, and change in ownership. Administrative Amendment #1 dated September 14, 2012
2. Change in Responsible Official from Gary M. Buchler to Tom Dender, Vice-President of Operations, Administrative Amendment #2 dated May 17, 2013
3. Changed only the Technical Contact and Billing Contact. (Amendment #3, April 5, 2016) TGP submitted a request dated December 10, 2015 for an Administrative Permit Amendment to their Title V Permit 562542 for Compressor Station 856, Source Reference Number 36-0061. This Administrative Permit Amendment reflects the change in the Technical and Billing Contact. The new technical and billing contact for the facility is Julia Griffin, as reflected in conditions E2-1(b) and E2-1(c). This Administrative Permit Amendment, dated April 5, 2016, is pursuant to the regulatory provision of item 1200-03-09-.02(11)(f)4.(i)(II) of the Tennessee Air Pollution Control Regulations.

**TENNESSEE AIR POLLUTION CONTROL BOARD
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE, TENNESSEE 37243-1531**



OPERATING PERMIT (TITLE V) Issued Pursuant to Tennessee Air Quality Act

This permit fulfills the requirements of Title V of the Federal Clean Air Act (42 U.S.C. 7661a-7661e) and the federal regulations promulgated thereunder at 40 CFR Part 70. (FR Vol. 57, No. 140, Tuesday, July 21, 1992 p.32295-32312). This permit is issued in accordance with the provisions of paragraph 1200-03-09-.02(11) of the Tennessee Air Pollution Control Regulations. The permittee has been granted permission to operate an air contaminant source in accordance with emissions limitations and monitoring requirements set forth herein.

Date Issued: **DRAFT**

Permit Number:
571462

Date Expires:

Issued To:
Tennessee Gas Pipeline Company, L.L.C. - Station 856

Installation Address:
2030 Highway 226
Savannah

Installation Description:

Natural Gas Pipeline Compressor Station:

01: Two (2) Natural Gas-fired Turbine Engines, Unit 1A rated at 5000 hp GE M3502RC
& Unit 2A rated at 7500 hp Westinghouse W81RM-54

02: Natural gas-fired emergency generator, 225 hp Caterpillar G343

NESHAP Subpart ZZZZ

Emission Source Reference No.: **36-0061**

Renewal Application Due Date:

Between **XX** and **XX** (to be determined..)

Primary SIC: 49

Information Relied Upon:

Title V Renewal Application dated:
March 14, 2016

(Continued on the next page)

TECHNICAL SECRETARY

No Authority is Granted by this Permit to Operate, Construct, or Maintain any Installation in Violation of any Law, Statute, Code, Ordinance, Rule, or Regulation of the State of Tennessee or any of its Political Subdivisions.

POST AT INSTALLATION ADDRESS

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ATTACHMENT 1	Opacity Matrix Decision Tree for Visible Emission Evaluation EPA Method 9, dated June 18, 1996 (amended September 11, 2013)	1 page
ATTACHMENT 2	Emission Factors for Stationary Gas Turbines	2 pages
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ATTACHMENT 4	Uncontrolled Emission Factors for 4 Stroke Rich Burn engines	1 page
ATTACHMENT 5	TGP Emission Factors for the engine driving the emergency generator	1 page

SECTION A

GENERAL PERMIT CONDITIONS

A permit issued under the provisions of paragraph 1200-03-09-.02(11) is a permit issued pursuant to the requirements of Title V of the Federal Act and its implementing Federal regulations promulgated at 40 CFR, Part 70.

- A1. Definitions.** Terms not otherwise defined in the permit shall have the meaning assigned to such terms in the referenced regulation.

TAPCR 1200-03

- A2. Compliance requirement.** All terms and conditions in a permit issued pursuant to paragraph 1200-03-09-.02(11) including any provisions designed to limit a source's potential to emit, are enforceable by the Administrator and citizens under the Federal Act.

The permittee shall comply with all conditions of its permit. Except for requirements specifically designated herein as not being federally enforceable (State Only), non-compliance with the permit requirements is a violation of the Federal Act and the Tennessee Air Quality Act and is grounds for enforcement action; for a permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. Non-compliance with permit conditions specifically designated herein as not being federally enforceable (State Only) is a violation of the Tennessee Air Quality Act and may be grounds for these actions.

TAPCR 1200-03-09-.02(11)(e)2(i) and 1200-03-09-.02(11)(e)1(vi)(I)

- A3. Need to halt or reduce activity.** The need to halt or reduce activity is not a defense for noncompliance. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. However, nothing in this item shall be construed as precluding consideration of a need to halt or reduce activity as 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 continuing operations.

TAPCR 1200-03-09-.02(11)(e)1(vi)(II)

- A4. The permit.** The permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

TAPCR 1200-03-09-.02(11)(e)1(vi)(III)

- A5. Property rights.** The permit does not convey any property rights of any sort, or any exclusive privilege.

TAPCR 1200-03-09-.02(11)(e)1(vi)(IV)

- A6. Submittal of requested information.** The permittee shall furnish to the Technical Secretary, within a reasonable time, any information that the Technical Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or termination of the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Technical Secretary copies of records required to be kept by the permit. If the permittee claims that such information is confidential, the Technical Secretary may review that claim and hold the information in protected status until such time that the Board can hear any contested proceedings regarding confidentiality disputes. If the information is desired by EPA, the permittee may mail the information directly to EPA. Any claims of confidentiality for federal purposes will be determined by EPA.

TAPCR 1200-03-09-.02(11)(e)1(vi)(V)

- A7. Severability clause.** The requirements of this permit are severable. A dispute regarding one or more requirements of this permit does not invalidate or otherwise excuse the permittee from their duty to comply with the remaining portion of the permit.

TAPCR 1200-03-09.02(11)(e)1(v)

A8. Fee payment.

(a) The permittee shall pay an annual major source emission fee based upon the responsible official's choice of actual emissions or allowable emissions. An emission cap of 4,000 tons per year per regulated pollutant per major source SIC Code shall apply to actual or allowable based emission fees. A major source annual emission fee will not be charged for emissions in excess of the cap (s) or for carbon monoxide.

(b) Major sources who have filed a timely, complete operating permit application in accordance with 1200-03-09-.02(11), shall pay allowable emission based fees until the beginning of the next annual accounting period following receipt of their major source operating permit. At that time, the permittee shall begin paying their annual emission fee based upon their choice of actual or allowable based fees, or mixed actual and allowable based fees as stated under SECTION E of this permit. Once permitted, altering the existing choice shall be accomplished by a written request of the major source, filed in the office of the Technical Secretary at least one hundred eighty days prior to the expiration or reissuance of the major source operating permit.

(c) Major sources must conform to the following requirements with respect to fee payments:

1. If a major source choosing an allowable based annual emission fee wishes to restructure its allowable emissions for the purposes of lowering its annual emission fees, a mutually agreed upon, more restrictive regulatory requirement may be established to minimize the allowable emissions and thus the annual emission fee. The more restrictive requirement must be specified on the permit, and must include the method used to determine compliance with the limitation. The documentation procedure to be followed by the major source must also be included to insure that the limit is not exceeded. Restructuring the allowable emissions is permissible only in the annual accounting periods of eligibility and only, if the written request for restructuring is filed with the Technical Secretary at least 120 days prior to the beginning of the annual accounting period of eligibility. These periods of eligibility occur upon expiration of the initial major source operating permit, renewal of an expired major source operating permit or reissuance of a major source operating permit.

2. Beginning with the annual accounting period beginning July 1, 2004 to June 30, 2005, major sources paying on allowable based emission fees will be billed by the Division no later than April 1 prior to the end of the accounting period. The major source annual emission fee is due July 1 following the end of the accounting period.

3. Beginning with the annual accounting period beginning July 1, 2004 to June 30, 2005, major sources choosing an actual based annual emission fee shall file an actual emissions analysis with the Technical Secretary which summarizes the actual emissions of all regulated pollutants at the air contaminant sources of their facility. Based upon the actual emissions analysis, the source shall calculate the fee due and submit the payment and the analysis each July 1st following the end of the annual accounting period.

4. Beginning with the annual accounting period beginning July 1, 2004 to June 30, 2005, major sources choosing a mixture of allowable and actual based emission fees shall file an actual emissions and allowable emissions analysis with the Technical Secretary which summarizes the actual and allowable emissions of all regulated pollutants at the air contaminant sources of their facility. Based upon the analysis, the source shall calculate the fee due and submit the payment and the analysis each July 1st following the end of the annual accounting period.

The mixed based fee shall be calculated utilizing the 4,000 ton cap specified in subparagraph 1200-03-26-.02(2)(i). In determining the tonnages to be applied toward the regulated pollutant 4,000 ton cap in a mixed based fee, the source shall first calculate the actual emission based fees for a regulated pollutant and apply that tonnage toward the regulated pollutant's cap. The remaining tonnage available in the 4,000 ton category of a regulated pollutant shall be subject to allowable emission based fee calculations for the sources that were not included in the actual emission based fee calculations. Once the 4,000 ton cap has been reached for a regulated pollutant, no additional fee shall be required.

5. Major sources choosing to pay their major source annual emission fee based on actual based emissions or a mixture of allowable and actual based emissions may request an extension of time to file their emissions analysis with the Technical Secretary. The extension may be granted by the Technical Secretary up to ninety (90) days. The request for extension must be postmarked no later than July 1 or the request for extension shall be denied. The request for extension to file must state the reason and give an adequate explanation.

An estimated annual emission fee payment of no less than eighty percent (80%) of the fee due July 1 must accompany the request for extension to avoid penalties and interest on the underpayment of the annual emission fee. A remaining balance due must accompany the emission analysis. If there has been an overpayment, a refund may be requested in writing to the Division or be applied as a credit toward next year's major source annual emission fee. The request for extension of time is not available to major sources choosing to pay their major source annual emission fee based on allowable emissions.

6. Newly constructed major sources or minor existing sources modifying their operations such that they become a major source in the midst of the standard July 1st to June 30th annual accounting period, shall pay allowable based annual emission fees for the fractional remainder of the annual accounting period commencing upon their start-up. At the beginning of the next annual accounting period, the "responsible official" of the source may choose to pay

annual emission fees based on actual or allowable emissions or a mixture of the two as provided for in this rule 1200-03-26-.02.

(d) Where more than one (1) allowable emission limit is applicable to a regulated pollutant, the allowable emissions for the regulated pollutants shall not be double counted. Major sources subject to the provisions of paragraph 1200-03-26-.02(9) shall apportion their emissions as follows to ensure that their fees are not double counted.

1. Sources that are subject to federally promulgated hazardous air pollutant standards that can be imposed under Chapter 1200-03-11 or Chapter 1200-03-31 will place such regulated emissions in the specific hazardous air pollutant under regulation. If the pollutant is also in the family of volatile organic compounds or the family of particulates, the pollutant shall not be placed in that respective family category.

2. A miscellaneous category of hazardous air pollutants shall be used for hazardous air pollutants listed at part 1200-03-26-.02(2)(i)12 that do not have an allowable emission standard. A pollutant placed in this category shall not be subject to being placed in any other category such as volatile organic compounds or particulates.

