INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

TO: Interested Parties / Applicant

DATE: April 19, 2012

RE: Citizens Gas / 097-31494-00141

FROM: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

(1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
(2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
(3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

(1) the name and address of the person making the request;
(2) the interest of the person making the request;
(3) identification of any persons represented by the person making the request;
(4) the reasons, with particularity, for the request;
(5) the issues, with particularity, proposed for considerations at any hearing; and
(6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNPER.dot12/03/07

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April 19, 2012

Mr. Drew McClay
Citizens Gas
2700 S. Belmont Avenue
Indianapolis, IN 46221

Re: 097-31494-00141
First Significant Permit Revision GHG
Reopening to F097-18805-00141

Dear Mr. McClay:

Citizens Gas was issued a Federally Enforceable State Operating Permit (FESOP) Renewal No. F097-18805-00141 on December 21, 2006 for a stationary liquefied natural gas storage plant located at 4536 West 86th Street, Indianapolis, IN 46268.

On January 5, 2012, the Office of Air Quality (OAQ) provided notice to this source that the Greenhouse Gas (GHG) Tailoring Rule (75 FR 31514) set a date of July 1, 2012 for sources that have the potential to emit (PTE) greenhouse gases (GHGs) equal to or greater than 100,000 tons per year of carbon dioxide equivalent emissions (CO2e) to apply for a Title V permit or revise their current FESOP to add limits on GHGs. This notice specified that companies could request IDEM to reopen their permit to add limits on GHGs. On February 15, 2012, IDEM OAQ received a request from this source to reopen its FESOP to add limits on GHGs, pursuant to the provisions of 326 IAC 2-8-8.

Pursuant to 326 IAC 2-7-1(39), starting July 1, 2011, GHGs emissions are subject to regulation at a source with a potential to emit of 100,000 tons per year or more of CO2e. Therefore, CO2e emissions have been calculated for this source. Based on the calculations, the PTE greenhouse gases from this entire source is equal to or greater than 100,000 tons of CO2e per year (see TSD Appendix A for detailed calculations). This source would have been subject to the provisions of 326 IAC 2-7. However, this source will be issued a Significant Permit Revision (SPR) to its existing FESOP because the source will limit its CO_2e emissions to less than the Title V subject to regulation threshold of 100,000 tons per year. The attached Technical Support Document (TSD) provides additional explanation of the changes to the permit.

Pursuant to the provisions of 326 IAC 2-8-11.1, these changes to the permit are required to be reviewed in accordance with the SPR procedures of 326 IAC 2-8-11.1(f). Pursuant to the provisions of 326 IAC 2-8-11.1, a SPR to this permit is hereby approved as described in the attached TSD.

All other conditions of the permit shall remain unchanged and in effect. Attached please find the entire revised permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Jason R. Krawczyk, of my staff, at 317-234-5174 or 1-800-451-6027, and ask for extension 4-5174.

Sincerely,

Nathan Bell, Section Chief
Permits Branch
Office of Air Quality

Attachments: Technical Support Document and revised permit

NB/JRK

cc: File - Marion County
Marion County Health Department
U.S. EPA, Region V
Compliance and Enforcement Branch
Billing, Licensing and Training Section

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FEDERALLY ENFORCEABLE STATE OPERATING PERMIT RENEWAL
OFFICE of AIR QUALITY

Citizens Gas
4536 West 86th Street
Indianapolis, Indiana 46268

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

The Permittee must comply with all conditions of this permit. Noncompliance with any provision of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; and denial of a permit renewal application. It shall not be a defense for the 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 this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17. This permit also addresses new source review requirements and is intended to fulfill the new source review procedures and permit revision requirements pursuant to 326 IAC 2-8-11.1, applicable to those conditions.

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a FESOP under 326 IAC 2-8.

Operation Permit No.: F097-18805-00141	
Original Signed By: Felicia A. Robinson, Administrator Office of Environmental Services	Issuance Date: December 21, 2006 Expiration Date: December 21, 2016

1st Administrative Amendment No. 097-25813-00141, issued January 17, 2008
2nd Administrative Amendment No. 097-27692-00141, issued April 28, 2009
3rd Administrative Amendment No: 097-29954-00141, issued January 20, 2011

First Significant Permit Revision No.: 097-31494-00141	
Issued By: Nathan Bell, Section Chief Permits Branch Office of Air Quality	Issuance Date: April 19, 2012 Expiration Date: December 21, 2016

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in Conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates a liquefied natural gas storage plant.

Source Address:	4536 West 86th Street, Indianapolis, IN 46268
General Source Phone:	(317) 927-6016
SIC Code:	4922
Source Location Status:	Marion County Nonattainment for PM2.5 Attainment for all other criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD and Emission Offset Rules; Minor Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

This stationary source consists of the following emission units and pollution control devices:

(a) One (1) Allison simple cycle Gas Turbine for refrigerant compressor, identified as Emission Unit ID 01 and exhausting at Stack/Vent ID S01. Natural gas fired at 38.0 million Btu per hour maximum heat input. Model number 501-KC5. Installation date of 1990. Under 40 CFR 60.330, Subpart GG (Standards of Performance for Stationary Gas Turbines), the Allison simple cycle Gas Turbine is considered a stationary gas turbine. Emission Unit ID 01 includes non HAP VOC emissions from the natural gas liquefaction compressor/heat exchange system.

(b) One (1) T-Thermal water submerged Vaporizer for the vaporization of liquefied natural gas, identified as Emission Unit ID 02 and exhausting at Stack/Vent ID 02-A1 and 02-A2. Includes six (6) natural gas fired burners with a combined total heat input capacity of 72.0 million Btu per hour. Installation date of 1990. Under 40 CFR 60.40c, Subpart Dc (Standards of Performance for Small Industrial - Commercial - Institutional Steam Generating Units), the T-Thermal water submerged Vaporizer identified as Emission Unit ID 02 is considered a steam generating unit.

(c) One (1) T-Thermal water submerged Vaporizer for the vaporization of liquefied natural gas, identified as Emission Unit ID 03 and exhausting at Stack/Vent ID 03-B1 and 03-B2. Includes six (6) natural gas fired burners with a combined total heat input capacity of 72.0 million Btu per hour. Installation date of 1990. Under 40 CFR 60.40c, Subpart Dc (Standards of Performance for Small Industrial - Commercial - Institutional Steam Generating Units), the T-Thermal water submerged Vaporizer identified as Emission Unit ID 03 is considered a steam generating unit.

(d) One (1) T-Thermal water submerged Vaporizer for the vaporization of liquefied natural gas, identified as Emission Unit ID 04 and exhausting at Stack/Vent ID 04-C1 and 04-C2. Includes six (6) natural gas fired burners with a combined total heat input capacity of 72.0 million Btu per hour. Installation date of 1990. Under 40 CFR 60.40c, Subpart Dc (Standards of Performance for Small Industrial - Commercial - Institutional Steam Generating Units), the T-Thermal water submerged Vaporizer identified as Emission Unit ID 04 is considered a steam generating unit.

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

(a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million BTU per hour:

(1) Salt Bath heater for mole sieve regeneration, operated while natural gas is being liquefied, identified as Emission Unit ID SBH-01, with a maximum heat input capacity of 6.5 MMBtu/hr. [326 IAC 6-2-4]

(b) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume.

(c) Process vessel degassing and cleaning to prepare for internal repairs.

(d) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.

(e) Equipment used to collect any material that might be released during a malfunction, process upset or spill cleanup including catch tanks, temporary liquid separators, tanks and fluid handling equipment.

(f) On site fire and emergency response training approved by the department.

(g) Natural gas turbines or reciprocating engines not exceeding 16,000 horsepower, including:

(1) Emission Unit ID WEG 1, Waukesha Emergency Generator, natural gas fired at 6.0 million Btu per hour or an equivalent horsepower rating of 2346 at 1750 kilowatts. [326 IAC 2-3]

(h) Stationary fire pumps, including:

(1) Emission Unit ID EFP-01, diesel fuel fired emergency fire pump, rated at 459 horse power. [326 IAC 2-3]

(i) Purge double block and bleed valves.

(j) One (1) ethylene storage tank at 12,000 gallon storage capacity, identified as Emission Unit ID Ethylene Storage Tank, installed in 1990. [326 IAC 8-1-6]

(k) One (1) pentane storage tank at 10,000 gallon storage capacity, identified as Emission Unit ID Pentane Storage Tank, installed in 1990.

(l) One (1) butane storage tank and one (1) propane storage tank, identified as Emission Unit ID Butane Storage Tank, and Emission Unit ID Propane Storage Tank, respectively,

each at 3,500 gallon storage capacity, and one (1) odorant storage tank at 100 gallon capacity, all installed in 1990.

A.4 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) to renew a Federally Enforceable State Operating Permit (FESOP).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-8-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

(a) This permit, F097-18805-00141, is issued for a fixed term of ten (10) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

B.3 Term of Conditions [326 IAC 2-1.1-9.5]

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

(a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or

(b) the emission unit to which the condition pertains permanently ceases operation.

B.4 Enforceability [326 IAC 2-8-6] [IC 13-17-12]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.5 Severability [326 IAC 2-8-4(4)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.6 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

This permit does not convey any property rights of any sort or any exclusive privilege.

B.7 Duty to Provide Information [326 IAC 2-8-4(5)(E)]

(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

(b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]

(a) A certification required by this permit meets the requirements of 326 IAC 2-8-5(a)(1) if:

(1) it contains a certification by an "authorized individual", as defined by 326 IAC 2-1.1-1(1), and

(2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

(c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

B.9 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than April 15 of each year to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) The annual compliance certification report shall include the following:

(1) The appropriate identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and

(5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.10 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)][326 IAC 2-8-5(a)(1)]

(a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

The Permittee shall implement the PMPs.

(b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

The Permittee shall implement the PMPs.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.12 Emergency Provisions [326 IAC 2-8-12]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation except as provided in 326 IAC 2-8-12.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

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

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.

(g) Operations may continue during an emergency only if the following conditions are met:

(1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

(2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:

(A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and

(B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5]

(a) All terms and conditions of permits established prior to F097-18805-00141 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised, or

(3) deleted.

(b) All previous registrations and permits are superseded by this permit.

B.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State Operating Permit modification, revocation and reissuance, or termination, or of a notification of

planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]

(c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

B.16 Permit Renewal [326 IAC 2-8-3(h)]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(b) A timely renewal application is one that is:

(1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the

deadline specified, pursuant to 326 IAC 2-8-3(g), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) through (d) without a prior permit revision, if each of the following conditions is met:

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any approval required by 326 IAC 2-8-11.1 has been obtained;

(3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to

326 IAC 2-8-15(b) through (d). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-8-15(b)(2), (c)(1), and (d).

(b) Emission Trades [326 IAC 2-8-15(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).

(c) Alternative Operating Scenarios [326 IAC 2-8-15(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.

(d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.19 Source Modification Requirement [326 IAC 2-8-11.1]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

B.20 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.21 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

(a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit

responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.22 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ no later than thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.

(b) Failure to pay may result in administrative enforcement action or revocation of this permit.

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.23 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-8-4(1)]

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

(1) The potential to emit any regulated pollutant, except particulate matter (PM) and greenhouse gases (GHGs), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.

(2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and

(3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(4) The potential to emit greenhouse gases (GHGs) from the entire source shall be limited to less than one hundred thousand (100,000) tons of CO_2 equivalent emissions (CO_2e) per twelve (12) consecutive month period.

(b) Pursuant to 326 IAC 2-2 (PSD), potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period.

(c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.

(d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.3 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (Applicability) and 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A,

Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.4 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

C.6 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Demolition and Renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

(g) Indiana Licensed Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos.

Testing Requirements [326 IAC 2-8-4(3)]

C.8 Performance Testing [326 IAC 3-6]

(a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.9 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

C.10 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]

Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or of initial start-up, whichever is later, to begin such monitoring. If due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance or the date of initial startup, whichever is later, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a permit revision shall be implemented when operation begins.

C.11 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(1)]

(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.