3. Each individual hazardous air pollutant and the miscellaneous category of hazardous air pollutants is subject to the 4,000 ton cap provisions of subparagraph 1200-03-26-.02(2)(i).

4. Major sources that wish to pay annual emission fees for PM₁₀ on an allowable emission basis may do so if they have a specific PM₁₀ allowable emission standard. If a major source has a total particulate emission standard, but wishes to pay annual emission fees on an actual PM₁₀ emission basis, it may do so if the PM₁₀ actual emission levels are proven to the satisfaction of the Technical Secretary. The method to demonstrate the actual PM₁₀ emission levels must be made as part of the source's major source operating permit in advance in order to exercise this option. The PM₁₀ emissions reported under these options shall not be subject to fees under the family of particulate emissions. The 4,000 ton cap provisions of subparagraph 1200-03-26-.02(2)(i) shall also apply to PM₁₀ emissions.

TAPCR 1200-03-26-.02 (3) and (9) and 1200-03-09-.02(11)(e)1(vii)

A9. Permit revision not required. A permit revision will not be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or process for changes that are provided for in the permit.

TAPCR 1200-03-09-.02(11)(e)1(viii)

A10. Inspection and entry. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Technical Secretary or his authorized representative to perform the following for the purposes of determining compliance with the permit applicable requirements:

(a) Enter upon, at reasonable times, the permittee's premises where a source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;

(c) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and

(d) As authorized by the Clean Air Act and Chapter 1200-03-10 of TAPCR, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

(e) "Reasonable times" shall be considered to be customary business hours unless reasonable cause exists to suspect noncompliance with the Act, Division 1200-03 or any permit issued pursuant thereto and the Technical Secretary specifically authorizes an inspector to inspect a facility at any other time.

TAPCR 1200-03-09-.02(11)(e)3.(ii)

A11. Permit shield.

(a) Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements as of the date of permit issuance, provided that:

1. Such applicable requirements are included and are specifically identified in the permit; or

2. The Technical Secretary, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.

(b) Nothing in this permit shall alter or affect the following:

1. The provisions of section 303 of the Federal Act (emergency orders), including the authority of the Administrator under that section. Similarly, the provisions of T.C.A. §68-201-109 (emergency orders) including the authority of the Governor under the section;

2. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;

3. The applicable requirements of the acid rain program, consistent with section 408(a) of the Federal Act; or

4. The ability of EPA to obtain information from a source pursuant to section 114 of the Federal Act.

- (c) Permit shield is granted to the permittee.

A12. Permit renewal and expiration.

- (a) An application for permit renewal must be submitted at least 180 days, but no more than 270 days prior to the expiration of this permit. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted.
- (b) Provided that the permittee submits a timely and complete application for permit renewal the source will not be considered to be operating without a permit until the Technical Secretary takes final action on the permit application, except as otherwise noted in paragraph 1200-03-09-.02(11).
- (c) This permit, its shield provided in Condition A11, and its conditions will be extended and effective after its expiration date provided that the source has submitted a timely, complete renewal application to the Technical Secretary.

TAPCR 1200-03-09-.02(11)(f)2 and 3, 1200-03-09-.02(11)(d)1(i)(III), and 1200-03-09-.02(11)(a)2

A13. Reopening for cause.

- (a) A permit shall be reopened and revised prior to the expiration of the permit under any of the circumstances listed below:
1. Additional applicable requirements under the Federal Act become applicable to the sources contained in this permit provided the permit has a remaining term of 3 or more years. Such a reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the permit expiration date of this permit, unless the original has been extended pursuant to 1200-03-09-.02(11)(a)2.
 2. Additional requirements become applicable to an affected source under the acid rain program.
 3. The Technical Secretary or EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
 4. The Technical Secretary or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
- (b) Proceedings to reopen and issue a permit shall follow the same proceedings as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists, and not the entire permit. Such reopening shall be made as expeditiously as practicable.
- (c) Reopenings for cause shall not be initiated before a notice of such intent is provided to the permittee by the Technical Secretary at least 30 days in advance of the date that the permit is to be reopened except that the Technical Secretary may provide a shorter time period in the case of an emergency. An emergency shall be established by the criteria of T.C.A. 68-201-109 or other compelling reasons that public welfare is being adversely affected by the operation of a source that is in compliance with its permit requirements.
- (d) If the Administrator finds that cause exists to terminate, modify, or revoke and reissue a permit as identified in A13, he is required under federal rules to notify the Technical Secretary and the permittee of such findings in writing. Upon receipt of such notification, the Technical Secretary shall investigate the matter in order to determine if he agrees or disagrees with the Administrator's findings. If he agrees with the Administrator's findings, the Technical Secretary shall conduct the reopening in the following manner:
1. The Technical Secretary shall, within 90 days after receipt of such notification, forward to EPA a proposed determination of termination, modification, or revocation and reissuance, as appropriate. If the Administrator grants additional time to secure permit applications or additional information from the permittee, the Technical Secretary shall have the additional time period added to the standard 90 day time period.
 2. EPA will evaluate the Technical Secretary's proposed revisions and respond as to their evaluation.
 3. If EPA agrees with the proposed revisions, the Technical Secretary shall proceed with the reopening in the same manner prescribed under Condition A13 (b) and Condition A13 (c).
 4. If the Technical Secretary disagrees with either the findings or the Administrator that a permit should be reopened or an objection of the Administrator to a proposed revision to a permit submitted pursuant to Condition A13(d), he shall bring the matter to the Board at its next regularly scheduled meeting for instructions as to how he should proceed. The permittee shall be required to file a written brief expressing their position relative to the Administrator's objection and have a responsible official present at the meeting to answer questions for the Board. If the Board agrees that EPA is wrong in their demand for a permit revision, they shall instruct the Technical Secretary to conform to EPA's demand, but to issue the permit under protest preserving all rights available for litigation against EPA.

TAPCR 1200-03-09-.02(11)(f)6 and 7.

- A14. Permit transference.** An administrative permit amendment allows for a change of ownership or operational control of a source where the Technical Secretary determines that no other change in the permit is necessary, provided that the following requirements are met:
- (a) Transfer of ownership permit application is filed consistent with the provisions of 1200-03-09-.03(6), and
 - (b) Written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee has been submitted to the Technical Secretary.

TAPCR 1200-03-09-.02(11)(f)4(i)(IV) and 1200-03-09-.03(6)

- A15. Air pollution alert.** When the Technical Secretary has declared that an air pollution alert, an air pollution warning, or an air pollution emergency exists, the permittee must follow the requirements for that episode level as outlined in TAPCR 1200-03-09-.03(1) and TAPCR 1200-03-15-.03.

- A16. Construction permit required.** Except as exempted in TAPCR 1200-03-09-.04, or excluded in subparagraph TAPCR 1200-03-02-.01(1)(aa) or subparagraph TAPCR 1200-03-02-.01(1)(cc), this facility shall not begin the construction of a new air contaminant source or the modification of an air contaminant source which may result in the discharge of air contaminants without first having applied for and received from the Technical Secretary a construction permit for the construction or modification of such air contaminant source.

TAPCR 1200-03-09-.01(1)(a)

- A17. Notification of changes.** The permittee shall notify the Technical Secretary 30 days prior to commencement of any of the following changes to an air contaminant source which would not be a modification requiring a construction permit.
- (a) change in air pollution control equipment
 - (b) change in stack height or diameter
 - (c) change in exit velocity of more than 25 percent or exit temperature of more than 15 percent based on absolute temperature.

TAPCR 1200-03-09-.02(7)

- A18. Schedule of compliance.** The permittee will comply with any applicable requirement that becomes effective during the permit term on a timely basis. If the permittee is not in compliance, the permittee must submit a schedule for coming into compliance, which must include a schedule of remedial measure(s), including an enforceable set of deadlines for specific actions.

TAPCR 1200-03-09-.02(11)(d)3 and 40 CFR Part 70.5(c)

A19. Title VI.

- (a) The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR, Part 82, Subpart F, except as provided for motor vehicle air conditioners (MVACs) in Subpart B:
 - 1. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to Section 82.156.
 - 2. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to Section 82.158.
 - 3. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to Section 82.161.
- (b) If the permittee performs a service on motor (fleet) vehicles when this service involves ozone depleting substance refrigerant in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR, Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.
- (c) The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR, Part 82, Subpart G, Significant New Alternatives Policy Program.

- A20. 112 (r).** The permittee shall comply with the requirement to submit to the Administrator or designated State Agency a risk management plan, including a registration that reflects all covered processes, by June 21, 1999, if the permittee's facility is required pursuant to 40 CFR 68 to submit such a plan.

TAPCR 1200-03-32-.03(3)

SECTION B

**GENERAL CONDITIONS for MONITORING,
REPORTING, and ENFORCEMENT**

- B1. Recordkeeping.** Monitoring and related record keeping shall be performed in accordance with the requirements specified in the permit conditions for each individual permit unit. In no case shall reports of any required monitoring and record keeping be submitted less frequently than every six months.
- (a) Where applicable, records of required monitoring information include the following:
1. The date, place as defined in the permit, and time of sampling or measurements;
 2. The date(s) analyses were performed;
 3. The company or entity that performed the analysis;
 4. The analytical techniques or methods used;
 5. The results of such analyses; and
 6. The operating conditions as existing at the time of sampling or measurement.
- (b) Digital data accumulation which utilizes valid data compression techniques shall be acceptable for compliance determination as long as such compression does not violate an applicable requirement and its use has been approved in advance by the Technical Secretary.

TAPCR 1200-03-09-.02(11)(e)1(iii)

- B2. Retention of monitoring data.** The permittee shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

TAPCR 1200-03-09-.02(11)(e)1(iii)(II)II

- B3. Reporting.** Reports of any required monitoring and record keeping shall be submitted to the Technical Secretary in accordance with the frequencies specified in the permit conditions for each individual permit unit. Reports shall be submitted within 60 days of the close of the reporting period unless otherwise noted. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official. Reports required under "State only requirements" are not required to be certified by a responsible official.

TAPCR 1200-03-09-.02(11)(e)1(iii)

- B4. Certification.** Except for reports required under "State Only" requirements, any application form, report or compliance certification submitted pursuant to the requirements of this permit shall contain certification by a responsible official of truth, accuracy and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

TAPCR 1200-03-09-.02(11)(d)4

- B5. Annual compliance certification.** The permittee shall submit annually compliance certifications with terms and conditions contained in Sections A, B, D and E of this permit, including emission limitations, standards, or work practices. This compliance certification shall include all of the following (provided that the identification of applicable information may cross-reference the permit or previous reports, as applicable):
- (a) The identification of each term or condition of the permit that is the basis of the certification;
- (b) The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period; such methods and other means shall include, at a minimum, the methods and means required by this permit. If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Federal Act, which prohibits knowingly making a false certification or omitting material information;
- (c) The status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the method or means designated in B5(b) above. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion* or exceedance** as defined below occurred; and
- (d) Such other facts as the Technical Secretary may require to determine the compliance status of the source.

* "Excursion" shall mean a departure from an indicator range established for monitoring under this paragraph, consistent with any averaging period specified for averaging the results of the monitoring.

** "Exceedance" shall mean a condition that is detected by monitoring that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) are greater than the applicable emission limitation or standard (or less than the applicable standard in the case of a percent reduction requirement) consistent with any averaging period specified for averaging the results of the monitoring.

40 CFR Part 70.6(c)(5)(iii) as amended in the Federal Register Vol. 79, No.144, July 28, 2014, pages 43661 through 43667

B6. Submission of compliance certification. The compliance certification shall be submitted to:

The Tennessee Department of Environment and Conservation Environmental Field Office specified in Section E of this permit	and	Air and EPCRA Enforcement Branch US EPA Region IV 61 Forsyth Street, SW Atlanta, Georgia 30303
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TAPCR 1200-03-09-.02(11)(e)3(v)(IV)

B7. Emergency provisions. An emergency constitutes an affirmative defense to an enforcement action brought against this source for noncompliance with a technology based emission limitation due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

(a) The affirmative defense of the emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

1. An emergency occurred and that the permittee can identify the probable cause(s) of the emergency. "Probable" must be supported by a credible investigation into the incident that seeks to identify the causes and results in an explanation supported by generally accepted engineering or scientific principles.

2. The permitted source was at the time being properly operated. In determining whether or not a source was being properly operated, the Technical Secretary shall examine the source's written standard operating procedures which were in effect at the time of the noncompliance and any other code as detailed below that would be relevant to preventing the noncompliance. Adherence to the source's standard operating procedures will be the test of adequate preventative maintenance, careless operation, improper operation or operator error to the extent that such adherence would prevent noncompliance. The source's failure to follow recognized standards of practice to the extent that adherence to such a standard would have prevented noncompliance will disqualify the source from any claim of an emergency and an affirmative defense.

3. During the period of the emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit.

4. The permittee submitted notice of the emergency to the Technical Secretary according to the notification criteria for malfunctions in rule 1200-03-20-.03. For the purposes of this condition, "emergency" shall be substituted for "malfunction(s)" in rule 1200-03-20-.03 to determine the relevant notification threshold. The notice shall include a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

(b) In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.

(c) The provisions of this condition are in addition to any emergency, malfunction or upset requirement contained in Division 1200-03 or other applicable requirement.

TAPCR 1200-03-09-.02(11)(e)7

B8. Excess emissions reporting.

(a) The permittee shall promptly notify the Technical Secretary when any emission source, air pollution control equipment, or related facility breaks down in such a manner to cause the emission of air contaminants in excess of the applicable emission standards contained in Division 1200-03 or any permit issued thereto, or of sufficient duration to cause damage to property or public health. The permittee must provide the Technical Secretary with a statement giving all pertinent facts, including the estimated duration of the breakdown. Violations of the visible emission standard which occur for less than 20 minutes in one day (midnight to midnight) need not be reported. Prompt notification will be within 24 hours of the malfunction and shall be provided by telephone to the Division's Nashville office. The Technical Secretary shall be notified when the condition causing the failure or breakdown has been corrected. In attainment and

unclassified areas if emissions other than from sources designated as significantly impacting on a nonattainment area in excess of the standards will not and do not occur over more than a 24-hour period (or will not recur over more than a 24-hour period) and no damage to property and or public health is anticipated, notification is not required.

(b) Any malfunction that creates an imminent hazard to health must be reported by telephone immediately to the Division's Nashville office at (615) 532-0554 and to the State Civil Defense.

(c) A log of all malfunctions, startups, and shutdowns resulting in emissions in excess of the standards in Division 1200-03 or any permit issued thereto must be kept at the plant. All information shall be entered in the log no later than twenty-four (24) hours after the startup or shutdown is complete, or the malfunction has ceased or has been corrected. Any later discovered corrections can be added in the log as footnotes with the reason given for the change. This log must record at least the following:

1. Stack or emission point involved
2. Time malfunction, startup, or shutdown began and/or when first noticed
3. Type of malfunction and/or reason for shutdown
4. Time startup or shutdown was complete or time the air contaminant source returned to normal operation
5. The company employee making entry on the log must sign, date, and indicate the time of each log entry

The information under items 1. and 2. must be entered into the log by the end of the shift during which the malfunction or startup began. For any source utilizing continuous emission(s) monitoring, continuous emission(s) monitoring collection satisfies the above log keeping requirement.

TAPCR 1200-03-20-.03 and .04

B9. Malfunctions, startups and shutdowns - reasonable measures required. The permittee must take all reasonable measures to keep emissions to a minimum during startups, shutdowns, and malfunctions. These measures may include installation and use of alternate control systems, changes in operating methods or procedures, cessation of operation until the process equipment and/or air pollution control equipment is repaired, maintaining sufficient spare parts, use of overtime labor, use of outside consultants and contractors, and other appropriate means. Failures that are caused by poor maintenance, careless operation or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions. This provision does not apply to standards found in 40 CFR, Parts 60(Standards of performance for new stationary sources), 61(National emission standards for hazardous air pollutants) and 63(National emission standards for hazardous air pollutants for source categories).

TAPCR 1200-03-20-.02

B10. Reserved.

B11. Report required upon the issuance of a notice of violation for excess emissions. The permittee must submit within twenty (20) days after receipt of the notice of violation, the data shown below to assist the Technical Secretary in deciding whether to excuse or validate the violation. If this data has previously been available to the Technical Secretary prior to the issuance of the notice of violation no further action is required of the violating source. However, if the source desires to submit additional information, then this must be submitted within the same twenty (20) day time period. The minimum data requirements are:

- (a) The identity of the stack and/or other emission point where the excess emission(s) occurred;
- (b) The magnitude of the excess emissions expressed in pounds per hour and the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions;
- (c) The time and duration of the emissions;
- (d) The nature and cause of such emissions;
- (e) For malfunctions, the steps taken to correct the situation and the action taken or planned to prevent the recurrence of such malfunctions;
- (f) The steps taken to limit the excess emissions during the occurrence reported, and
- (g) If applicable, documentation that the air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good operating practices for minimizing emissions.

Failure to submit the required report within the twenty (20) day period specified shall preclude the admissibility of the data for consideration of excusal for malfunctions.

TAPCR 1200-03-20-.06(2), (3) and (4)

SECTION C

PERMIT CHANGES

- C1. Operational flexibility changes.** The source may make operational flexibility changes that are not addressed or prohibited by the permit without a permit revision subject to the following requirements:
- (a) The change cannot be subject to a requirement of Title IV of the Federal Act or Chapter 1200-03-30.
 - (b) The change cannot be a modification under any provision of Title I of the federal Act or Division 1200-03.
 - (c) Each change shall meet all applicable requirements and shall not violate any existing permit term or condition.
 - (d) The source must provide contemporaneous written notice to the Technical Secretary and EPA of each such change, except for changes that are below the threshold of levels that are specified in Rule 1200-03-09-.04.
 - (e) Each change shall be described in the notice including the date, any change in emissions, pollutants emitted, and any applicable requirements that would apply as a result of the change.
 - (f) The change shall not qualify for a permit shield under the provisions of part 1200-03-09-.02(11)(e)6.
 - (g) The permittee shall keep a record describing the changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes. The records shall be retained until the changes are incorporated into subsequently issued permits.

TAPCR 1200-03-09-.02(11)(a)4 (ii)

- C2. Section 502(b)(10) changes.**
- (a) The permittee can make certain changes without requiring a permit revision, if the changes are not modifications under Title I of the Federal Act or Division 1200-03 and the changes do not exceed the emissions allowable under the permit. The permittee must, however, provide the Administrator and Technical Secretary with written notification within a minimum of 7 days in advance of the proposed changes. The Technical Secretary may waive the 7 day advance notice in instances where the source demonstrates in writing that an emergency necessitates the change. Emergency shall be demonstrated by the criteria of TAPCR 1200-03-09-.02(11)(e)7 and in no way shall it include changes solely to take advantages of an unforeseen business opportunity. The Technical Secretary and EPA shall attach each such notice to their copy of the relevant permit.
 - (b) The written notification must be signed by a facility Title V responsible official and include the following:
 - 1. a brief description of the change within the permitted facility;
 - 2. the date on which the change will occur;
 - 3. a declaration and quantification of any change in emissions;
 - 4. a declaration of any permit term or condition that is no longer applicable as a result of the change; and
 - 5. a declaration that the requested change is not a Title I modification and will not exceed allowable emissions under the permit.
 - (c) The permit shield provisions of TAPCR 1200-03-09-.02(11)(e)6 shall not apply to Section 502(b)(10) changes.

TAPCR 1200-03-09-.02(11)(a)4 (i)

- C3. Administrative amendment.**
- (a) Administrative permit amendments to this permit shall be in accordance with 1200-03-09-.02(11)(f)4. The source may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request.
 - (b) The permit shield shall be extended as part of an administrative permit amendment revision consistent with the provisions of TAPCR 1200-03-09-.02(11)(e)6 for such revisions made pursuant to item (c) of this condition which meet the relevant requirements of TAPCR 1200-03-09-.02(11)(e), TAPCR 1200-03-09-.02(11)(f) and TAPCR 1200-03-09-.02(11)(g) for significant permit modifications.
 - (c) Proceedings to review and grant administrative permit amendments shall be limited to only those parts of the permit for which cause to amend exists, and not the entire permit.

TAPCR 1200-03-09-.02(11)(f)4

- C4. Minor permit modifications.**

- (a) The permittee may submit an application for a minor permit modification in accordance with TAPCR 1200-03-09-.02(11)(f)5(ii).
- (b) The permittee may make the change proposed in its minor permit modification immediately after an application is filed with the Technical Secretary.
- (c) Proceedings to review and modify permits shall be limited to only those parts of the permit for which cause to modify exists, and not the entire permit.
- (d) Minor permit modifications do not qualify for a permit shield.

TAPCR 1200-03-09-.02(11)(f)5(ii)

C5. Significant permit modifications.

- (a) The permittee may submit an application for a significant modification in accordance with TAPCR 1200-03-09-.02(11)(f)5(iv).
- (b) Proceedings to review and modify permits shall be limited to only those parts of the permit for which cause to modify exists, and not the entire permit.

TAPCR 1200-03-09-.02(11)(f)5(iv)

C6. New construction or modifications.

Future construction at this facility that is subject to the provisions of TAPCR 1200-03-09-.01 shall be governed by the following:

- (a) The permittee shall designate in their construction permit application the route that they desire to follow for the purposes of incorporating the newly constructed or modified sources into their existing operating permit. The Technical Secretary shall use that information to prepare the operating permit application submittal deadlines in their construction permit.
- (b) Sources desiring the permit shield shall choose the administrative amendment route of TAPCR 1200-03-09-.02(11)(f)4 or the significant modification route of TAPCR 1200-03-09-.02(11)(f)5(iv).
- (c) Sources desiring expediency instead of the permit shield shall choose the minor permit modification procedure route of TAPCR 1200-03-09-.02(11)(f)5(ii) or group processing of minor modifications under the provisions of TAPCR 1200-03-09-.02(11)(f)5(iii) as applicable to the magnitude of their construction.