(b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

Corrective Actions and Response Steps [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

C.12 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]

If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

C.13 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

(a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or

(3) any necessary follow-up actions to return operation to normal or usual manner of operation.

(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:

(1) monitoring results;

(2) review of operation and maintenance procedures and records; and/or

(3) inspection of the control device, associated capture system, and the process.

(d) Failure to take reasonable response steps shall be considered a deviation from the permit.

(e) The Permittee shall record the reasonable response steps taken.

C.14 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.

(b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

C.15 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

C.16 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

(b) The address for report submittal is:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit “calendar year” means the twelve (12) month period from January 1 to December 31 inclusive.

Stratospheric Ozone Protection

C.17 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with applicable standards for recycling and emissions reduction.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

(a) One (1) Allison simple cycle Gas Turbine for refrigerant compressor, identified as Emission Unit ID 01 and exhausting at Stack/Vent ID S01. Natural gas fired at 38.0 million Btu per hour maximum heat input. Model number 501-KC5. Installation date of 1990. Under 40 CFR 60.330, Subpart GG (Standards of Performance for Stationary Gas Turbines), the Allison simple cycle Gas Turbine is considered a stationary gas turbine. Emission Unit ID 01 includes non HAP VOC emissions from the natural gas liquefaction compressor/heat exchange system.

(b) One (1) T-Thermal water submerged Vaporizer for the vaporization of liquefied natural gas, identified as Emission Unit ID 02 and exhausting at Stack/Vent ID 02-A1 and 02-A2. Includes six (6) natural gas fired burners with a combined total heat input capacity of 72.0 million Btu per hour. Installation date of 1990. Under 40 CFR 60.40c, Subpart Dc (Standards of Performance for Small Industrial - Commercial - Institutional Steam Generating Units), the T-Thermal water submerged Vaporizer identified as Emission Unit ID 02 is considered a steam generating unit.

(c) One (1) T-Thermal water submerged Vaporizer for the vaporization of liquefied natural gas, identified as Emission Unit ID 03 and exhausting at Stack/Vent ID 03-B1 and 03-B2. Includes six (6) natural gas fired burners with a combined total heat input capacity of 72.0 million Btu per hour. Installation date of 1990. Under 40 CFR 60.40c, Subpart Dc (Standards of Performance for Small Industrial - Commercial - Institutional Steam Generating Units), the T-Thermal water submerged Vaporizer identified as Emission Unit ID 03 is considered a steam generating unit.

(d) One (1) T-Thermal water submerged Vaporizer for the vaporization of liquefied natural gas, identified as Emission Unit ID 04 and exhausting at Stack/Vent ID 04-C1 and 04-C2. Includes six (6) natural gas fired burners with a combined total heat input capacity of 72.0 million Btu per hour. Installation date of 1990. Under 40 CFR 60.40c, Subpart Dc (Standards of Performance for Small Industrial - Commercial - Institutional Steam Generating Units), the T-Thermal water submerged Vaporizer identified as Emission Unit ID 04 is considered a steam generating unit.

INSIGNIFICANT ACTIVITIES

(a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million BTU per hour:

(1) Salt bath heater for mole sieve regeneration, operated while natural gas is being liquefied, identified as Emission Unit ID SBH-01, with a maximum heat input capacity of 6.5 MMBtu/hr. [326 IAC 6-2-4]

(g) Natural gas turbines or reciprocating engines not exceeding 16,000 horsepower, including:

(1) Emission Unit ID WEG 1, Waukesha Emergency Generator, natural gas fired at 6.0 million Btu per hour or an equivalent horsepower rating of 2346 at 1750 kilowatts. [326 IAC 2-3]

(h) Stationary fire pumps, including:

(1) Emission Unit ID EFP-01, diesel fuel fired emergency fire pump, rated at 459 horse power. [326 IAC 2-3]

Facility Description [326 IAC 2-8-4(10)]:

(j) One (1) ethylene storage tank at 12,000 gallon storage capacity, identified as Emission Unit ID Ethylene Storage Tank, installed in 1990. [326 IAC 8-1-6]

(k) One (1) pentane storage tank at 10,000 gallon storage capacity, identified as Emission Unit ID Pentane Storage Tank, installed in 1990.

(l) One (1) butane storage tank and one (1) propane storage tank, identified as Emission Unit ID Butane Storage Tank, and Emission Unit ID Propane Storage Tank, respectively, each at 3,500 gallon storage capacity, and one (1) odorant storage tank at 100 gallon capacity, all installed in 1990.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.1.1 Emission Offset Minor Limit [326 IAC 2-3] [326 IAC 2-8] [Installation Permit 900141-01]

(a) Pursuant to Installation Permit number 900141-01, issued November 6, 1990:

(1) Nitrogen Oxides (NO_X) emissions from Emission Unit ID 01, the one (1) Allison simple cycle Gas Turbine, shall be limited to 32.1 pounds per hour.

(2) The nitrogen content for gas turbine fuel consumed in Emission Unit ID 01, the one (1) Allison simple cycle Gas Turbine, shall be limited to 23.2 percent by weight.

(b) Pursuant to 326 IAC 2-8-4 (FESOP; Permit Content):

(1) Nitrogen Oxides (NO_X) emissions from the Allison simple cycle Gas Turbine, identified as Emission Unit ID 01, shall not exceed 846 pounds per million cubic feet (lbs/MMCF) of natural gas burned.

(2) Nitrogen Oxides (NO_X) emissions from each of the three T-Thermal water submerged Vaporizers, identified as Emission Unit ID 02, 03 and 04, shall not exceed 100 pounds per million cubic feet (lbs/MMCF) of natural gas burned.

(3) Nitrogen Oxides (NO_X) emissions from the Waukesha Emergency Generator, identified as Emission Unit ID WEG 1, shall not exceed 3,170 pounds per million cubic feet (lbs/MMCF) of natural gas burned.

(4) Nitrogen Oxides (NO_X) emissions from the diesel fuel fired emergency fire pump, Emission Unit ID EFP-01, shall not exceed 0.6 pounds per gallon (lbs/gal) of diesel fuel burned.

(5) The combined total Nitrogen Oxides (NO_X) emissions from the Allison simple cycle Gas Turbine, Emission Unit ID 01, the three T-Thermal water submerged Vaporizers, Emission Unit IDs 02 – 04, the Waukesha Emergency Generator, Emission Unit ID WEG 1, and the diesel fuel fired emergency fire pump, Emission Unit ID EFP-01, shall not exceed 93.06 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with this condition shall limit total NO_X emissions from the source to less than 100 tons per twelve (12) consecutive month period with compliance determined at the end of each month and demonstrates compliance with 326 IAC 2-3 (Emission Offset) and Installation Permit number 900141-01, issued November 6, 1990. Therefore, the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-3 (Emission Offset) do not apply to the source.

D.1.2 PSD Minor Limit [326 IAC 2-2][326 IAC 2-8-4]

Pursuant to 326 IAC 2-8-4 and in order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the source shall comply with the following:

The combined CO2e emissions from the Allison simple cycle Gas Turbine, Emission Unit ID 01, the three T-Thermal water submerged Vaporizers, Emission Unit IDs 02 – 04, the Waukesha Emergency Generator, Emission Unit ID WEG 1, and the diesel fuel fired emergency fire pump, Emission Unit ID EFP-01, shall not exceed 96,463 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these limits, combined with the potential to emit greenhouse gases from all other emission units at this source, shall limit the source-wide total potential to emit greenhouse gases (GHGs) to less than 100,000 tons of CO_2 equivalent emissions (CO_2e) per 12 consecutive month period and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.1.3 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

(a) Pursuant to 326 IAC 8-1-6, VOC input to the natural gas liquefaction compressor/heat exchange system shall be limited such that the potential to emit of VOC is less than ninety (90.0) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) Ethylene (VOC) input not sent to the natural gas liquefaction compressor/heat exchange system from Emission Unit ID Ethylene Storage Tank shall only be vented into the vapor feed line directly into the natural gas distribution system.

D.1.4 Particulate Matter (PM) [326 IAC 6-2-1][326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-1 (Particulate Emission Limitations for Sources of Indirect Heating), the allowable PM emission rate from the three T-Thermal water submerged Vaporizers, identified as Emission Unit ID 02, 03 and 04, and the Salt Bath heater for mole sieve regeneration, identified as Emission Unit ID SBH-01, based on a total heat input rate of 222.50 MMBtu per hour, shall each be limited to 0.27 pound per MMBtu heat input.

This limitation is based on the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

where: Pt = Pounds of particulate matter emitted per MMBtu heat input.
Q = Total source maximum operating capacity rating in MMBtu per hour.

D.1.5 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, is required for Emission Unit ID 01 through 04 and any control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.1.6 Nitrogen Oxides (NO_X) Emissions

Compliance with Condition D.1.1 shall be determined by the following equation:

E = [(846 lbs/MMCF) x (actual monthly fuel use in MMCF this month in the Allison simple cycle Gas Turbine) + (100 lbs/MMCF) x (combined actual monthly fuel use in MMCF this month in the three T-Thermal water submerged Vaporizers) + (3,170 lbs/MMCF) x (actual monthly fuel use in MMCF this month in the Waukesha Emergency Generator) + (0.6 lbs/gal) x (actual monthly fuel use in gallons this month in the diesel fuel fired emergency fire pump)] + P

Where: E = actual NO_X emissions per twelve (12) consecutive month period
P = actual NO_X emissions in the previous eleven (11) consecutive month period

D.1.7 CO_2e Emissions

In order to comply with Condition D.1.2, the Permittee shall use the following equations to determine the tons of CO_2e emitted per twelve (12) consecutive month period:

Carbon Dioxide Equivalent (CO_2e) emissions calculation:

$$CO_2 = \frac{G1(EG1_{CO2}) + G2(EG2_{CO2}) + G3(EG3_{CO2}) + D(ED_{CO2})}{2{,}000 \text{ lbs/ton}}$$

$$CH_4 = \frac{G1(EG1_{CH4}) + G2(EG2_{CH4}) + G3(EG3_{CH4}) + D(ED_{CH4})}{2{,}000 \text{ lbs/ton}}$$

$$N_2O = \frac{G1(EG1_{N2O}) + G2(EG2_{N2O}) + G3(EG3_{N2O}) + D(ED_{N2O})}{2{,}000 \text{ lbs/ton}}$$

$$CO_2e = \sum[(CO_2 \times CO_2 \text{ GWP}) + (CH_4 \times CH_4 \text{ GWP}) + (N_2O \times N_2O \text{ GWP})]$$

Where:

CO_2 = tons of CO_2 emissions for previous 12 consecutive month period
CH_4 = tons of CH_4 emissions for previous 12 consecutive month period
N_2O = tons of N_2O emissions for previous 12 consecutive month period
CO_2e = tons of CO_2e equivalent emissions for previous 12 consecutive month period
G1 = million cubic feet of natural gas used in Turbine (01) in previous 12 months
G2 = million cubic feet of natural gas used in Vaporizers (02, 03, 04) in previous 12 months
G3 = million cubic feet of natural gas used in Generator (WEG 1) in previous 12 months
D = kilogallons of diesel used in the Emergency Fire Pump (EFP-01) in previous 12 months

Emission Unit	Equation Input	Values		
		CO_2	CH_4	N_2O
Turbine (01)*	EG1	112,200 lb/MMscf	8.77 lb/MMscf	3.06 lb/MMscf
Vaporizers (02, 03, 04)	EG2	120,000 lb/MMscf	2.3 lb/MMscf	2.2 lb/MMscf
Generator (WEG 1)*	EG3	112,200 lb/MMscf	1,479 lb/MMscf	0.10 lb/MMscf
Fire Pump (EFP-01)**	ED	22,473 lb/kgal	0.91 lb/kgal	0.18 lb/kgal

Notes:
* An assumed heat content of 1020 Btu/scf was used to convert from lb/MMBtu to lb/MMscf.
** The ED Values were determined assuming diesel has a heating value of 19,300 Btu/lb and a density of 7.1 lbs/gal (137,030 Btu/gal).