TAPCR 1200-03-09-.02(11)(d) 1(i)(V)

SECTION D

GENERAL APPLICABLE REQUIREMENTS

- D1. Visible emissions.** With the exception of air emission sources exempt from the requirements of TAPCR Chapter 1200-03-05 and air emission sources for which a different opacity standard is specifically provided elsewhere in this permit, the permittee shall not cause, suffer, allow or permit discharge of a visible emission from any air contaminant source with an opacity in excess of twenty (20) percent for an aggregate of more than five (5) minutes in any one (1) hour or more than twenty (20) minutes in any twenty-four (24) hour period; provided, however, that for fuel burning installations with fuel burning equipment of input capacity greater than 600 million btu per hour, the permittee shall not cause, suffer, allow, or permit discharge of a visible emission from any fuel burning installation with an opacity in excess of twenty (20) percent (6-minute average) except for one six minute period per one (1) hour of not more than forty (40) percent opacity. Sources constructed or modified after July 7, 1992 shall utilize 6-minute averaging.

Consistent with the requirements of TAPCR Chapter 1200-03-20, due allowance may be made for visible emissions in excess of that permitted under TAPCR 1200-03-05 which are necessary or unavoidable due to routine startup and shutdown conditions. The facility shall maintain a continuous, current log of all excess visible emissions showing the time at which such conditions began and ended and that such record shall be available to the Technical Secretary or his representative upon his request.

TAPCR 1200-03-05-.01(1), TAPCR 1200-03-05-.03(6) and TAPCR 1200-03-05-.02(1)

- D2. General provisions and applicability for non-process gaseous emissions.** Any person constructing or otherwise establishing a non-portable air contaminant source emitting gaseous air contaminants after April 3, 1972, or relocating an air contaminant source more than 1.0 km from the previous position after November 6, 1988, shall install and utilize the best equipment and technology currently available for controlling such gaseous emissions.

TAPCR 1200-03-06-.03(2)

- D3. Non-process emission standards.** The permittee shall not cause, suffer, allow, or permit particulate emissions from non-process sources in excess of the standards in TAPCR 1200-03-06.

- D4. General provisions and applicability for process gaseous emissions.** Any person constructing or otherwise establishing an air contaminant source emitting gaseous air contaminants after April 3, 1972, or relocating an air contaminant source more than 1.0 km from the previous position after November 6, 1988, shall install and utilize equipment and technology which is deemed reasonable and proper by the Technical Secretary.

TAPCR 1200-03-07-.07(2)

- D5. Particulate emissions from process emission sources.** The permittee shall not cause, suffer, allow, or permit particulate emissions from process sources in excess of the standards in TAPCR 1200-03-07.

- D6. Sulfur dioxide emission standards.** The permittee shall not cause, suffer, allow, or permit Sulfur dioxide emissions from process and non-process sources in excess of the standards in TAPCR 1200-03-14. Regardless of the specific emission standard, new process sources shall utilize the best available control technology as deemed appropriate by the Technical Secretary of the Tennessee Air Pollution Control Board.

- D7. Fugitive dust.**

(a) The permittee shall not cause, suffer, allow, or permit any materials to be handled, transported, or stored; or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, but not be limited to, the following:

- 1.** Use, where possible, of water or chemicals for control of dust in demolition of existing buildings or structures, construction operations, grading of roads, or the clearing of land;
- 2.** Application of asphalt, oil, water, or suitable chemicals on dirt roads, material stock piles, and other surfaces which can create airborne dusts;

3. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting or other similar operations.

(b) The permittee shall not cause, suffer, allow, or permit fugitive dust to be emitted in such manner to exceed five (5) minutes per hour or twenty (20) minutes per day as to produce a visible emission beyond the property line of the property on which the emission originates, excluding malfunction of equipment as provided in Chapter 1200-03-20.

TAPCR 1200-03-08

D8. **Open burning.** The permittee shall comply with the TAPCR 1200-03-04-.04 for all open burning activities at the facility.

TAPCR 1200-03-04

D9. **Asbestos.** Where applicable, the permittee shall comply with the requirements of 1200-03-11-.02(2)(d) when conducting any renovation or demolition activities at the facility.

TAPCR 1200-03-11-.02(2)(d) and 40 CFR, Part 61

D10. **Annual certification of compliance.** The generally applicable requirements set forth in Section D of this permit are intended to apply to activities and sources that are not subject to source-specific applicable requirements contained in State of Tennessee and U.S. EPA regulations. By annual certification of compliance, the permittee shall be considered to meet the monitoring and related record keeping and reporting requirements of TAPCR 1200-03-09-.02(11)(e)1.(iii) and 1200-03-10-.04(2)(b)1 and compliance requirements of TAPCR 1200-03-09-.02(11)(e)3.(i). The permittee shall submit compliance certification for these conditions annually.

Revised 10/2011

Revised: March 3, 2016

SECTION E

SOURCE SPECIFIC EMISSION STANDARDS, OPERATING LIMITATIONS, and MONITORING, RECORDKEEPING and REPORTING REQUIREMENTS

36-0061	Facility Description:	Two (2) natural gas-fired turbine engines, including one (1) 5000 Hp (at 80 degrees F ambient temperature), 60 MM BTU/hr input (HHV), General Electric M3502RC Turbine Engine, 1A installed in 1956, and one (1) 7500 Hp (at 80 degrees F ambient temperature), 104 MM BTU/hr input (HHV), installed 1958, Westinghouse W81RM-54 Turbine Engine, 2A and a 225 hp, 2.7 MM BTU/hr input (HHV), natural gas-fired emergency backup generator, Caterpillar G343, existing engine at area source of HAPS subject to 40 CFR 63 Subpart ZZZZ
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E1. Fee payment: Actual emissions basis.

FEE EMISSIONS SUMMARY TABLE FOR MAJOR SOURCE 36-0061

REGULATED POLLUTANTS	ALLOWABLE EMISSIONS (tons per AAP)	ACTUAL EMISSIONS (tons per AAP)	COMMENTS
PARTICULATE MATTER (PM)	N/A	AEAR	Includes all fee emissions.
PM ₁₀	N/A	N/A	Included with PM fee emissions
SO ₂	N/A	AEAR	Includes all fee emissions.
VOC	N/A	AEAR	Includes all fee emissions.
NO _x	N/A	AEAR	Includes all fee emissions.
CATEGORY OF MISCELLANEOUS HAZARDOUS AIR POLLUTANTS (HAP WITHOUT A STANDARD)*			
VOC FAMILY GROUP	N/A	N/A	Fee emissions are included in VOC above.
NON-VOC GASEOUS GROUP	N/A	AEAR	Fee emissions are NOT included in VOC above.
PM FAMILY GROUP	N/A	N/A	
CATEGORY OF SPECIFIC HAZARDOUS AIR POLLUTANTS (HAP WITH A STANDARD)**			
VOC FAMILY GROUP	N/A	N/A	
NON-VOC GASEOUS GROUP	N/A	N/A	
PM FAMILY GROUP	N/A	N/A	
CATEGORY OF NSPS POLLUTANTS NOT LISTED ABOVE***			
EACH NSPS POLLUTANT NOT LISTED ABOVE	N/A	N/A	

NOTES

AAP The Annual Accounting Period (AAP) is a twelve (12) consecutive month period that begins each July 1st and ends June 30th of the following year. The present Annual Accounting Period began July 1, 2016 and ends June 30, 2017. The next Annual Accounting Period begins July 1, 2017 and ends June 30, 2018.

N/A N/A indicates that no emissions are specified for fee computation.

AEAR AEAR indicates that an Actual Emissions Analysis is Required to determine the actual emissions of:

- (1) each regulated pollutant (Particulate matter, SO₂, VOC, NO_x and so forth. See TAPCR 1200-03-26-.02(2)(i) for the definition of a regulated pollutant.),
- (2) each pollutant group (VOC Family, Non-VOC Gaseous, and Particulate Family), and
- (3) the Miscellaneous HAP Category under consideration during the Annual Accounting Period.

* **Category Of Miscellaneous HAP (HAP Without A Standard):** This category is made-up of hazardous air pollutants that do not have a federal or state standard. Each HAP is classified into one of three groups, the VOC

Family group, the Non-VOC Gaseous group, or the Particulate (PM) Family group. For fee computation, the Miscellaneous HAP Category is subject to the 4,000 ton cap provisions of subparagraph 1200-03-26-.02(2)(i).

**** Category Of Specific HAP (HAP With A Standard): This category is made-up of hazardous air pollutants (HAP) that are subject to Federally promulgated Hazardous Air Pollutant Standards that can be imposed under Chapter 1200-03-11 or Chapter 1200-03-31. Each individual hazardous air pollutant is classified into one of three groups, the **VOC Family group, the Non-VOC Gaseous group, or the Particulate (PM) Family group. For fee computation**, each individual hazardous air pollutant of the **Specific HAP Category** is subject to the 4,000 ton cap provisions of subparagraph 1200-03-26-.02(2)(i).**

***** Category Of NSPS Pollutants Not Listed Above: This category is made-up of each New Source Performance Standard (NSPS) pollutant whose emissions are not included in the **PM, SO₂, VOC or NO_x** emissions from each source in this permit. For fee computation, each **NSPS pollutant not listed above** is subject to the 4,000 ton cap provisions of subparagraph 1200-03-26-.02(2)(i).**

END NOTES

- The permittee shall:**
- (1) Pay major source annual **actual based emission fees** as requested by the responsible official, for each annual accounting period (AAP) by July 1 of each year.
 - (2) Prepare an **actual emission analysis** in accordance with the above **Fee Emissions Summary Table** for each AAP (July 1 of each year through June 30 of the following year). The **actual emissions analysis** shall include:
 - (a) the completed **Fee Emissions Summary Table**,
 - (b) each **AEAR** required by the above **Fee Emissions Summary Table**, **and**
 - (c) the records required by Log 1 stipulated in Conditions E4-7 and E5-7 of this permit. These records shall be used to complete the **AEARs** required by the above **Fee Emissions Summary Table**.
 - (3) Submit the **actual emissions analysis** at the time the fees are paid in full.
 - (4) Calculate the fee due based upon the **actual emissions analysis**, and submit the payment on July 1st following the end of the **annual accounting period**. If any part of any fee imposed under TAPCR 1200-03-26-.02 is not paid within fifteen (15) days of the due date, penalties shall at once accrue as specified in TAPCR 1200-03-26-.02(8). Major sources may request an extension of time to file their emissions analysis with the Technical Secretary as specified in Condition A8(c)5 of this permit. Emissions for regulated pollutants shall not be double counted as specified in Condition A8(d) of this permit.

The Tennessee Air Pollution Control Division will bill the permittee no later than April 1 prior to the end of each **annual accounting period**. The annual emission fee is due July 1 following the end of each **annual accounting period**. If any part of any fee imposed under TAPCR 1200-03-26-.02 is not paid within fifteen (15) days of the due date, penalties shall at once accrue as specified in TAPCR 1200-03-26-.02(8). Emissions for regulated pollutants shall not be double counted as specified in Condition A8(d) of this permit.

Payment of the fee due and the actual emissions analysis shall be submitted to the following address:

Payment for Fee to		Actual Emissions Analysis to
The Tennessee Department of Environment and Conservation Division of Fiscal Services Consolidated Fee Section – APC (36-0061) William R. Snodgrass Tennessee Tower 312 Rosa L. Parks Avenue, 10 th Floor Nashville, Tennessee 37243	and	The Tennessee Department of Environment and Conservation Division of Air Pollution Control West Tennessee Permit Program William R. Snodgrass Tennessee Tower 312 Rosa L. Parks Avenue, 15 th Floor Nashville, Tennessee 37243 OR by e mail to: air.pollution.control@tn.gov

TAPCR 1200-03-26-.02 (3) and (9), and 1200-03-09-.02(11)(e)1 (iii) and (vii)

E2. Reporting requirements.

Semiannual reports. The first report after issuance of this permit shall cover the 6-month period from **April 1, 2016** to **September 30, 2016**, and shall be submitted within 60 days after the 6-month period ending **September 30, 2016**. Subsequent reports shall be submitted within 60 days after the end of each 6-month period following the first report.

These semiannual reports shall include:

- (1) Any monitoring and recordkeeping required by Conditions E4-5, E5-3 (Log 2), and E5-15(b) of this permit. However, a summary report of this data is acceptable provided there is sufficient information to enable the Technical Secretary to evaluate compliance.
- (2) The visible emission evaluation readings from Condition E3-6 of this permit if required. However, a summary report of this data is acceptable provided there is sufficient information to enable the Technical Secretary to evaluate compliance.
- (3) Identification of all instances of deviations from **ALL PERMIT REQUIREMENTS**.

These reports must be certified by a responsible official consistent with condition B4 of this permit and shall be submitted to The Technical Secretary at the address below:

The Technical Secretary
 Jackson Environmental Field Office
 Division of Air Pollution Control
 1625 Hollywood Drive
 Jackson, TN 38305

OR APC.JackEFO@tn.gov

TAPCR 1200-03-09-.02(11)(e)1.(iii)

(b) **Annual compliance certification.** The permittee shall submit annually compliance certifications with terms and conditions contained in Sections **A, B, D** and **E** of this permit, including emission limitations, standards, or work practices. This compliance certification shall include all of the following (provided that the identification of applicable information may cross-reference the permit or previous reports, as applicable):

- (1) The identification of each term or condition of the permit that is the basis of the certification;
- (2) The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period; Such methods and other means shall include, at a minimum, the methods and means required by this permit. If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Federal Act, which prohibits knowingly making a false certification or omitting material information;
- (3) The status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the method or means designated in E2(b)(2) above. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion* or exceedance** as defined below occurred; and
- (4) Such other facts as the Technical Secretary may require to determine the compliance status of the source.

* “Excursion” shall mean a departure from an indicator range established for monitoring under this paragraph, consistent with any averaging period specified for averaging the results of the monitoring.

** “Exceedance” shall mean a condition that is detected by monitoring that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) are greater than the applicable emission limitation or standard (or less than the applicable standard in the case of a percent reduction requirement) consistent with any averaging period specified for averaging the results of the monitoring.

Annual compliance certifications shall cover each 12-month period from October 1 of each calendar year to September 30 of the following calendar year and shall be submitted within 60 days after each 12-month reporting period ends. These certifications shall be submitted to: Tennessee Division of Air Pollution Control TN APCD and EPA at the following addresses:

**Division of Air Pollution Control
Jackson Environmental Field Office
1625 Hollywood Drive
Jackson, Tennessee 38305
Or
E-mail: APC.JackEFO@tn.gov**

and

**Air and EPCRA Enforcement Branch
US EPA Region IV
61 Forsyth Street, SW
Atlanta, Georgia 30303**

40 CFR Part 70.6(c)(5)(iii) as amended in the Federal Register Vol.79, No.144, July 28, 2014, pages 43661 through 43667

(c) **Retention of Records** All records required by any condition in Section E of this permit must be retained for a period of not less than five years. Additionally, these records shall be kept available for inspection by the Technical Secretary or his representative.

TAPCR 1200-03-09-.02(11)(e)1.(iii)(II)II

E2-1 Identification of Responsible Official, Technical Contact, and Billing Contact of the Permitted Facility.

a) The application that was utilized in the preparation of this permit is dated March 14, 2016, and signed by Responsible official Thomas C. Dender, Vice President of Operations for the permitted facility. If this person terminates employment or is assigned different duties and is no longer a Responsible Official for this facility as defined in part 1200-03-09-.02(11)(b)21 of the Tennessee Air Pollution Control Regulations, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification must be in writing and must be submitted within thirty (30) days of the change. The notification shall include the name and title of the new Responsible Official and certification of truth and accuracy. All representations, agreement to terms and conditions, and covenants made by the former Responsible Official that were used in the establishment of the permit terms and conditions will continue to be binding on the facility until such time that a revision to this permit is obtained that would change said representations, agreements, and/or covenants.

b) The application that was utilized in the preparation of this permit is dated March 14, 2016, and identifies Julia Griffin-Senior EHS Specialist II as the Principal Technical Contact for the permitted facility. An updated APC 1 and Certificate of Completeness dated September 26, 2016 from the permittee identifies Shrishti Chhabra as the new Technical Contact for the permitted facility. If this person terminates employment or is assigned different duties and is no longer the Principal Technical Contact for this facility, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification must be in writing and must be submitted within thirty (30) days of the change. The notification shall include the name and title of the new Principal Technical Contact and certification of truth and accuracy.

c) The application that was utilized in the preparation of this permit is dated March 14, 2016, and identifies Julia Griffin-Senior EHS Specialist II as the Billing Contact for the permitted facility. An updated APC 1 and Certificate of Completeness dated September 26, 2016 from the permittee identifies Shrishti Chhabra as the new Billing Contact for the permitted facility. If this person terminates employment or is assigned different duties and is no longer the Billing Contact for this facility, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification must be in writing and must be submitted within thirty (30) days of the change. The notification shall include the name and title of the new Billing Contact and certification of truth and accuracy.

E3. General permit conditions.

E3-1. Logs and records specified in this permit shall be made available upon request by the Technical Secretary or his representative and shall be retained for a period of not less than five years unless otherwise noted. Logs and records contained in this permit are based on a recommended format. Any logs that have an alternative format may be utilized provided such logs contain the same information that is required. Computer-generated logs are also acceptable. Logs and records are not required to be submitted semiannually unless specified in Condition E2(a)(1).

E3-2. Regarding recordkeeping of logs, the following is applicable:

- a) For monthly recordkeeping, all data, including the results of all calculations, must be entered into the log no later than 30 days from the end of the month for which the data is required.
- b) For weekly recordkeeping, all data, including the results of all calculations, must be entered into the log no later than 7 days from the end of the week for which the data is required.
- c) For daily recordkeeping, all data, including the results of all calculations, must be entered into the log no later than 7 days from the end of the day for which the data is required.

E3-3. This Title V Operating Permit 571462 is a renewal of Title V Operating Permit 562542 issued on September 22, 2011.

E3-4. **Accidental release plan.** The permittee is not required to file an accidental release plan pursuant to Section 112(r) of the Clean Air Act and 1200-03-32 of TAPCR.

E3-5. **CAM Plan.** This facility is not currently subject to regulations under 40 CFR Part 64 (Compliance Assurance Monitoring).

E3-6. Visible emissions from the each stack at this facility shall not exhibit greater than twenty percent (20%) opacity, except for one (1) six-minute period in any one (1) hour period, and for no more than four (4) six-minute periods in any twenty-four (24) hour period. Visible emissions from this source shall be determined by EPA Method 9, as published in the current 40 CFR 60, Appendix A (six-minute average).

TAPCR 1200-03-05-.03(6) and TAPCR 1200-03-05-.01(1)

Compliance Method: The permittee shall assure compliance with the opacity standard by utilizing the opacity matrix dated June 18, 1996 and amended on September 11, 2013 that is enclosed as Attachment 1.

If the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements.

E3-7. This source shall comply with all applicable state and federal air pollution regulations. This includes, but is not limited to, federal regulations published under 40 CFR 63 for sources of hazardous air pollutants and 40 CFR 60, New Source Performance Standards.

TAPCR 1200-03-09-.03(8)

E3-8. This source shall operate in accordance with the terms of this permit and the information submitted in the approved permit application.

TAPCR 1200-03-09

E4. Emission Source.

36-0061-01	Source Description	Two (2) natural gas-fired turbine engines, including Unit 1A rated at 5000 Hp (at 80 degrees F ambient temperature), 60 MM BTU/hr input (HHV), General Electric M3502RC turbine engine built/installed in 1956, and Unit 2A rated at 7500 Hp (at 80 degrees F ambient temperature), 104 MM BTU/hr input (HHV), Westinghouse W81RM-54 turbine engine, built/installed in 1958.
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Conditions E4-1 through E4-5 apply to source 36-0061-01

E4-1. The rated horsepower output and design capacities for each of the two turbines are stated in the description above.

Compliance Method: This condition is a statement of design capacities for these units. If the permittee wishes to increase the design or maximum capacity of this source by modifications, the permittee shall pursue the appropriate Title V procedure in accordance with 1200-03-09-.02(11) of TAPCR. If a construction permit is applied for, this shall be done in accordance with 1200-03-09-.01(1) of TAPCR.

E4-2. Particulate matter emitted from the 2 natural gas fired turbine engines combined shall not exceed 6.3 pounds per hour, equivalent to 27.60 tons/yr. This limitation is established pursuant to TAPCR 1200-03-26-.02(9)(g) and the information contained in the agreement letter dated March 31, 1998 from the permittee.

Compliance Method: Compliance with this emission standard is based on emission factors from EPA AP-42, Stationary Gas Turbines, Table 3.1-2a dated April 2000 (Attachment 2) or specific test data from this unit or similar units.

E4-3. Sulfur dioxide emitted from the 2 natural gas fired turbine engines combined shall not exceed 0.1 pound per hour, equivalent to 0.44 tons/yr. This limitation is established pursuant to TAPCR 1200-03-26-.02(9)(g) and the information contained in the agreement letter dated March 31, 1998 from the permittee.

Compliance Method: Based on the maximum sulfur content of the natural gas and the EPA AP-42 emission factors these emission limits will be assured.

E4-4. Only natural gas shall be used as fuel for the turbine engines.

Compliance Method: Compliance is assured since the permittee only utilizes pipeline quality gas to power these turbines.

E4-5. For the purpose of calculating actual emissions for fee purposes, the permittee shall maintain records as specified below for each of the turbine engines and the natural gas fired emergency generator engine. These records shall be kept for a period of no less than five years and shall be made available to the Division upon request.