Global Warming Potentials (GWP)
Carbon dioxide (CO_2) = 1
Methane (CH_4) = 21
Nitrous oxide (N_2O) = 310

D.1.8 VOC Organic Compounds (VOC) [326 IAC 8-1-6]

Compliance with Condition D.1.3 shall be determined at the end of each month using the following equation:

E = (VOC input, in tons, this month – ethylene (VOC), in tons, this month sent to the natural gas distribution system) + P

Where: E = actual VOC emissions per twelve (12) consecutive month period
P = actual VOC emissions in the previous eleven (11) consecutive month period

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.1.9 Record Keeping Requirements

(a) To document the compliance status with Conditions D.1.1, the Permittee shall maintain records in accordance with (1) through (2) below.

(1) Calendar dates covered in the compliance determination period;

(2) Actual natural gas usage in the Allison simple cycle Gas Turbine (Emission Unit ID 01), the three T-Thermal water submerged Vaporizers (Emission Unit IDs 02 – 04), and the Waukesha Emergency Generator (Emission Unit ID WEG-01) and actual diesel fuel usage in the fire pump (Unit ID EFP-01) per month since the last compliance determination period and NO_X emissions;

(b) To document the compliance status with Condition D.1.2, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the CO_2e emission limits established in Condition D.1.2.

(1) Calendar dates covered in the compliance determination period;

(2) Actual natural gas usage each month;

(3) Actual diesel usage each month;

(4) Equivalent carbon dioxide equivalent (CO_2e) emission rates for each fuel used at the source per month; and

(5) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period.

(c) To document the compliance status with Condition D.1.3, the Permittee shall maintain records of (1) through (3) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limits established in Condition D.1.3. Records necessary to demonstrate compliance shall be available no later than 30 days of the end of each compliance period.

(1) The monthly total amount of VOC input to the natural gas liquefaction compressor/heat exchange system;

(2) VOC purchase records;

(3) VOC sent to the natural gas distribution system;

(4) Total amount of VOC emitted for each compliance period;

(d) Section C - General Record Keeping Requirements, of this permit contains the Permittee's obligations with regard to the records required by this condition.

D.1.10 Reporting Requirements

A quarterly summary of the information to document the compliance status with Conditions D.1.1, D.1.2, and D.1.3 shall be submitted, using the reporting forms located at the end of this permit, or their equivalent, no later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

New Source Performance Standards (NSPS) Requirements [326 IAC 2-8-4(1)]

D.1.11 General Provisions Relating to NSPS [40 CFR Part 60, Subpart A][326 IAC 12-1]

(a) The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to Emission Unit ID 01 through 04 as described in this section except when otherwise specified in 40 CFR Part 60, Subpart GG or 40 CFR Part 60, Subpart Dc.

(b) Pursuant to 40 CFR 60.7, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, IN 46204-2251

D.1.12 Standards of Performance for Stationary Gas Turbines [40 CFR 60.330 Subpart GG] [326 IAC 12]

Pursuant 40 CFR 60.330 Subpart GG (Standards of Performance for Stationary Gas Turbines), the one (1) Allison simple cycle Gas Turbine, identified as Emission Unit ID 01, shall comply with the following:

§ 60.330 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to the following affected facilities: All stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules (10 million Btu) per hour, based on the lower heating value of the fuel fired.

(b) Any facility under paragraph (a) of this section which commences construction, modification, or reconstruction after October 3, 1977, is subject to the requirements of this part except as provided in paragraphs (e) and (j) of §60.332.

[44 FR 52798, Sept. 10, 1979, as amended at 52 FR 42434, Nov. 5, 1987; 65 FR 61759, Oct. 17, 2000]

§ 60.331 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

(a) *Stationary gas turbine* means any simple cycle gas turbine, regenerative cycle gas turbine or any gas turbine portion of a combined cycle steam/electric generating system that is not self propelled. It may, however, be mounted on a vehicle for portability.

(b) *Simple cycle gas turbine* means any stationary gas turbine which does not recover heat from the gas turbine exhaust gases to preheat the inlet combustion air to the gas turbine, or which does not recover heat from the gas turbine exhaust gases to heat water or generate steam.

(c) *Regenerative cycle gas turbine* means any stationary gas turbine which recovers heat from the gas turbine exhaust gases to preheat the inlet combustion air to the gas turbine.

(d) *Combined cycle gas turbine* means any stationary gas turbine which recovers heat from the gas turbine exhaust gases to heat water or generate steam.

(e) *Emergency gas turbine* means any stationary gas turbine which operates as a mechanical or electrical power source only when the primary power source for a facility has been rendered inoperable by an emergency situation.

(f) *Ice fog* means an atmospheric suspension of highly reflective ice crystals.
(g) *ISO standard day conditions* means 288 degrees Kelvin, 60 percent relative humidity and 101.3 kilopascals pressure.

(h) *Efficiency* means the gas turbine manufacturer's rated heat rate at peak load in terms of heat input per unit of power output based on the lower heating value of the fuel.

(i) *Peak load* means 100 percent of the manufacturer's design capacity of the gas turbine at ISO standard day conditions.

(j) *Base load* means the load level at which a gas turbine is normally operated.

(k) *Fire-fighting turbine* means any stationary gas turbine that is used solely to pump water for extinguishing fires.

(l) *Turbines employed in oil/gas production or oil/gas transportation* means any stationary gas turbine used to provide power to extract crude oil/natural gas from the earth or to move crude oil/natural gas, or products refined from these substances through pipelines.

(m) A *Metropolitan Statistical Area* or *MSA* as defined by the Department of Commerce.

(n) *Offshore platform gas turbines* means any stationary gas turbine located on a platform in an ocean.

(o) *Garrison facility* means any permanent military installation.

(p) *Gas turbine model* means a group of gas turbines having the same nominal air flow, combuster inlet pressure, combuster inlet temperature, firing temperature, turbine inlet temperature and turbine inlet pressure.

(q) *Electric utility stationary gas turbine* means any stationary gas turbine constructed for the purpose of supplying more than one-third of its potential electric output capacity to any utility power distribution system for sale.

(r) *Emergency fuel* is a fuel fired by a gas turbine only during circumstances, such as natural gas supply curtailment or breakdown of delivery system, that make it impossible to fire natural gas in the gas turbine.

(s) *Unit operating hour* means a clock hour during which any fuel is combusted in the affected unit. If the unit combusts fuel for the entire clock hour, it is considered to be a full unit operating hour. If the unit combusts fuel for only part of the clock hour, it is considered to be a partial unit operating hour.

(t) *Excess emissions* means a specified averaging period over which either:

(1) The NO_X emissions are higher than the applicable emission limit in §60.332;

(2) The total sulfur content of the fuel being combusted in the affected facility exceeds the limit specified in §60.333; or

(3) The recorded value of a particular monitored parameter is outside the acceptable range specified in the parameter monitoring plan for the affected unit.

(u) *Natural gas* means a naturally occurring fluid mixture of hydrocarbons (*e.g.*, methane, ethane, or propane) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions. Natural gas contains 20.0 grains or less of total sulfur per 100 standard cubic feet. Equivalents of this in other units are as follows: 0.068 weight percent total sulfur, 680 parts per million by weight (ppmw) total sulfur, and 338 parts per million by volume (ppmv) at 20 degrees Celsius total sulfur. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1100 British thermal units (Btu) per standard cubic foot. Natural gas does not include the following gaseous fuels: landfill gas, digester gas, refinery gas, sour gas, blast furnace gas, coal-derived gas, producer gas, coke oven gas, or any gaseous fuel produced in a process which might result in highly variable sulfur content or heating value.

(v) *Duct burner* means a device that combusts fuel and that is placed in the exhaust duct from another source, such as a stationary gas turbine, internal combustion engine, kiln, etc., to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a heat recovery steam generating unit.

(w) *Lean premix stationary combustion turbine* means any stationary combustion turbine where the air and fuel are thoroughly mixed to form a lean mixture for combustion in the combustor. Mixing may occur before or in the combustion chamber. A unit which is capable of operating in both lean premix and diffusion flame modes is considered a lean premix stationary combustion turbine when it is in the lean premix mode, and it is considered a diffusion flame stationary combustion turbine when it is in the diffusion flame mode.

(x) *Diffusion flame stationary combustion turbine* means any stationary combustion turbine where fuel and air are injected at the combustor and are mixed only by diffusion prior to ignition. A unit which is capable of operating in both lean premix and diffusion flame modes is considered a lean premix stationary combustion turbine when it is in the lean premix mode, and it is considered a diffusion flame stationary combustion turbine when it is in the diffusion flame mode.

(y) *Unit operating day* means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

[44 FR 52798, Sept. 10, 1979, as amended at 47 FR 3770, Jan. 27, 1982; 65 FR 61759, Oct. 17, 2000; 69 FR 41359, July 8, 2004]

§ 60.332 Standard for nitrogen oxides.

(a) On and after the date on which the performance test required by §60.8 is completed, every owner or operator subject to the provisions of this subpart as specified in paragraphs (b), (c), and (d) of this section shall comply with one of the following, except as provided in paragraphs (e), (f), (g), (h), (i), (j), (k), and (l) of this section.

(2) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of:

$$STD = 0.0150(14.4)/Y + F$$

where:

STD = allowable ISO corrected (if required as given in §60.335(b)(1)) NO_X emission concentration (percent by volume at 15 percent oxygen and on a dry basis),
Y = manufacturer's rated heat rate at manufacturer's rated peak load (kilojoules per watt hour), or actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour, and
F = NO_X emission allowance for fuel-bound nitrogen as defined in paragraph (a)(4) of this section.

(3) The use of F in paragraphs (a)(1) and (2) of this section is optional. That is, the owner or operator may choose to apply a NO_X allowance for fuel-bound nitrogen and determine the appropriate F-value in accordance with paragraph (a)(4) of this section or may accept an F-value of zero.

(4) If the owner or operator elects to apply a NO_X emission allowance for fuel-bound nitrogen, F shall be defined according to the nitrogen content of the fuel during the most recent performance test required under §60.8 as follows:

Fuel-bound nitrogen (percent by weight)	F (NOX percent by volume)
N [le] 0.015	0
0.015 < N[le] 0.1	0.04(N)
0.1 < N [le] 0.25	0.004+0.0067(N-0.1)
N > 0.25	0.005

Where:
N = the nitrogen content of the fuel (percent by weight).
or:
Manufacturers may develop and submit to EPA custom fuel-bound nitrogen allowances for each gas turbine model they manufacture. These fuel-bound nitrogen allowances shall be substantiated with data and must be approved for use by the Administrator before the initial performance test required by §60.8. Notices of approval of custom fuel-bound nitrogen allowances will be published in the Federal Register.

(c) Stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules per hour (10 million Btu/hour) but less than or equal to 107.2 gigajoules per hour (100 million Btu/hour) based on the lower heating value of the fuel fired, shall comply with the provisions of paragraph (a)(2) of this section.

[44 FR 52798, Sept. 10, 1979, as amended at 47 FR 3770, Jan. 27, 1982; 65 FR 61759, Oct. 17, 2000; 69 FR 41359, July 8, 2004]

§ 60.333 Standard for sulfur dioxide.

On and after the date on which the performance test required to be conducted by §60.8 is completed, every owner or operator subject to the provision of this subpart shall comply with one or the other of the following conditions:

(a) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine any gases which contain sulfur dioxide in excess of 0.015 percent by volume at 15 percent oxygen and on a dry basis.

(b) No owner or operator subject to the provisions of this subpart shall burn in any stationary gas turbine any fuel which contains total sulfur in excess of 0.8 percent by weight (8000 ppmw).

[44 FR 52798, Sept. 10, 1979, as amended at 69 FR 41360, July 8, 2004]

§ 60.334 Monitoring of operations.

(c) For any turbine that commenced construction, reconstruction or modification after October 3, 1977, but before July 8, 2004, and which does not use steam or water injection to control NO_X emissions, the owner or operator may, for purposes of determining excess emissions, use a CEMS that meets the requirements of paragraph (b) of this section. Also, if the owner or operator has previously submitted and received EPA or local permitting authority approval of a petition for an alternative procedure of continuously monitoring compliance with the applicable NO_X emission limit under §60.332, that approved procedure may continue to be used, even if it deviates from paragraph (a) of this section.