For fee purposes, the permittee may calculate actual oxides of nitrogen (NO_x) emissions, particulate matter (PM) emissions, sulfur dioxide (SO₂) emissions, and volatile organic compound (VOC) emissions from turbine units for each Annual Accounting Period (AAP) using engine operating hours, actual horsepower, natural gas usage, and AP-42, April 2000, Stationary Gas Turbines, Table 3.1-2a, (Attachment 2) or specific engine test data (Attachment 3) or a combination of both. The results of these calculations shall be recorded, maintained, and entered in Log 1 (or another format providing the required information) specifying the specific emission factors and basis for calculations. If more recent emission factors or test data is used, the basis for such factors shall be provided. These records shall be retained for a period of not less than five (5) years. These records shall be reported in accordance with Condition **E1** of this permit.

Log 1: Fiscal Year (AAP) Log of total emissions from Turbines 1A, 2A, and emergency generator for fee purposes

Year _____ July 1, _____ to June 30, _____

Unit	MM SCF nat. gas during fee year	Design Horsepower	Hours	Horsepower-Hours	Fuel Heating Value (HHV)	Pollutant	Emission Factor and Basis	Fiscal year Emissions (tons)
Turbine Unit 1A						NO _x		
						SO ₂		
						PM		
						VOC		
Turbine Unit 2A						NO _x		
						SO ₂		
						PM		
						VOC		
Emerg. Gen.						NO _x		
						SO ₂		
						PM		
						VOC		

Note: Complete table as required to calculate emissions.

36-0061-02 Source Description Natural gas-fired emergency generator engine, 225 hp at 1800 rpm, (2.7 MM BTU/hr input (HHV) based on heat rate of 12,000 BTU/hp-hr) Caterpillar G343 with a reciprocating internal combustion engine (RICE) spark ignition (SI) firing, considered an existing unit installed prior to June 12, 2006 (built late 1970's or 1980's) subject to 40 CFR 63 Subpart ZZZZ, This unit is considered an existing unit at an area source of HAPs and an affected source pursuant to 63.6590(a)(1)(iii) and specifically an Emergency Stationary SI RICE subject to Table 2d, item 5 of Subpart ZZZZ

Conditions E5-1 through E5-16 apply to source 02

- E5-1.** The rated horsepower output capacity for the emergency engine is listed in the source description above.
Compliance Method: This condition is a statement of design capacity for this source. If the permittee wishes to increase the design or maximum capacity or modify this source, the permittee shall pursue the appropriate Title V procedure in accordance with 1200-03-09-.02(11) of TAPCR. If a construction permit is applied for, this shall be done in accordance with 1200-03-09-.01(1) of TAPCR.
- E5-2.** Only natural gas shall be used as fuel for the emergency engine.
Compliance Method: Compliance is assured since the permittee only utilizes pipeline quality gas to power this engine.
- E5-3.** This generator engine shall not operate more than 500 hours per calendar year based on the application and agreement dated January 10, 2011.

Compliance Method: Compliance is assured by keeping a monthly log of emergency generator engine operating hours as shown in Log 2. Entries for the month of concern shall be made no later than 30 days after the month ends in accordance with Condition E3-2.

Log 2 Emergency Generator Engine Operating Hours				
Month	Hours			Justification for use
	Emergency	Maintenance Checks/Readiness Testing	Other	
January				
December				
Total				

E5-4. Particulate matter emissions emitted from this source shall not exceed 0.6 pounds per MM Btu. Based on 2.7 MM BTU/hr at 12,000 BTU/hp/hr, the allowable emission rate is 1.62 lbs/hr equivalent to 0.41 tons/yr at 500 hours per year.

TAPCR 1200-03-06-.02(2)

Compliance Method: Compliance with this emission limit is assured based on the use of natural gas only and the emission factor contained in AP-42, 5th Edition, Table 3.2-3, **Uncontrolled emission factors for natural gas-fired 4 stroke rich-burn engines, July 2000** (Attachment 4) indicating an emission rate of 0.0194 lbs PM/MM BTU or 0.0524 lbs/hr for this type of unit.

E5-5. Sulfur dioxide (SO₂) emitted from this source shall not exceed 0.0016 pounds per hour equivalent to 0.0004 tons/yr at 500 hours per year.

TAPCR 1200-03-14-.03(5)

Compliance Method: Compliance with this emission limit is assured based on the use of natural gas only and the emission factor contained in AP-42, 5th Edition, Table 3.2-3, **Uncontrolled emission factors for natural gas-fired 4 stroke rich-burn engines, July 2000** indicating an emission rate of 0.000588 lbs SO₂/MM BTU for this type of unit.

E5-6. Gaseous emissions from this generator that include CO, VOC, and NO_x shall not exceed the following values:

Gaseous Pollutant	Lbs/hr	Tons/yr at 500 hrs/yr
CO	10.04	2.51
VOC	0.08	0.02
NO _x	5.97	1.49

TAPCR 1200-03-07-.07(2)

Compliance Method: Compliance is assured based on natural gas usage, AP-42, 5th Edition, Table 3.2-3, **Uncontrolled emission factors for natural gas-fired 4 stroke rich-burn engines, July 2000**, and annual operation not exceeding 500 hrs/year. Refer to Attachments 4 and 5.

E5-7. For fee purposes, the permittee shall calculate the actual oxides of nitrogen (NO_x) emissions, particulate matter (PM) emissions, sulfur dioxide (SO₂) emissions, and volatile organic compound (VOC) emissions from the engine driving the emergency generator for each fiscal year using engine operating hours, actual horsepower, natural gas usage and AP-42, 5th Edition, Table 3.2-3, **Uncontrolled emission factors for natural gas-fired 4 stroke rich-burn engines, July 2000**. The results of these calculations shall be recorded, maintained, and entered in Log 1 and shall be retained for a period of not less than five (5) years. These records shall be reported in accordance with Condition **E1** of this permit.

MACT requirements follow:

The emergency engine driving the generator is subject to regulations under 40 CFR Part 63, Subpart ZZZZ, **NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES**.

The following permit conditions E5-8 through E5-16 are applicable to MACT for this engine driving the emergency generator.

E5-8. The permittee shall comply with the MACT requirements no later than October 19, 2013.

40 CFR §63.6595(a)(1).

E5-9. The permittee shall institute a maintenance plan as follows:

- (a) Change oil and filter every 500 hours of operation or annually, whichever comes first; however, the permittee has the option to utilize an oil analysis program as described in §63.6625(j) in order to extend the specified oil change requirement.
- (b) Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first; and
- (c) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. If the emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements as described in (a), (b), and (c) above, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. The permittee must report any failure to perform the management practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.

40 CFR §63.6603(a) Table 2d, Item 5 and Footnote 2 of Table 2d

The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Table 2d Item 5. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2d Item 5. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid 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 permittee is not required to change the oil. If any of the limits are exceeded, the permittee must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the permittee must change the oil within 2 days or before commencing operation, whichever is later. The permittee 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(j)

E5-10. The permittee shall develop and use an operation and maintenance plan as follows:

The permittee must operate and maintain the stationary RICE according to the manufacturer's emission-related written instructions or develop his 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)(3) Item 9 of Table 6

- E5-11.** The permittee must install a non-resettable hour meter to the emergency engine driving the generator if one is not already installed.

40 CFR §63.6625(f)

- E5-12.** The permittee must minimize the engine idle time as follows:

The permittee must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.

40 CFR §63.6625(h)

- E5-13.** The permittee must maintain continuous compliance with operating limitations including work/management practices and maintenance.

- (a) The permittee must demonstrate continuous compliance with each operating limitation in Table 2d to Subpart ZZZZ that applies to the permittee (Item 5 of Table 2d) according to methods specified in Item 9 of Table 6 of Subpart ZZZZ.

40 CFR §63.6640(a)

- E5-14.** The following constitutes permissible operating times for emergency use, non-emergency use, and other operating times.

- (a) The permittee may operate the emergency stationary RICE according to the requirements in 40 CFR §63.6640(f)(1)(i) through (iii). Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in §63.6640(f)(1) through (iii), is prohibited. If the permittee does not operate the engine according to the requirements in §63.6640(f)(1)(i) through (iii), the engine will not be considered an emergency engine and will need to meet all requirements for non-emergency engines.

40 CFR §63.6640(f)(1)

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

40 CFR §63.6640(f)(1)(i)

- (c) The permittee may operate the emergency engine for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. The permittee 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 permittee maintains records indicating that Federal, State, or local standards require maintenance and testing of the emergency RICE beyond 100 hours per year.

40 CFR §63.6640(f)(1)(ii)

- (d) The permittee may operate the emergency stationary RICE up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity; except that owners and operators may operate the emergency engine for a maximum of 15 hours per year as part of a demand response program if the regional transmission organization or equivalent balancing authority and transmission operator has determined there

are emergency conditions that could lead to a potential electrical blackout, such as unusually low frequency, equipment overload, capacity or energy deficiency, or unacceptable voltage level. The engine may not be operated for more than 30 minutes prior to the time when the emergency condition is expected to occur, and the engine operation must be terminated immediately after the facility is notified that the emergency condition is no longer imminent. The 15 hours per year of demand response operation are counted as part of the 50 hours of operation per year provided for non-emergency situations. The supply of emergency power to another entity or entities pursuant to financial arrangement is not limited by this paragraph (f)(1)(iii), as long as the power provided by the financial arrangement is limited to emergency power.

40 CFR §63.6640(f)(1)(iii)

E5-15. The permittee must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A)

E5-16. The following recordkeeping requirements are applicable.

(a) The permittee must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that it was operated and maintained according to the permittee's maintenance plan.

40 CFR §63.6655(e)

(b) The permittee must keep records of the hours of operation of the emergency engine that is recorded through the non-resettable hour meter (See Log 2 of Condition E5-3). The permittee must document how many hours are spent for emergency operation including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for demand response operation, the permittee must keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response.

40 CFR §63.6655(f)

(c) The records must be in a form suitable and readily available for expeditious review according to 40 CFR §63.10(b)(1). As specified in 40 CFR §63.10(b)(1), the permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The permittee must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR §63.10(b)(1)

END OF PERMIT NUMBER 571462

ATTACHMENT 1

**Opacity Matrix Decision Tree for Visible Emission Evaluation
EPA Method 9
dated June 18, 1996 and amended September 11, 2013**

Decision Tree PM for Opacity for Sources Utilizing EPA Method 9*

Notes:

PM = Periodic Monitoring required by 1200-03-09-.02(11)(e)(iii).

This Decision Tree outlines the criteria by which major sources can meet the periodic monitoring and testing requirements of Title V for demonstrating compliance with the visible emission standards set forth in the permit. It is not intended to determine compliance requirements for EPA's Compliance Assurance Monitoring (CAM) Rule (formerly referred to as Enhanced Monitoring – Proposed 40 CFR 64).

Examine each emission unit using this Decision Tree to determine the PM required.*

Use of continuous emission monitoring systems eliminates the need to do any additional periodic monitoring.