(h) The owner or operator of any stationary gas turbine subject to the provisions of this subpart:

(1) Shall monitor the total sulfur content of the fuel being fired in the turbine, except as provided in paragraph (h)(3) of this section. The sulfur content of the fuel must be determined using total sulfur methods described in §60.335(b)(10). Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than 0.4 weight percent (4000 ppmw), ASTM D4084–82, 94, D5504–01, D6228–98, or Gas Processors Association Standard 2377–86 (all of which are incorporated by reference-see §60.17), which measure the major sulfur compounds may be used; and

(2) Shall monitor the nitrogen content of the fuel combusted in the turbine, if the owner or operator claims an allowance for fuel bound nitrogen (*i.e.*, if an F-value greater than zero is being or will be used by the owner or operator to calculate STD in §60.332). The nitrogen content of the fuel shall be determined using methods described in §60.335(b)(9) or an approved alternative.

(3) Notwithstanding the provisions of paragraph (h)(1) of this section, the owner or operator may elect not to monitor the total sulfur content of the gaseous fuel combusted in the turbine, if the gaseous fuel is demonstrated to meet the definition of natural gas in §60.331(u), regardless of whether an existing custom schedule approved by the administrator for subpart GG requires such monitoring. The owner or operator shall use one of the following sources of information to make the required demonstration:

(i) The gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less; or

(ii) Representative fuel sampling data which show that the sulfur content of the gaseous fuel does not exceed 20 grains/100 scf. At a minimum, the amount of fuel sampling data specified in section 2.3.1.4 or 2.3.2.4 of appendix D to part 75 of this chapter is required.

(4) For any turbine that commenced construction, reconstruction or modification after October 3, 1977, but before July 8, 2004, and for which a custom fuel monitoring schedule has previously been approved, the owner or operator may, without submitting a special petition to the Administrator, continue monitoring on this schedule.

(i) The frequency of determining the sulfur and nitrogen content of the fuel shall be as follows:

(1) *Fuel oil.* For fuel oil, use one of the total sulfur sampling options and the associated sampling frequency described in sections 2.2.3, 2.2.4.1, 2.2.4.2, and 2.2.4.3 of appendix D to part 75 of this chapter (*i.e.*, flow proportional sampling, daily sampling, sampling from the unit's storage tank after each addition of fuel to the tank, or sampling each delivery prior to combining it with fuel oil already in the intended storage tank). If an emission allowance is being claimed for fuel-bound nitrogen, the nitrogen content of the oil shall be determined and recorded once per unit operating day.

(2) *Gaseous fuel.* Any applicable nitrogen content value of the gaseous fuel shall be determined and recorded once per unit operating day. For owners and operators that elect not to demonstrate sulfur content using options in paragraph (h)(3) of this section, and for which the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel shall be determined and recorded once per unit operating day.

(3) *Custom schedules.* Notwithstanding the requirements of paragraph (i)(2) of this section, operators or fuel vendors may develop custom schedules for determination of the total sulfur content of gaseous fuels, based on the design and operation of the affected facility and the characteristics of the fuel supply. Except as provided in paragraphs (i)(3)(i) and (i)(3)(ii) of this section, custom schedules shall be substantiated with data and shall be approved by the Administrator before they can be used to comply with the standard in §60.333.

(i) The two custom sulfur monitoring schedules set forth in paragraphs (i)(3)(i)(A) through (D) and in paragraph (i)(3)(ii) of this section are acceptable, without prior Administrative approval:

(A) The owner or operator shall obtain daily total sulfur content measurements for 30 consecutive unit operating days, using the applicable methods specified in this subpart. Based on the results of the 30 daily samples, the required frequency for subsequent monitoring of the fuel's total sulfur content shall be as specified in paragraph (i)(3)(i)(B), (C), or (D) of this section, as applicable.

(B) If none of the 30 daily measurements of the fuel's total sulfur content exceeds 0.4 weight percent (4000 ppmw), subsequent sulfur content monitoring may be performed at 12 month intervals. If any of the samples taken at 12-month intervals has a total sulfur content between 0.4 and 0.8 weight percent (4000 and 8000 ppmw), follow the procedures in paragraph (i)(3)(i)(C) of this section. If any measurement exceeds 0.8 weight percent (8000 ppmw), follow the procedures in paragraph (i)(3)(i)(D) of this section.

(C) If at least one of the 30 daily measurements of the fuel's total sulfur content is between 0.4 and 0.8 weight percent (4000 and 8000 ppmw), but none exceeds 0.8 weight percent (8000 ppmw), then:

(*1*) Collect and analyze a sample every 30 days for three months. If any sulfur content measurement exceeds 0.8 weight percent (8000 ppmw), follow the procedures in paragraph (i)(3)(i)(D) of this section. Otherwise, follow the procedures in paragraph (i)(3)(i)(C)(*2*) of this section.

(*2*) Begin monitoring at 6-month intervals for 12 months. If any sulfur content measurement exceeds 0.8 weight percent (8000 ppmw), follow the procedures in paragraph (i)(3)(i)(D) of this section. Otherwise, follow the procedures in paragraph (i)(3)(i)(C)(*3*) of this section.

(*3*) Begin monitoring at 12-month intervals. If any sulfur content measurement exceeds 0.8 weight percent (8000 ppmw), follow the procedures in paragraph (i)(3)(i)(D) of this section. Otherwise, continue to monitor at this frequency.

(D) If a sulfur content measurement exceeds 0.8 weight percent (8000 ppmw), immediately begin daily monitoring according to paragraph (i)(3)(i)(A) of this section. Daily monitoring shall continue until 30 consecutive daily samples, each having a sulfur content no greater than 0.8 weight percent (8000 ppmw), are obtained. At that point, the applicable procedures of paragraph (i)(3)(i)(B) or (C) of this section shall be followed.

(j) For each affected unit required to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content or fuel nitrogen content under this subpart, the owner or operator shall submit reports of excess emissions and monitor downtime, in accordance with §60.7(c). Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction. For the purpose of reports required under §60.7(c), periods of excess emissions and monitor downtime that shall be reported are defined as follows:

(1) Nitrogen oxides.

(ii) If the owner or operator elects to take an emission allowance for fuel bound nitrogen, then excess emissions and periods of monitor downtime are as described in paragraphs (j)(1)(ii)(A) and (B) of this section.

(A) An excess emission shall be the period of time during which the fuel-bound nitrogen (N) is greater than the value measured during the performance test required in §60.8 and used to determine the allowance. The excess emission begins on the date and hour of the sample which shows that N is greater

than the performance test value, and ends with the date and hour of a subsequent sample which shows a fuel nitrogen content less than or equal to the performance test value.

(2) Sulfur dioxide. If the owner or operator is required to monitor the sulfur content of the fuel under paragraph (h) of this section:

(i) For samples of gaseous fuel and for oil samples obtained using daily sampling, flow proportional sampling, or sampling from the unit's storage tank, an excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 weight percent and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit.

(ii) If the option to sample each delivery of fuel oil has been selected, the owner or operator shall immediately switch to one of the other oil sampling options (*i.e.*, daily sampling, flow proportional sampling, or sampling from the unit's storage tank) if the sulfur content of a delivery exceeds 0.8 weight percent. The owner or operator shall continue to use one of the other sampling options until all of the oil from the delivery has been combusted, and shall evaluate excess emissions according to paragraph (j)(2)(i) of this section. When all of the fuel from the delivery has been burned, the owner or operator may resume using the as-delivered sampling option.

(iii) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime shall include only unit operating hours, and ends on the date and hour of the next valid sample.

(4) *Emergency fuel.* Each period during which an exemption provided in §60.332(k) is in effect shall be included in the report required in §60.7(c). For each period, the type, reasons, and duration of the firing of the emergency fuel shall be reported.

(5) All reports required under §60.7(c) shall be postmarked by the 30th day following the end of each calendar quarter.

[44 FR 52798, Sept. 10, 1979, as amended at 47 FR 3770, Jan. 27, 1982; 65 FR 61759, Oct. 17, 2000; 69 FR 41360, July 8, 2004]

§ 60.335 Test methods and procedures.

(a) The owner or operator shall conduct the performance tests required in §60.8, using either

(1) EPA Method 20,

(2) ASTM D6522–00 (incorporated by reference, see §60.17), or

(3) EPA Method 7E and either EPA Method 3 or 3A in appendix A to this part, to determine NO_X and diluent concentration.

(4) Sampling traverse points are to be selected following Method 20 or Method 1, (non-particulate procedures) and sampled for equal time intervals. The sampling shall be performed with a traversing single-hole probe or, if feasible, with a stationary multi-hole probe that samples each of the points sequentially. Alternatively, a multi-hole probe designed and documented to sample equal volumes from each hole may be used to sample simultaneously at the required points.

(5) Notwithstanding paragraph (a)(4) of this section, the owner or operator may test at few points than are specified in Method 1 or Method 20 if the following conditions are met:

(i) You may perform a stratification test for NO_X and diluent pursuant to

(A) [Reserved]

(B) The procedures specified in section 6.5.6.1(a) through (e) appendix A to part 75 of this chapter.

(ii) Once the stratification sampling is completed, the owner or operator may use the following alternative sample point selection criteria for the performance test:

(A) If each of the individual traverse point NO_X concentrations, normalized to 15 percent O_2, is within ±10 percent of the mean normalized concentration for all traverse points, then you may use 3 points (located either 16.7, 50.0, and 83.3 percent of the way across the stack or duct, or, for circular stacks or ducts greater than 2.4 meters (7.8 feet) in diameter, at 0.4, 1.2, and 2.0 meters from the wall). The 3 points shall be located along the measurement line that exhibited the highest average normalized NO_X concentration during the stratification test; or

(B) If each of the individual traverse point NO_X concentrations, normalized to 15 percent O_2, is within ±5 percent of the mean normalized concentration for all traverse points, then you may sample at a single point, located at least 1 meter from the stack wall or at the stack centroid.

(6) Other acceptable alternative reference methods and procedures are given in paragraph (c) of this section.

(b) The owner or operator shall determine compliance with the applicable nitrogen oxides emission limitation in §60.332 and shall meet the performance test requirements of §60.8 as follows:

(1) For each run of the performance test, the mean nitrogen oxides emission concentration (NO_{Xo}) corrected to 15 percent O_2 shall be corrected to ISO standard conditions using the following equation. Notwithstanding this requirement, use of the ISO correction equation is optional for: Lean premix stationary combustion turbines; units used in association with heat recovery steam generators (HRSG) equipped with duct burners; and units equipped with add-on emission control devices:
$NO_X=(NO_{Xo})(P_r/P_o)^{0.5}$ e19 (Ho−0.00633) $(288°K/T_a)^{1.53}$
Where:
NO_X = emission concentration of NO_X at 15 percent O_2 and ISO standard ambient conditions, ppm by volume, dry basis,
NO_{Xo} = mean observed NO_X concentration, ppm by volume, dry basis, at 15 percent O_2,
P_r = reference combustor inlet absolute pressure at 101.3 kilopascals ambient pressure, mm Hg,
P_o = observed combustor inlet absolute pressure at test, mm Hg,
H_o = observed humidity of ambient air, g H_2O/g air,
e = transcendental constant, 2.718, and
T_a = ambient temperature, °K.

(2) The 3-run performance test required by §60.8 must be performed within ±5 percent at 30, 50, 75, and 90-to-100 percent of peak load or at four evenly-spaced load points in the normal operating range of the gas turbine, including the minimum point in the operating range and 90-to-100 percent of peak load, or at the highest achievable load point if 90-to-100 percent of peak load cannot be physically achieved in practice. If the turbine combusts both oil and gas as primary or backup fuels, separate performance testing is required for each fuel. Notwithstanding these requirements, performance testing is not required for any emergency fuel (as defined in §60.331).

(3) For a combined cycle turbine system with supplemental heat (duct burner), the owner or operator may elect to measure the turbine NO_X emissions after the duct burner rather than directly after the turbine. If the owner or operator elects to use this alternative sampling location, the applicable NO_X emission limit in §60.332 for the combustion turbine must still be met.

(4) If water or steam injection is used to control NO_X with no additional post-combustion NO_X control and the owner or operator chooses to monitor the steam or water to fuel ratio in accordance with §60.334(a), then that monitoring system must be operated concurrently with each EPA Method 20, ASTM D6522–00 (incorporated by reference, see §60.17), or EPA Method 7E run and shall be used to determine the fuel consumption and the steam or water to fuel ratio necessary to comply with the applicable §60.332 NO_X emission limit.

(5) If the owner operator elects to claim an emission allowance for fuel bound nitrogen as described in §60.332, then concurrently with each reference method run, a representative sample of the fuel used shall be collected and analyzed, following the applicable procedures described in §60.335(b)(9). These data shall be used to determine the maximum fuel nitrogen content for which the established water (or steam) to fuel ratio will be valid.

(6) If the owner or operator elects to install a CEMS, the performance evaluation of the CEMS may either be conducted separately (as described in paragraph (b)(7) of this section) or as part of the initial performance test of the affected unit.

(7) If the owner or operator elects to install and certify a NO_X CEMS under §60.334(e), then the initial performance test required under §60.8 may be done in the following alternative manner:

(i) Perform a minimum of 9 reference method runs, with a minimum time per run of 21 minutes, at a single load level, between 90 and 100 percent of peak (or the highest physically achievable) load.

(ii) Use the test data both to demonstrate compliance with the applicable NO_X emission limit under §60.332 and to provide the required reference method data for the RATA of the CEMS described under §60.334(b).

(iii) The requirement to test at three additional load levels is waived.

(8) If the owner or operator is required under §60.334(f) to monitor combustion parameters or parameters indicative of proper operation of NO_X emission controls, the appropriate parameters shall be continuously monitored and recorded during each run of the initial performance test, to establish acceptable operating ranges, for purposes of the parameter monitoring plan for the affected unit, as specified in §60.334(g).

(9) To determine the fuel bound nitrogen content of fuel being fired (if an emission allowance is claimed for fuel bound nitrogen), the owner or operator may use equipment and procedures meeting the requirements of:

(i) For liquid fuels, ASTM D2597–94 (Reapproved 1999), D6366–99, D4629–02, D5762–02 (all of which are incorporated by reference, *see* §60.17); or

(ii) For gaseous fuels, shall use analytical methods and procedures that are accurate to within 5 percent of the instrument range and are approved by the Administrator.

(10) If the owner or operator is required under §60.334(i)(1) or (3) to periodically determine the sulfur content of the fuel combusted in the turbine, a minimum of three fuel samples shall be collected during the performance test. Analyze the samples for the total sulfur content of the fuel using:

(i) For liquid fuels, ASTM D129–00, D2622–98, D4294–02, D1266–98, D5453–00 or D1552–01 (all of which are incorporated by reference, *see* §60.17); or

(ii) For gaseous fuels, ASTM D1072–80, 90 (Reapproved 1994); D3246–81, 92, 96; D4468–85 (Reapproved 2000); or D6667–01 (all of which are incorporated by reference, see §60.17). The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the prior approval of the Administrator.

(11) The fuel analyses required under paragraphs (b)(9) and (b)(10) of this section may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency.

(c) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

(1) Instead of using the equation in paragraph (b)(1) of this section, manufacturers may develop ambient condition correction factors to adjust the nitrogen oxides emission level measured by the performance test as provided in §60.8 to ISO standard day conditions.

[69 FR 41363, July 8, 2004]

D.1.13 Standards of Performance for Small Industrial-Commercial-Intstitutional Steam Generating Units [40 CFR 60.40c, Subpart Dc]

Pursuant 40 CFR 60.40c, Subpart Dc (Standards of Performance for Small Industrial-Commercial-Intstitutional Steam Generating Units), the three T-Thermal water submerged Vaporizers, identified as Emission Unit ID 02, 03 and 04, shall each comply with the following:

§ 60.40c Applicability and delegation of authority.

(a) Except as provided in paragraph (d) of this section, the affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million Btu per hour (Btu/hr)) or less, but greater than or equal to 2.9 MW (10 million Btu/hr).

(b) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, §60.48c(a)(4) shall be retained by the Administrator and not transferred to a State.

(c) Steam generating units which meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide (SO_2) or particulate matter (PM) emission limits, performance testing requirements, or monitoring requirements under this subpart (§§60.42c, 60.43c, 60.44c, 60.45c, 60.46c, or 60.47c) during periods of combustion research, as defined in §60.41c.

(d) Any temporary change to an existing steam generating unit for the purpose of conducting combustion research is not considered a modification under §60.14.

[55 FR 37683, Sept. 12, 1990, as amended at 61 FR 20736, May 8, 1996]

§ 60.41c Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act and in subpart A of this part.

Annual capacity factor means the ratio between the actual heat input to a steam generating unit from an individual fuel or combination of fuels during a period of 12 consecutive calendar months and the potential heat input to the steam generating unit from all fuels had the steam generating unit been operated for 8,760 hours during that 12-month period at the maximum design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility during a period of 12 consecutive calendar months.

Coal means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials in ASTM D388–77, 90, 91, 95, or 98a, Standard Specification for Classification of Coals by Rank (IBR—see §60.17), coal refuse, and petroleum coke. Coal-derived synthetic fuels derived from coal for the purposes of creating useful heat, including but not limited to solvent refined coal, gasified coal, coal-oil mixtures, and coal-water mixtures, are also included in this definition for the purposes of this subpart.

Coal refuse means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (kJ/kg) (6,000 Btu per pound (Btu/lb) on a dry basis.

Cogeneration steam generating unit means a steam generating unit that simultaneously produces both electrical (or mechanical) and thermal energy from the same primary energy source.

Combined cycle system means a system in which a separate source (such as a stationary gas turbine, internal combustion engine, or kiln) provides exhaust gas to a steam generating unit.

Combustion research means the experimental firing of any fuel or combination of fuels in a steam generating unit for the purpose of conducting research and development of more efficient combustion or more effective prevention or control of air pollutant emissions from combustion, provided that, during these periods of research and development, the heat generated is not used for any purpose other than preheating combustion air for use by that steam generating unit (i.e., the heat generated is released to the atmosphere without being used for space heating, process heating, driving pumps, preheating combustion air for other units, generating electricity, or any other purpose).

Conventional technology means wet flue gas desulfurization technology, dry flue gas desulfurization technology, atmospheric fluidized bed combustion technology, and oil hydrodesulfurization technology.

Distillate oil means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396–78, 89, 90, 92, 96, or 98, “Standard Specification for Fuel Oils” (incorporated by reference—see §60.17).

Dry flue gas desulfurization technology means a sulfur dioxide (SO_2) control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline reagents used in dry flue gas desulfurization systems include, but are not limited to, lime and sodium compounds.

Duct burner means a device that combusts fuel and that is placed in the exhaust duct from another source (such as a stationary gas turbine, internal combustion engine, kiln, etc.) to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a steam generating unit.

Emerging technology means any SO_2 control system that is not defined as a conventional technology under this section, and for which the owner or operator of the affected facility has received approval from the Administrator to operate as an emerging technology under §60.48c(a)(4).

Federally enforceable means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR Parts 60 and 61, requirements within any applicable State implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 40 CFR 51.24.

Fluidized bed combustion technology means a device wherein fuel is distributed onto a bed (or series of beds) of limestone aggregate (or other sorbent materials) for combustion; and these materials are forced upward in the device by the flow of combustion air and the gaseous products of combustion. Fluidized bed combustion technology includes, but is not limited to, bubbling bed units and circulating bed units.

Fuel pretreatment means a process that removes a portion of the sulfur in a fuel before combustion of the fuel in a steam generating unit.

Heat input means heat derived from combustion of fuel in a steam generating unit and does not include the heat derived from preheated combustion air, recirculated flue gases, or exhaust gases from other sources (such as stationary gas turbines, internal combustion engines, and kilns).

Heat transfer medium means any material that is used to transfer heat from one point to another point.

Maximum design heat input capacity means the ability of a steam generating unit to combust a stated maximum amount of fuel (or combination of fuels) on a steady state basis as determined by the physical design and characteristics of the steam generating unit.

Natural gas means (1) a naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane, or (2) liquefied petroleum (LP) gas, as defined by the American Society for Testing and Materials in ASTM D1835–86, 87, 91, or 97, “Standard Specification for Liquefied Petroleum Gases” (incorporated by reference—see §60.17).

Noncontinental area means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

Oil means crude oil or petroleum, or a liquid fuel derived from crude oil or petroleum, including distillate oil and residual oil.

Potential sulfur dioxide emission rate means the theoretical SO_2 emissions (nanograms per joule [ng/J], or pounds per million Btu [lb/million Btu] heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems.

Process heater means a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.

Residual oil means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society for Testing and Materials in ASTM D396–78, 89, 90, 92, 96, or 98, "Standard Specification for Fuel Oils" (incorporated by reference—see §60.17).

Steam generating unit means a device that combusts any fuel and produces steam or heats water or any other heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as defined in this subpart.

Steam generating unit operating day means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

Wet flue gas desulfurization technology means an SO_2 control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a liquid material. This definition includes devices where the liquid material is subsequently converted to another form. Alkaline reagents used in wet flue gas desulfurization systems include, but are not limited to, lime, limestone, and sodium compounds.

Wet scrubber system means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of particulate matter (PM) or SO_2.

Wood means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including but not limited to sawdust, sanderdust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.

[55 FR 37683, Sept. 12, 1990, as amended at 61 FR 20736, May 8, 1996; 65 FR 61752, Oct. 17, 2000; 71 FR 9884, Feb. 27, 2006]

§ 60.48c Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction, anticipated startup, and actual startup, as provided by §60.7 of this part. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

(2) If applicable, a copy of any Federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §60.42c, or §60.43c.

(3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

(4) Notification if an emerging technology will be used for controlling SO_2 emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or

operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of §60.42c(a) or (b)(1), unless and until this determination is made by the Administrator.

(g) The owner or operator of each affected facility shall record and maintain records of the amounts of each fuel combusted during each day. The owner or operator of an affected facility that only burns very low sulfur fuel oil or other liquid or gaseous fuels with potential sulfur dioxide emissions rate of 140 ng/J (0.32 lb/MMBtu) heat input or less shall record and maintain records of the fuels combusted during each calendar month.

[55 FR 37683, Sept. 12, 1990, as amended at 64 FR 7465, Feb. 12, 1999; 65 FR 61753, Oct. 17, 2000; 71 FR 9886, Feb. 27, 2006]

D.1.14 State Only Heat Transfer Medium NSPS Requirements [326 IAC 12]

Pursuant 326 IAC 12, the Permittee shall comply with the provisions of the July 1, 2002 version of 40 CFR 60.40c, Subpart Dc (Standards of Performance for Small Industrial-Commercial-Intstitutional Steam Generating Units), which is incorporated by reference by 326 IAC 12 for each of the T-Thermal Vaporizers, identified as Emission Unit ID 02, 03 and 04. The Permittee shall comply with the following:

§ 60.41c Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act and in subpart A of this part.

Coal means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials in ASTM D388-77, “Standard Specification for Classification of Coals by Rank” (incorporated by reference--see Sec. 60.17), coal refuse, and petroleum coke. Synthetic fuels derived from coal for the purposes of creating useful heat, including but not limited to solvent refined coal, gasified coal, coal-oil mixtures, and coal-water mixtures, are also included in this definition for the purposes of this subpart.

[55 FR 37683, Sept. 12, 1990, as amended at 61 FR 20736, May 8, 1996; 65 FR 61752, Oct. 17, 2000]

§ 60.48c Reporting and recordkeeping requirements.

(g) The owner or operator of each affected facility shall record and maintain records of the amounts of each fuel combusted during each day.