Visible Emission Evaluations (VEEs) are to be conducted utilizing EPA Method 9. The observer must be properly certified to conduct valid evaluations.

Typical Pollutants
Particulates, VOC, CO, SO₂, NO_x, HCl, HF, HBr, Ammonia, and Methane.

Initial observations are to be repeated within 90 days of startup of a modified source, if a new construction permit is issued for modification of the source.

A VEE conducted by TAPCD personnel after the Title V permit is issued will also constitute an initial reading.

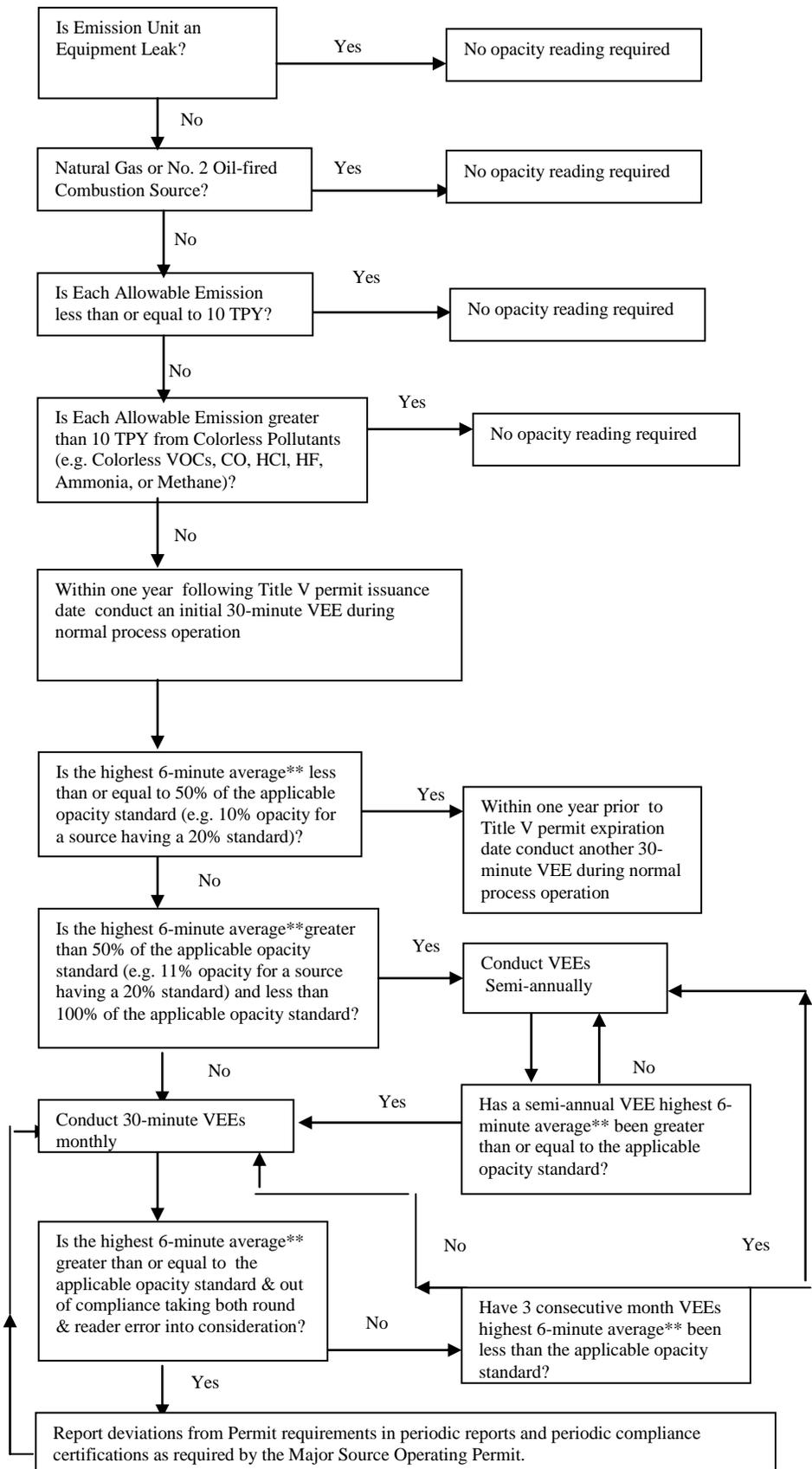
Reader Error
EPA Method 9, Non-NSPS or NESHAPS stipulated opacity standards:
The TAPCD guidance is to declare non-compliance when the highest six-minute average** exceeds the standard plus 6.8% opacity (e.g. 26.8% for a 20% standard).

EPA Method 9, NSPS or NESHAPS stipulate opacity standards:
EPA guidance is to allow only engineering round. No allowance for reader error is given.

*Not applicable to Asbestos manufacturing subject to 40 CFR 61.142

**Or second highest six-minute average, if the source has an exemption period stipulated in either the regulations or in the permit.

Dated June 18, 1996
Amended September 11, 2013



ATTACHMENT 2

**AP-42 Fifth Edition Emission Factors for
Natural Gas Combustion from Stationary Gas Turbines
Revised April 2000**

Table 3.1-1. EMISSION FACTORS FOR NITROGEN OXIDES (NO_x) AND CARBON MONOXIDE (CO) FROM STATIONARY GAS TURBINES
(revised 4/00)

Emission Factors ^a				
Turbine Type	Nitrogen Oxides		Carbon Monoxide	
	(lb/MMBtu) ^c (Fuel Input)	Emission Factor Rating	(lb/MMBtu) ^c (Fuel Input)	Emission Factor Rating
Natural Gas-Fired Turbines ^b				
Uncontrolled	3.2 E-01	A	8.2 E-02 ^d	A
Water-Steam Injection	1.3 E-01	A	3.0 E-02	A
Lean-Premix	9.9 E-02	D	1.5 E-02	D
Distillate Oil-Fired Turbines ^e	(lb/MMBtu) ^f (Fuel Input)	Emission Factor Rating	(lb/MMBtu) ^f (Fuel Input)	Emission Factor Rating
Uncontrolled	8.8 E-01	C	3.3 E-03	C
Water-Steam Injection	2.4 E-01	B	7.6 E-02	C
Landfill Gas-Fired Turbines ^g	(lb/MMBtu) ^h (Fuel Input)	Emission Factor Rating	(lb/MMBtu) ^h (Fuel Input)	Emission Factor Rating
Uncontrolled	1.4 E-01	A	4.4 E-01	A
Digester Gas-Fired Turbines ^j	(lb/MMBtu) ^k (Fuel Input)	Emission Factor Rating	(lb/MMBtu) ^k (Fuel Input)	Emission Factor Rating
Uncontrolled	1.6 E-01	D	1.7 E-02	D

^a Factors are derived from units operating at high loads (≥ 80 percent load) only. For information on units operating at other loads, consult the background report for this chapter (Reference 16), available at “www.epa.gov/ttn/chief”.

^b Source Classification Codes (SCCs) for natural gas-fired turbines include 2-01-002-01, 2-02-002-01, 2-02-002-03, 2-03-002-02, and 2-03-002-03. The emission factors in this table may be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this average heating value.

^c Emission factors based on an average natural gas heating value (HHV) of 1020 Btu/scf at 60°F. To convert from (lb/MMBtu) to (lb/10⁶ scf), multiply by 1020.

^d It is recognized that the uncontrolled emission factor for CO is higher than the water-steam injection and lean-premix emission factors, which is contrary to expectation. The EPA could not identify the reason for this behavior, except that the data sets used for developing these factors are different.

^e SCCs for distillate oil-fired turbines include 2-01-001-01, 2-02-001-01, 2-02-001-03, and 2-03-001-02.

^f Emission factors based on an average distillate oil heating value of 139 MMBtu/10³ gallons. To convert from (lb/MMBtu) to (lb/10³ gallons), multiply by 139.

^g SCC for landfill gas-fired turbines is 2-03-008-01.

^h Emission factors based on an average landfill gas heating value of 400 Btu/scf at 60°F. To convert from (lb/MMBtu), to (lb/10⁶ scf), multiply by 400.

^j SCC for digester gas-fired turbine is 2-03-007-01.

^k Emission factors based on an average digester gas heating value of 600 Btu/scf at 60°F. To convert from (lb/MMBtu) to (lb/10⁶ scf), multiply by 600.

Table 3.1-2a. EMISSION FACTORS FOR CRITERIA POLLUTANTS AND GREENHOUSE GASES FROM STATIONARY GAS TURBINES
(revised 4/00)

Emission Factors ^a - Uncontrolled				
Pollutant	Natural Gas-Fired Turbines ^b		Distillate Oil-Fired Turbines ^d	
	(lb/MMBtu) ^c (Fuel Input)	Emission Factor Rating	(lb/MMBtu) ^e (Fuel Input)	Emission Factor Rating
CO ₂ ^f	110	A	157	A
N ₂ O	0.003 ^g	E	ND	NA
Lead	ND	NA	1.4 E-05	C
SO ₂	0.94S ^h	B	1.01S ^h	B
Methane	8.6 E-03	C	ND	NA
VOC	2.1 E-03	D	4.1 E-04 ^j	E
TOC ^k	1.1 E-02	B	4.0 E-03 ^l	C
PM (condensable)	4.7 E-03 ^l	C	7.2 E-03 ^l	C
PM (filterable)	1.9 E-03 ^l	C	4.3 E-03 ^l	C
PM (total)	6.6 E-03 ^l	C	1.2 E-02 ^l	C

^a Factors are derived from units operating at high loads (≥80 percent load) only. For information on units operating at other loads, consult the background report for this chapter (Reference 16), available at “www.epa.gov/ttn/chief”. ND = No Data, NA = Not Applicable.

^b SCCs for natural gas-fired turbines include 2-01-002-01, 2-02-002-01 & -03, and 2-03-002-02 & -03.

^c Emission factors based on an average natural gas heating value (HHV) of 1020 Btu/scf at 60°F. To convert from (lb/MMBtu) to (lb/10⁶ scf), multiply by 1020. Similarly, these emission factors can be converted to other natural gas heating values.

^d SCCs for distillate oil-fired turbines are 2-01-001-01, 2-02-001-01, 2-02-001-03, and 2-03-001-02.

^e Emission factors based on an average distillate oil heating value of 139 MMBtu/10³ gallons. To convert from (lb/MMBtu) to (lb/10³ gallons), multiply by 139.

^f Based on 99.5% conversion of fuel carbon to CO₂ for natural gas and 99% conversion of fuel carbon to CO₂ for distillate oil. CO₂ (Natural Gas) [lb/MMBtu] = (0.0036 scf/Btu)(%CON)(C)(D), where %CON = weight percent conversion of fuel carbon to CO₂, C = carbon content of fuel by weight, and D = density of fuel. For natural gas, C is assumed at 75%, and D is assumed at 4.1 E+04 lb/10⁶ scf. For distillate oil, CO₂ (Distillate Oil) [lb/MMBtu] = (26.4 gal/MMBtu) (%CON)(C)(D), where C is assumed at 87%, and the D is assumed at 6.9 lb/gallon.