[55 FR 37683, Sept. 12, 1990, as amended at 64 FR 7465, Feb. 12, 1999; 65 FR 61753, Oct. 17, 2000]

The requirements of 326 IAC 12 listed in this condition are not federally enforceable.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: Citizens Gas
Source Address: 4536 West 86th Street, Indianapolis, IN 46268
FESOP No.: F097-18805-00141

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

☐ Annual Compliance Certification Letter

☐ Test Result (specify)_____

☐ Report (specify)_____

☐ Notification (specify)_____

☐ Affidavit (specify)_____

☐ Other (specify)_____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: 317-233-0178
Fax: 317-233-6865

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT

Source Name: Citizens Gas
Source Address: 4536 West 86th Street, Indianapolis, IN 46268
FESOP No.: F097-18805-00141

This form consists of 2 pages **Page 1 of 2**

☐ This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (**4**) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance and Enforcement Branch); and
- The Permittee must submit notice in writing or by facsimile within two (**2**) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_X, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____
Title / Position: _____
Date: _____
Phone: _____

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INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

FESOP Quarterly Report

Source Name: Citizens Gas
Source Address: 4536 West 86th Street, Indianapolis, IN 46268
FESOP No.: F097-18805-00141
Facility: Natural gas liquefaction compressor/heat exchange system for the liquefaction process (Emission Unit ID 01)
Parameter: VOC input, in tons, to the natural gas liquefaction compressor/heat exchange system – ethylene (VOC), in tons, sent to the natural gas distribution system = VOC emissions
Limit: Pursuant to 326 IAC 8-1-6, VOC input to the natural gas liquefaction compressor/heat exchange system shall be limited such that the potential to emit of VOC is less than ninety (90.0) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Quarter :_____ Year:_____

Month	Column 1	Column 2	Column 1 + Column 2
	VOC Emissions (tons) This Month	VOC Emissions (tons) Previous 11 Months	VOC Emissions (tons) 12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:_____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

FESOP Quarterly Report

Source Name: Citizens Gas
Source Address: 4536 West 86th Street, Indianapolis, IN 46268
FESOP No.: F097-18805-00141
Facility: Allison simple cycle Gas Turbine, Emission Unit ID 01, the three T-Thermal water submerged Vaporizers, Emission Unit IDs 02 – 04, the Waukesha Emergency Generator, Emission Unit ID WEG 1, and the diesel fuel fired emergency fire pump, Emission Unit ID EFP-01
Parameter: NO_X emissions
Limit: Combined total Nitrogen Oxides (NO_X) emissions shall not exceed 93.06 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Quarter:_____ Year:_____

Month	Column 1	Column 2	Column 1 + Column 2
	Combined total Nitrogen Oxides (NO_X) emissions (tons) This Month	Combined total Nitrogen Oxides (NO_X) emissions (tons) Previous 11 Months	Combined total Nitrogen Oxides (NO_X) emissions (tons) 12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:_____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

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INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

FESOP Quarterly Report

Page 1 of 2

Source Name: Citizens Gas
Source Address: 4536 West 86th Street, Indianapolis, IN 46268
FESOP No.: F097-18805-00141
Facility: Emission Unit IDs 01 through 04, WEG 1, and EFP-01
Parameter: CO_2e emissions
Limit: The combined CO2e emissions from the Allison simple cycle Gas Turbine, Emission Unit ID 01, the three T-Thermal water submerged Vaporizers, Emission Unit IDs 02 – 04, the Waukesha Emergency Generator, Emission Unit ID WEG 1, and the diesel fuel fired emergency fire pump, Emission Unit ID EFP-01, shall not exceed 96,463 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Carbon Dioxide Equivalent (CO_2e) emissions calculation:

$$CO_2 = \frac{G1(EG1_{CO2}) + G2(EG2_{CO2}) + G3(EG3_{CO2}) + D(ED_{CO2})}{2{,}000 \text{ lbs/ton}}$$

$$CH_4 = \frac{G1(EG1_{CH4}) + G2(EG2_{CH4}) + G3(EG3_{CH4}) + D(ED_{CH4})}{2{,}000 \text{ lbs/ton}}$$

$$N_2O = \frac{G1(EG1_{N2O}) + G2(EG2_{N2O}) + G3(EG3_{N2O}) + D(ED_{N2O})}{2{,}000 \text{ lbs/ton}}$$

$$CO_2e = \sum[(CO_2 \times CO_2 \text{ GWP}) + (CH_4 \times CH_4 \text{ GWP}) + (N_2O \times N_2O \text{ GWP})]$$

Where:

CO_2 = tons of CO_2 emissions for previous 12 consecutive month period
CH_4 = tons of CH_4 emissions for previous 12 consecutive month period
N_2O = tons of N_2O emissions for previous 12 consecutive month period
CO_2e = tons of CO_2e equivalent emissions for previous 12 consecutive month period
G1 = million cubic feet of natural gas used in Turbine (01) in previous 12 months
G2 = million cubic feet of natural gas used in Vaporizers (02, 03, 04) in previous 12 months
G3 = million cubic feet of natural gas used in Generator (WEG 1) in previous 12 months
D = kilogallons of diesel used in the Emergency Fire Pump (EFP-01) in previous 12 months

Emission Unit	Equation Input	Values		
		CO_2	CH_4	N_2O
Turbine (01)*	EG1	112,200 lb/MMscf	8.77 lb/MMscf	3.06 lb/MMscf
Vaporizers (02, 03, 04)	EG2	120,000 lb/MMscf	2.3 lb/MMscf	2.2 lb/MMscf
Generator (WEG 1)*	EG3	112,200 lb/MMscf	1,479 lb/MMscf	0.10 lb/MMscf
Fire Pump (EFP-01)**	ED	22,473 lb/kgal	0.91 lb/kgal	0.18 lb/kgal

Notes:
* An assumed heat content of 1020 Btu/scf was used to convert from lb/MMBtu to lb/MMscf.
** The ED Values were determined assuming diesel has a heating value of 19,300 Btu/lb and a density of 7.1 lbs/gal (137,030 Btu/gal).

Global Warming Potentials (GWP)
Carbon dioxide (CO_2) = 1
Methane (CH_4) = 21
Nitrous oxide (N_2O) = 310

Page 2 of 2

QUARTER:_____ YEAR:_____

Month	Column 1	Column 2	Column 1 + Column 2
	Combined total CO2e emissions (tons) This Month	Combined total CO2e emissions (tons) Previous 11 Months	Combined total CO2e emissions (tons) 12 Month Total

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature:_____

Date:_____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Citizens Gas
Source Address: 4536 West 86th Street, Indianapolis, IN 46268
FESOP No.: F097-18805-00141

Months: _____ to _____ Year: _____

Page 1 of 2

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Page 2 of 2

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Form Completed By: ______________________________

Title/Position: ______________________________

Date: ______________________________

Phone: ______________________________

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Significant Permit Revision (SPR) Greenhouse Gases (GHGs) Reopening to a Federally Enforceable State Operating Permit (FESOP)

Source Description and Location

Source Name:	**Citizens Gas**
Source Location:	**4536 West 86th Street, Indianapolis, IN 46268**
County:	**Marion**
SIC Code:	**4922 (Natural Gas Transmission)**
Operation Permit No.:	**F 097-18805-00141**
Operation Permit Issuance Date:	**December 21, 2006**
Significant Permit Revision No.:	**097-31494-00141**
Permit Reviewer:	**Jason R. Krawczyk**

Citizens Gas was issued a Federally Enforceable State Operating Permit (FESOP) Renewal No. F097-18805-00141 on December 21, 2006, for a stationary liquefied natural gas storage plant located at 4536 West 86th Street, Indianapolis, IN 46268.

On January 5, 2012, the Office of Air Quality (OAQ) provided notice to this source that the Greenhouse Gas (GHG) Tailoring Rule (75 FR 31514) set a date of July 1, 2012 for sources that have the potential to emit (PTE) greenhouse gases (GHGs) equal to or greater than 100,000 tons per year of carbon dioxide equivalent emissions (CO2e) to apply for a Title V permit or revise their current FESOP to add limits on GHGs. This notice specified that companies could request IDEM to reopen their permit to add limits on GHGs. On February 15, 2012, IDEM OAQ received a request from this source to reopen its FESOP to add limits on GHGs, pursuant to the provisions of 326 IAC 2-8-8.

Existing Approvals

The source was issued FESOP Renewal No. 097-18805-00141 on January 21, 2006. The source has since received the following approvals:

(a) Administrative Amendment No. 097-25813-00141, issued on January 17, 2008;

(b) Administrative Amendment No. 097-27692-00141, issued on April 28, 2009; and

(c) Administrative Amendment No. 097-29954-00141, issued on January 20, 2011.

County Attainment Status

The source is located in Marion County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Attainment effective February 18, 2000, for the part of the city of Indianapolis bounded by 11th Street on the north; Capitol Avenue on the west; Georgia Street on the south; and Delaware Street on the east. Unclassifiable or attainment effective November 15, 1990, for the remainder of Indianapolis and Marion County.
O_3	Attainment effective November 8, 2007, for the 8-hour ozone standard.[1]
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Attainment effective July 10, 2000, for the part of Franklin Township bounded by Thompson Road on the south; Emerson Avenue on the west; Five Points Road on the east; and Troy Avenue on the north. Attainment effective July 10, 2000, for the part of Wayne Township bounded by Rockville Road on the north; Girls School Road on the east; Washington Street on the south; and Bridgeport Road on the west. The remainder of the county is not designated.
[1]Attainment effective October 18, 2000, for the 1-hour ozone standard for the Indianapolis area, including Marion County, and is a maintenance area for the 1-hour ozone National Ambient Air Quality Standards (NAAQS) for purposes of 40 CFR 51, Subpart X*. The 1-hour designation was revoked effective June 15, 2005. Basic nonattainment designation effective federally April 5, 2005, for PM2.5.	

(a) Ozone Standards
Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Marion County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) $PM_{2.5}$
Marion County has been classified as nonattainment for $PM_{2.5}$ in 70 FR 943 dated January 5, 2005. On May 8, 2008, U.S. EPA promulgated specific New Source Review rules for $PM_{2.5}$ emissions. These rules became effective on July 15, 2008. Therefore, direct $PM_{2.5}$ and SO_2 emissions were reviewed pursuant to the requirements of Nonattainment New Source Review, 326 IAC 2-1.1-5. See the State Rule Applicability – Entire Source section.

(c) Other Criteria Pollutants
Marion County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

This type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, however, 40 CFR 60, Subpart GG (September 10, 1979) is an applicable New Source Performance Standard that was in effect on August 7, 1980, therefore fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Description of Proposed Revision

Pursuant to 326 IAC 2-7-1(39), starting July 1, 2011, GHGs emissions are subject to regulation at a source with a potential to emit of 100,000 tons per year or more of CO2e. Therefore, CO2e emissions have been calculated for this source. Based on the calculations, the PTE greenhouse gases from the entire source is equal to or greater than 100,000 tons of CO2e per year (see TSD Appendix A for detailed calculations). This source would have been subject to the provisions of 326 IAC 2-7. However, this source will be issued a Significant Permit Revision (SPR) to its existing FESOP because this source will limit its CO_2e emissions to less than the Title V subject to regulation threshold of 100,000 tons per year.

No new emission units are included in this proposed revision.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

PTE of the Entire Source After Issuance of the FESOP Revision

The table below summarizes the potential to emit of the entire source after issuance of this revision, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this FESOP permit revision, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

	Potential To Emit of the Entire Source After Issuance of Revision (tons/year)									
Process/ Emission Unit	PM	PM10*	PM2.5	SO_2	NOx	VOC	CO	**GHGs as CO_2e****	Total HAPs	Worst Single HAP
Turbine (01)	0.32	1.10	1.10	0.57	93.06	90.35	13.65	**96,463**	0.18	0.12 CH_2O
Vaporizers (02, 03, 04)	1.80	7.19	7.19	0.57		5.20	79.47		1.79	1.70 Hexane
Emergency Generator (WEG 1)	0.06	0.07	0.07	Negl.		0.18	0.58		0.12	Negl.
Fire Pump (EFP-01)	0.25	0.25	0.25	0.24		0.29	0.77		Negl.	Negl.
Salt Bath (SBH-1)	0.05	0.22	0.22	0.02	2.85	0.16	2.39	**3,437**	0.05	0.05 Hexane
Tanks	-	-	-	-	-	0.99	-	**-**	-	-
Total PTE of Entire Source	2.48	8.83	8.83	1.39	95.91	97.17	96.86	**99,900**	2.14	1.76 Hexane
Title V Major Source Thresholds**	NA	100	100	100	100	100	100	**100,000**	25	10
PSD Major Source Thresholds**	250	250	250	250	250	250	250	**100,000**	NA	NA
Nonattainment NSR Major Source Thresholds	N/A	N/A	100	N/A	N/A	N/A	N/A	NA	NA	NA

negl. = negligible
*Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".
**The 100,000 CO_2e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.
***Turbine emissions include 90 tons VOC/yr from refrigerant loss.

FESOP and PSD Minor Status for GHGs

(a) This revision to an existing Title V minor stationary source will not change the minor status, because the potential to emit GHGs from the entire source will still be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-8 (FESOP).

(b) This modification to an existing PSD minor stationary source will not change the PSD minor status, because the potential to emit of GHGs from the entire source will continue to be less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

Pursuant to 326 IAC 2-8-4 and in order to render the requirements of 326 IAC 2-2 (Prevention of

Significant Deterioration (PSD)) not applicable, the source shall comply with the following:

The combined CO2e emissions from the Allison simple cycle Gas Turbine, Emission Unit ID 01, the three T-Thermal water submerged Vaporizers, Emission Unit IDs 02 – 04, the Waukesha Emergency Generator, Emission Unit ID WEG 1, and the diesel fuel fired emergency fire pump, Emission Unit ID EFP-01, shall not exceed 96,463 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with this limit, combined with the potential to emit greenhouse gases from all other emission units at this source, shall limit the source-wide total potential to emit greenhouse gases (GHGs) to less than 100,000 tons of CO_2 equivalent emissions (CO_2e) per twelve (12) consecutive month period and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

Federal Rule and State Rule Applicability Determination and Compliance Determination, Monitoring and Testing Requirements

The existing applicable federal, state and compliance requirements will not change as a result of this reopening. The source shall continue to comply with the applicable requirements and permit conditions as contained in FESOP No: 097-18805-00141 (as amended by Administrative Amendment No. 097-29954-00141, issued on January 20, 2011) except as indicated below under Proposed Changes.

Proposed Changes

For this permit reopening, IDEM, OAQ has made the following changes to the permit:

(a) IDEM has revised Section C - Overall Source Limit to reflect that in order to remain a FESOP, the potential to emit greenhouse gases shall be limited to less than 100,000 tons per year of CO2 equivalent emissions (CO2e).

(b) IDEM has added applicable requirements (standards, limitations, compliance determination, record keeping and reporting) to limit CO2e emissions to be less than 100,000 tons per year in order to render 326 IAC 2-2 (PSD) and 326 IAC 2-7 (Part 70 Permits) not applicable. All subsequent conditions were renumbered as necessary.

The permit has been revised as follows with deleted language as ~~strikeouts~~ and new language **bolded**:

...

C.2 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

(1) The potential to emit any regulated pollutant, except particulate matter (PM) **and greenhouse gases (GHGs)**, from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.

(2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and

(3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(4) The potential to emit greenhouse gases (GHGs) from the entire source shall be limited to less than one hundred thousand (100,000) tons of CO_2 equivalent emissions (CO_2e) per twelve (12) consecutive month period.

...

D.1.2 PSD Minor Limit [326 IAC 2-2][326 IAC 2-8-4]

Pursuant to 326 IAC 2-8-4 and in order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the source shall comply with the following:

The combined CO2e emissions from the Allison simple cycle Gas Turbine, Emission Unit ID 01, the three T-Thermal water submerged Vaporizers, Emission Unit IDs 02 – 04, the Waukesha Emergency Generator, Emission Unit ID WEG 1, and the diesel fuel fired emergency fire pump, Emission Unit ID EFP-01, shall not exceed 96,463 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these limits, combined with the potential to emit greenhouse gases from all other emission units at this source, shall limit the source-wide total potential to emit greenhouse gases (GHGs) to less than 100,000 tons of CO_2 equivalent emissions (CO_2e) per 12 consecutive month period and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.1.~~2~~**3** Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

...

D.1.~~3~~**4** Particulate Matter (PM) [326 IAC 6-2-1][326 IAC 6-2-4]

...

D.1.~~4~~**5** Preventive Maintenance Plan [326 IAC 2-8-4(9)]

...

D.1.~~5~~**6** Nitrogen Oxides (NO_X) Emissions

...

D.1.7 CO_2e Emissions

In order to comply with Condition D.1.2, the Permittee shall use the following equations to determine the tons of CO_2e emitted per twelve (12) consecutive month period:

Carbon Dioxide Equivalent (CO_2e) emissions calculation:

$$CO_2 = \frac{G1(EG1_{CO2}) + G2(EG2_{CO2}) + G3(EG3_{CO2}) + D(ED_{CO2})}{2{,}000 \text{ lbs/ton}}$$

$$CH_4 = \frac{G1(EG1_{CH4}) + G2(EG2_{CH4}) + G3(EG3_{CH4}) + D(ED_{CH4})}{2{,}000 \text{ lbs/ton}}$$

$$N_2O = \frac{G1(EG1_{N2O}) + G2(EG2_{N2O}) + G3(EG3_{N2O}) + D(ED_{N2O})}{2{,}000 \text{ lbs/ton}}$$

$$CO_2e = \sum[(CO_2 \times CO_2 \text{ GWP}) + (CH_4 \times CH_4 \text{ GWP}) + (N_2O \times N_2O \text{ GWP})]$$

Where:

CO_2 = tons of CO_2 emissions for previous 12 consecutive month period

CH_4 = tons of CH_4 emissions for previous 12 consecutive month period
N_2O = tons of N_2O emissions for previous 12 consecutive month period
CO_2e = tons of CO_2e equivalent emissions for previous 12 consecutive month period
G1 = million cubic feet of natural gas used in Turbine (01) in previous 12 months
G2 = million cubic feet of natural gas used in Vaporizers (02, 03, 04) in previous 12 months
G3 = million cubic feet of natural gas used in Generator (WEG 1) in previous 12 months
D = kilogallons of diesel used in the Emergency Fire Pump (EFP-01) in previous 12 months

Emission Unit	Equation Input	Values		
		CO_2	CH_4	N_2O
Turbine (01)*	EG1	112,200 lb/MMscf	8.77 lb/MMscf	3.06 lb/MMscf
Vaporizers (02, 03, 04)	EG2	120,000 lb/MMscf	2.3 lb/MMscf	2.2 lb/MMscf
Generator (WEG 1)*	EG3	112,200 lb/MMscf	1,479 lb/MMscf	0.10 lb/MMscf
Fire Pump (EFP-01)**	ED	22,473 lb/kgal	0.91 lb/kgal	0.18 lb/kgal

Notes:
*** An assumed heat content of 1020 Btu/scf was used to convert from lb/MMBtu to lb/MMscf.**
**** The ED Values were determined assuming diesel has a heating value of 19,300 Btu/lb and a density of 7.1 lbs/gal (137,030 Btu/gal).**

Global Warming Potentials (GWP)
Carbon dioxide (CO_2) = 1
Methane (CH_4) = 21
Nitrous oxide (N_2O) = 310

D.1.6**8** VOC Organic Compounds (VOC) [326 IAC 8-1-6]

Compliance with Condition D.1.2**3** shall be determined at the end of each month using the following equation:

...

D.1.7**9** Record Keeping Requirements

....

(b) To document the compliance status with Condition D.1.2, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the CO_2e emission limits established in Condition D.1.2.

(1) Calendar dates covered in the compliance determination period;

(2) Actual natural gas usage each month;

(3) Actual diesel usage each month;

(4) Equivalent carbon dioxide equivalent (CO_2e) emission rates for each fuel used at the source per month; and

(5) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period.

(c)~~(b)~~ To document the compliance status with Condition D.1.2**3**, the Permittee shall maintain records of (1) through (3) below. Records maintained for (1) through (4) shall be taken

monthly and shall be complete and sufficient to establish compliance with the VOC emission limits established in Condition D.1.~~2~~**3**. Records necessary to demonstrate compliance shall be available no later than 30 days of the end of each compliance period.

(d)~~(c)~~ Section C - General Record Keeping Requirements, of this permit contains the Permittee's obligations with regard to the records required by this condition.

D.1.~~8~~**10** Reporting Requirements

A quarterly summary of the information to document the compliance status with Conditions D.1.1**, D.1.2,** and D.1.~~2~~**3** shall be submitted, using the reporting forms located at the end of this permit, or their equivalent, no later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

...

D.1.~~9~~**11** General Provisions Relating to NSPS [40 CFR Part 60, Subpart A][326 IAC 12-1]

...

D.1.~~10~~**12** Standards of Performance for Stationary Gas Turbines [40 CFR 60.330 Subpart GG] [326 IAC 12]

...

D.1.~~11~~**13** Standards of Performance for Small Industrial-Commercial-Intstitutional Steam Generating Units [40 CFR 60.40c, Subpart Dc]

...

D.1.~~12~~**14** State Only Heat Transfer Medium NSPS Requirements [326 IAC 12]

...

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

FESOP Quarterly Report

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Source Name: Citizens Gas
Source Address: 4536 West 86th Street, Indianapolis, IN 46268
FESOP No.: F097-18805-00141
Facility: Emission Unit IDs 01 through 04, WEG 1, and EFP-01
Parameter: CO_2e emissions
Limit: The combined CO2e emissions from the Allison simple cycle Gas Turbine, Emission Unit ID 01, the three T-Thermal water submerged Vaporizers, Emission Unit IDs 02 – 04, the Waukesha Emergency Generator, Emission Unit ID WEG 1, and the diesel fuel fired emergency fire pump, Emission Unit ID EFP-01, shall not exceed 96,463 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Carbon Dioxide Equivalent (CO_2e) emissions calculation:

$$CO_2 = \frac{G1(EG1_{CO2}) + G2(EG2_{CO2}) + G3(EG3_{CO2}) + D(ED_{CO2})}{2{,}000 \text{ lbs/ton}}$$

$$CH_4 = \frac{G1(EG1_{CH4}) + G2(EG2_{CH4}) + G3(EG3_{CH4}) + D(ED_{CH4})}{2{,}000 \text{ lbs/ton}}$$

$$N_2O = \frac{G1(EG1_{N2O}) + G2(EG2_{N2O}) + G3(EG3_{N2O}) + D(ED_{N2O})}{2{,}000 \text{ lbs/ton}}$$

$$CO_2e = \sum[(CO_2 \times CO_2 \text{ GWP}) + (CH_4 \times CH_4 \text{ GWP}) + (N_2O \times N_2O \text{ GWP})]$$

Where:

CO_2 = tons of CO_2 emissions for previous 12 consecutive month period
CH_4 = tons of CH_4 emissions for previous 12 consecutive month period
N_2O = tons of N_2O emissions for previous 12 consecutive month period
CO_2e = tons of CO_2e equivalent emissions for previous 12 consecutive month period
G1 = million cubic feet of natural gas used in Turbine (01) in previous 12 months
G2 = million cubic feet of natural gas used in Vaporizers (02, 03, 04) in previous 12 months
G3 = million cubic feet of natural gas used in Generator (WEG 1) in previous 12 months
D = kilogallons of diesel used in the Emergency Fire Pump (EFP-01) in previous 12 months

Emission Unit	Equation Input	Values		
		CO_2	CH_4	N_2O
Turbine (01)*	EG1	112,200 lb/MMscf	8.77 lb/MMscf	3.06 lb/MMscf
Vaporizers (02, 03, 04)	EG2	120,000 lb/MMscf	2.3 lb/MMscf	2.2 lb/MMscf
Generator (WEG 1)*	EG3	112,200 lb/MMscf	1,479 lb/MMscf	0.10 lb/MMscf
Fire Pump (EFP-01)**	ED	22,473 lb/kgal	0.91 lb/kgal	0.18 lb/kgal

Notes:
*** An assumed heat content of 1020 Btu/scf was used to convert from lb/MMBtu to lb/MMscf.**
**** The ED Values were determined assuming diesel has a heating value of 19,300 Btu/lb and a density of 7.1 lbs/gal (137,030 Btu/gal).**

Global Warming Potentials (GWP)
Carbon dioxide (CO_2) = 1
Methane (CH_4) = 21
Nitrous oxide (N_2O) = 310

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QUARTER:_____ **YEAR:**_____

Month	Column 1	Column 2	Column 1 + Column 2
	Combined total CO2e emissions (tons) This Month	**Combined total CO2e emissions (tons) Previous 11 Months**	**Combined total CO2e emissions (tons) 12 Month Total**

☐ **No deviation occurred in this quarter.**
☐ **Deviation/s occurred in this quarter.**
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

...