^g Emission factor is carried over from the previous revision to AP-42 (Supplement B, October 1996) and is based on limited source tests on a single turbine with water-steam injection (Reference 5).

^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).

^j VOC emissions are assumed equal to the sum of organic emissions.

^k Pollutant referenced as THC in the gathered emission tests. It is assumed as TOC, because it is based on EPA Test Method 25A.

^l Emission factors are based on combustion turbines using water-steam injection.

ATTACHMENT 3

**Tennessee Gas Pipeline Company (TGP) Emission factors and test data
for Turbines 1A and 2A**

ATTACHMENT TO FORMS APC V.28

Emission Factors Used in Calculation of Actual Emissions for Reporting Period of July 1, 2007 to June 30, 2008.

Unit	Unit Type	Emissions Factors						
		Nox Source	CO Source	VOC Source	PM Source	SO2 Source	Total VOC HAP Source	Total non-VOC HAP Source
1A	Turbine	2.11 g/hp-hr	0.35 g/hp-hr	2.14 lb/mmscf	6.73 lb/mmscf	0.6 lb/mmscf	1.05 lb/mmscf	<0.01 lb/mmscf
		Mech. Equip. test on 11/9/04, Casa Grande, A1, M3712R (rated at 6050) 100% speed, 94% torque	Mech. Equip. test on 11/9/04, Casa Grande, A1, M3712R (rated at 6050) 100% speed, 94% torque	AP-42, Table 3.1-2a, 4/00 and assuming HHV = 1,020 BTU/scf	AP-42, Table 3.1-2a, 4/00 and assuming HHV = 1,020 BTU/scf	Custom Fuel Sulfur Monitoring Maximum Value of 0.205 gr. S/100 scf	AP-42, Table 3.1-3, 4/00 and assuming HHV = 1,020 BTU/scf	AP-42, Table 3.1-3, 4/00 and assuming HHV = 1,020 BTU/scf
2A	Turbine	1.742 g/hp-hr	0.446 g/hp-hr	2.14 lb/mmscf	6.73 lb/mmscf	0.6 lb/mmscf	1.05 lb/mmscf	<0.01 lb/mmscf
		No TGP Data, Factors from AP-42 (4/00) Table 3.1-1 based on HR = 12,000 Btu/hp-hr	No TGP Data, Factors from AP-42 (4/00) Table 3.1-1 based on HR = 12,000 Btu/hp-hr	AP-42, Table 3.1-2a, 4/00 and assuming HHV = 1,020 BTU/scf	AP-42, Table 3.1-2a, 4/00 and assuming HHV = 1,020 BTU/scf	Custom Fuel Sulfur Monitoring Maximum Value of 0.205 gr. S/100 scf	AP-42, Table 3.1-3, 4/00 and assuming HHV = 1,020 BTU/scf	AP-42, Table 3.1-3, 4/00 and assuming HHV = 1,020 BTU/scf

Notes:

HHV = High Heating Value

Supporting documentation for the above factors was submitted to TAPCD EI Section with the emission inventory analysis for the reporting period of July 1, 2007 to June 30, 2008.

TGP Compressor Station 856
 POTENTIAL-TO-EMIT (PTE) CALCULATIONS

Unit	Unit Description	Hours	HP	Heat Input ² (MMBtu/hr)	Emission Rates ¹											
					NOx ³		CO ⁴		VOC ⁵		PM ⁶		SO ₂ ⁸		HAPs ⁷	
					(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/MMBtu)	(tpy)	(lb/MMBtu)	(tpy)	(lb/MMBtu)	(tpy)	(lb/MMBtu)	(tpy)
1A	General Electric M3502RC	8,760	5,000	60	31.61	138.45	9.15	40.08	2.10E-03	0.55	6.60E-03	1.73	5.88E-04	0.15	1.03E-03	0.27
2A	Westinghouse W81RM-54	8,760	7,500	104	47.46	207.87	24.41	106.92	2.10E-03	0.96	6.60E-03	3.01	5.88E-04	0.27	1.03E-03	0.47
Total Emissions:					79.07	346.33	33.56	146.99	0.00	1.51	0.01	4.74	1.18E-03	0.42	2.05E-03	0.74

¹ Emissions provided in this table are for representation purposes only and are not intended to convey any limitations or restrictions.

² Based on natural gas High Heating Value (HHV)

³ NOx emission rates are based upon test data from PR 15-92 Site 23, Test 113, Run 1 for GE M3912R on 4/2/79.

⁴ CO emission rates are based upon test data from Station 847, Run 1 for GE M3672R on 10/7/92 for 1A and test data from Station 315, Unit 1A T2, Run 1 for M3752 on 2/86 for 2A.

⁵ Emission factors based on AP-42, Table 3.1-2a (4/00) "Emission Factors for Criteria Pollutants and Greenhouse Gases from Stationary Gas Turbines"

⁶ AP-42 Section 3.2; based on 100% conversion of fuel sulfur to SO₂; assumes fuel sulfur content in natural gas of 2,000 gr/10⁶ scf

⁷ See following pages for details

Potential Hourly Emissions		
SO ₂	0.10	lb/hr
PM	1.08	lb/hr
Permit Limits		
SO ₂	0.1	lb/hr
PM	6.3	lb/hr

ATTACHMENT 4

AP-42, 5th Edition, Table 3.2-3
Uncontrolled emission factors for natural gas-fired 4 stroke rich-burn engines
July 2000

Table 3.2-3. UNCONTROLLED EMISSION FACTORS FOR 4-STROKE RICII-BURN
 ENGINES^a
 (SCC 2-02-002-53)

Pollutant	Emission Factor (lb/MMBtu) ^b (fuel input)	Emission Factor Rating
Criteria Pollutants and Greenhouse Gases		
NO _x ^c 90 - 105% Load	2.21 E+00	A
NO _x ^c <90% Load	2.27 E+00	C
CO ^d 90 - 105% Load	3.72 E+00	A
CO ^d <90% Load	3.51 E+00	C
CO ₂ ^e	1.10 E+02	A
SO ₂ ^f	5.88 E-04	A
TOC ^g	3.58 E-01	C
Methane ^h	2.30 E-01	C
VOC ^h	2.96 E-02	C
PM10 (filterable) ^{i,j}	9.50 E-03	E
PM2.5 (filterable) ^j	9.50 E-03	E
PM Condensable ^k	9.91 E-03	E
Trace Organic Compounds		
1,1,2,2-Tetrachloroethane ^l	2.53 E-05	C
1,1,2-Trichloroethane ^l	<1.53 E-05	E
1,1-Dichloroethane	<1.13 E-05	E
1,2-Dichloroethane	<1.13 E-05	E
1,2-Dichloropropane	<1.30 E-05	E
1,3-Butadiene ^l	6.63 E-04	D
1,3-Dichloropropene ^l	<1.27 E-05	E
Acetaldehyde ^{l,m}	2.79 E-03	C
Acrolein ^{l,m}	2.63 E-03	C
Benzene ^l	1.58 E-03	B
Butyr/isobutyraldehyde	4.86 E-05	D
Carbon Tetrachloride ^l	<1.77 E-05	E

ATTACHMENT 5

TGP Emission Factors for the Engine driving the Emergency Generator

TGP COMPRESSOR STATION 856, TENNESSEE

Caterpillar G343 Natural Gas Fired Emergency Generator

Manufacturer	Caterpillar	
Engine Model	G343	
Combustion Type	4SRB	
Design Output:	150 kW	
Design Output:	225 hp	Rated at 225 hp @ 1800 rpm
Fuel Used:	Natural Gas	
Heat Rate	12,000 Btu/hp-hr	Conservative assumption
Heat Input	2.700 MMBtu/hr	
HHV of fuel (Natural Gas):	1,020 Btu/scf	
Potential Operating hours/year:	500 hrs/yr	
Calculated Max Annual Fuel Usage	1.324 mmscf/yr	

Criteria Pollutants

Pollutants	Emission Factor ¹	Emission Factor Units	Potential Emissions	
			(lb/hr)	(tpy)
NOx	2.21	lb/MMBtu	5.9670	1.491750
CO	3.72E+00	lb/MMBtu	10.0440	2.511000
VOC	2.96E-02	lb/MMBtu	0.0799	0.019980
PM	1.94E-02	lb/MMBtu	0.0524	0.013102
PM10	1.94E-02	lb/MMBtu	0.0524	0.013102
PM2.5	1.94E-02	lb/MMBtu	0.0524	0.013102
SO ₂	5.88E-04	lb/MMBtu	0.0016	0.000397

HAPs	Emission Factor ¹ (lb/MMBtu)	Potential Emissions ³	
		(lb/hr)	(lb/yr)
1,1,2,2-Tetrachloroethane	2.53E-05	6.83E-05	0.034
1,1,2-Trichloroethane	1.53E-05	4.13E-05	0.021
1,1-Dichloroethane	1.13E-05	3.05E-05	0.015
1,2-Dichloroethane	1.13E-05	3.05E-05	0.015
1,2-Dichloropropane	1.30E-05	3.51E-05	0.018
1,3-Butadiene	6.63E-04	1.79E-03	0.895
1,3-Dichloropropene	1.27E-05	3.43E-05	0.017
Acetaldehyde	2.79E-03	7.53E-03	3.767
Acrolein	2.63E-03	7.10E-03	3.551
Benzene	1.58E-03	4.27E-03	2.133
Butyr/isobutyraldehyde	4.86E-05	1.31E-04	0.066
Carbon Tetrachloride	1.77E-05	4.78E-05	0.024
Chlorobenzene	1.29E-05	3.48E-05	0.017
Chloroform	1.37E-05	3.70E-05	0.018
Ethane	7.04E-02	1.90E-01	95.040
Ethylbenzene	2.48E-05	6.70E-05	0.033
Ethylene Dibromide	2.13E-05	5.75E-05	0.029
Formaldehyde	2.05E-02	5.54E-02	27.675
Methanol	3.06E-03	8.26E-03	4.131
Methylene Chloride	4.12E-05	1.11E-04	0.056
Naphthalene	9.71E-05	2.62E-04	0.131
PAH	1.41E-04	3.81E-04	0.190
Styrene	1.19E-05	3.21E-05	0.016
Toluene	5.58E-04	1.51E-03	0.753
Vinyl Chloride	7.18E-06	1.94E-05	0.010
Xylene	1.95E-04	5.27E-04	0.263
Total		2.78E-01	138.92

¹ Based on AP-42, 5th ed., Table 3.2-3 "Uncontrolled Emission Factors for Natural Gas Fired 4-Stroke Rich-Burn Engines" (7/00).

Example Calculations

Potential Emissions (lb/hr) = Heat Input (MMBtu/hr) × Emission Factor (lb/MMBtu)

Potential Emissions (tons/yr) = Potential Emissions (lb/hr) × (Potential Operating Hours) × (1 ton/2,000 lb)

Permit Number: 571462

Expiration Date: DRAFT