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the greenhouse gas reopening request and additional information submitted by the applicant. A greenhouse gas reopening request for the purposes of this review was received on February 15, 2012.

The operation of this proposed revision shall be subject to the conditions of the attached proposed FESOP Significant Permit Revision Greenhouse Gas Reopening No. 097-31494-00141. The staff recommends to the Commissioner that this FESOP Significant Permit Revision Greenhouse Gas Reopening be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Jason R. Krawczyk at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5174 or toll free at 1-800-451-6027 extension 4-5174.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.in.gov/idem

Appendix A: Emissions Calculations
Emission Summary

Company Name: Citizens Gas
Address City IN Zip: 4536 West 86th Street, Indianapolis, IN 46268
Permit Number: 097-31494-00141
Plt ID: 097-00141
Reviewer: Jason R. Krawczyk
Date: February 15, 2012

Uncontrolled / Unlimited Emissions (Tons/Yr)

Pollutant	Turbine (01)		Vaporizers (02, 03, 04)	Emergency Generator (WEG 1)	Fire Pump (EFP-01)	Salt Bath (SBH-1)	Tanks	Total
	Refrigerant Loss	Combustion						
PM	-	0.32	1.80	0.06	0.25	0.05	-	2.48
PM10	-	1.10	7.19	0.07	0.25	0.22	-	8.83
PM2.5	-	1.10	7.19	0.07	0.25	0.22	-	8.83
VOC	90.00	0.35	5.20	0.18	0.29	0.16	0.99	97.17
NOx	-	53.26	94.61	4.76	3.57	2.85	-	159.04
SO2	-	0.57	0.57	8.82E-04	0.24	0.02	-	1.39
CO	-	13.65	79.47	0.58	0.77	2.39	-	96.86
GHGs as CO2e	-	18,493	114,221	3,692	133	3,437	-	139,975
Single HAP (Hexane)	-	-	1.70	1.12E-03	-	0.05	-	1.76
Combined HAPs	-	0.18	1.79	0.12	3.12E-03	0.05	-	2.14

Controlled / Unlimited Emissions (Tons/Yr)

Pollutant	Turbine (01)		Vaporizers (02, 03, 04)	Emergency Generator (WEG 1)	Fire Pump (EFP-01)	Salt Bath (SBH-1)	Tanks	Total
	Refrigerant Loss	Combustion						
PM	-	0.32	1.80	0.06	0.25	0.05	-	2.48
PM10	-	1.10	7.19	0.07	0.25	0.22	-	8.83
PM2.5	-	1.10	7.19	0.07	0.25	0.22	-	8.83
VOC	90.00	0.35	5.20	0.18	0.29	0.16	0.99	97.17
NOx	-	53.26	94.61	4.76	3.57	2.85	-	159.04
SO2	-	0.57	0.57	8.82E-04	0.24	0.02	-	1.39
CO	-	13.65	79.47	0.58	0.77	2.39	-	96.86
GHGs as CO2e	-	18,493	114,221	3,692	133	3,437	-	139,975
Single HAP (Hexane)	-	-	1.70	1.12E-03	-	0.05	-	1.76
Combined HAPs	-	0.18	1.79	0.12	3.12E-03	0.05	-	2.14

Uncontrolled / Limited Emissions (Tons/Yr)

Pollutant	Turbine (01)		Vaporizers (02, 03, 04)	Emergency Generator (WEG 1)	Fire Pump (EFP-01)	Salt Bath (SBH-1)	Tanks	Total
	Refrigerant Loss	Combustion						
PM	-	0.32	1.80	0.06	0.25	0.05	-	2.48
PM10	-	1.10	7.19	0.07	0.25	0.22	-	8.83
PM2.5	-	1.10	7.19	0.07	0.25	0.22	-	8.83
VOC	90.00	0.35	5.20	0.18	0.29	0.16	0.99	97.17
NOx [α]	-	93.06				2.85	-	95.91
SO2	-	0.57	0.57	8.82E-04	0.24	0.02	-	1.39
CO	-	13.65	79.47	0.58	0.77	2.39	-	96.86
GHGs as CO2e [β]	-	96,463				3,437	-	99,900
Single HAP (Hexane)	-	-	1.70	1.12E-03	-	0.05	-	1.76
Combined HAPs	-	0.18	1.79	0.12	3.12E-03	0.05	-	2.14

Note:

α The combined Nox emissions from emission units 01 through 04, WEG 1, and EFP-01 shall not exceed 93.06 tons per twelve consecutive month period.

β The combined CO2e emissions from emissions units 01 through 04, WEG 1, and EFP-01 shall not exceed 96,463 tons per twelve consecutive month period.

Appendix A: Emissions Calculations
Natural Gas Fired Turbine (01)

Company Name: **Citizens Gas**
Address City IN Zip: **4536 West 86th Street, Indianapolis, IN 46268**
Permit Number: **097-31494-00141**
Plt ID: **097-00141**
Reviewer: **Jason R. Krawczyk**
Date: **February 15, 2012**

Heat Input Capacity MMBtu/hr	Emission Units
38.00	Natural Gas Fired Turbine (01)
38.00	

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMBtu	1.90E-03	6.60E-03	6.60E-03	3.40E-03	3.20E-01	2.10E-03	8.20E-02
Potential Emission in tons/yr	0.32	1.10	1.10	0.57	53.26	0.35	13.65

*PM emission factor is filterable PM only. PM10 and PM2.5 emission factor is filterable and condensible
**Sulfur content is default value given in AP-42 Chapter 3.1, Table 3.1-2a, Footnote "h"

Methodology:
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
Emission Factors are from AP 42, Chapter 3.1, Tables 3.1-1, 3.1-2a, SCC #2-01-002-01, 2-02-002-01 & 03, and 2-03-002-02 & 03.
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Hazardous Air Pollutant Emissions

	Benzene	Xylenes	Formaldehyde	1,3-Butadiene	Toluene
Emission Factor in lb/MMBtu	1.2E-05	6.4E-05	7.1E-04	4.3E-07	1.3E-04
Potential Emission in tons/yr	1.997E-03	1.065E-02	1.182E-01	7.157E-05	2.164E-02

	Acetaldehyde	Acrolein	Ethylbenzene	Napthalene	PAH
Emission Factor in lb/MMBtu	4.0E-05	6.4E-05	3.2E-05	1.3E-06	2.2E-06
Potential Emission in tons/yr	6.658E-03	1.065E-02	5.326E-03	2.164E-04	3.662E-04

Combined HAPs: **0.18**

Greenhouse Gas Emissions

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMBtu	110	8.60E-03	3.00E-03
Potential Emission in tons/yr	18,308	1.4	0.5
Summed Potential Emissions in tons/yr	18,310		
CO2e Total in tons/yr	18,493		

Methodology:
Emission Factors are from AP 42, Table 3.1-2a, SCC #2-01-002-01, 2-02-002-01 & 03, and 2-03-002-02 & 03.
Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Heat Input Capacity (MMBtu/hr) x Emission Factor (lb/MMBtu) x 8,760 hrs x 1 ton /2,000 lb
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A: Emissions Calculations
Natural Gas Combustion

Company Name: Citizens Gas
Address City IN Zip: 4536 West 86th Street, Indianapolis, IN 46268
Permit Number: 097-31494-00141
Plt ID: 097-00141
Reviewer: Jason R. Krawczyk
Date: February 15, 2012

Heat Input Capacity MMBtu/hr	HHV mmBtu / mmscf	Potential Throughput MMCF/yr	Emission Units
216.00		1892.2	3 vaporizers @ 72 MMBtu each (02, 03, 04)
216.00	1000	1892.2	

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	1.80	7.19	7.19	0.57	94.61	5.20	79.47

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology:
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Hazardous Air Pollutant Emissions

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	1.987E-03	1.135E-03	7.096E-02	1.703E+00	3.217E-03

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	4.730E-04	1.041E-03	1.325E-03	3.595E-04	1.987E-03

Combined HAPs: **1.79**

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Greenhouse Gas Emissions

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	113,530	2.2	2.1
Summed Potential Emissions in tons/yr	113,534		
CO2e Total in tons/yr	114,221		

Methodology:
The N2O Emission Factor for uncontrolled is 2.2.
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A: Emissions Calculations
Natural Gas Fired Emergency Generator (WEG 1)

Company Name: **Citizens Gas**
Address City IN Zip: **4536 West 86th Street, Indianapolis, IN 46268**
Permit Number: **097-31494-00141**
Plt ID: **097-00141**
Reviewer: **Jason R. Krawczyk**
Date: **February 15, 2012**

Heat Input Capacity MMBtu/hr	Emission Units
6.00	Waukesha Emergency Generator (WEG 1)
6.00	

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMBtu	3.84E-02	4.83E-02	4.83E-02	5.88E-04	3.17E+00	1.20E-01	3.86E-01
Potential Emission in tons/yr	0.06	0.07	0.07	8.82E-04	4.76	0.18	0.58

*PM emission factor is filterable PM only. PM10 and PM2.5 emission factor is filterable and condensible

Methodology:
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
Potential to Emit from emergency units is based on 500 hours of operation/yr
Emission Factors are from AP 42, Chapter 3.2, Table 3.2-1, SCC #2-02-002-52.
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 500 hrs/yr x 1 MMCF/1,000 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Hazardous Air Pollutant Emissions

	1,3-Butadiene	2,2,4-Trimethylpentane	Acetaldehyde	Acrolein	Benzene
Emission Factor in lb/MMBtu	8.2E-04	8.5E-04	7.8E-03	7.8E-03	1.9E-03
Potential Emission in tons/yr	1.230E-03	1.269E-03	1.164E-02	1.167E-02	2.910E-03

	Formaldehyde	Methanol	n-Hexane	Toluene	Xylene
Emission Factor in lb/MMBtu	5.5E-02	2.5E-03	7.5E-04	9.6E-04	2.7E-04
Potential Emission in tons/yr	8.280E-02	3.720E-03	1.118E-03	1.445E-03	4.020E-04

Combined HAPs: **0.12**

The ten highest HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 3.2, Table 3.2-1.

Greenhouse Gas Emissions

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMBtu	110	1.45E+00	1.00E-04
Potential Emission in tons/yr	2,891	38.1	0.00
Summed Potential Emissions in tons/yr	2,929		
CO2e Total in tons/yr	3,692		

Methodology:
The N2O Emission Factor is the default factor from 40 CFR 98, Subpart C, Table C-2
CO2 and CH4 Emission Factors are from AP 42, Chapter 3.2, Table 3.2-1, SCC #2-02-002-52.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Heat Input Capacity (MMBtu/hr) x Emission Factor (lb/MMBtu) x 8,760 hrs x 1 ton /2,000 lb
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A: Emission Calculations
Emergency Fire Pump (EFP-01)

Company Name: **Citizens Gas**
Address City IN Zip: **4536 West 86th Street, Indianapolis, IN 46268**
Permit Number: **097-31494-00141**
Plt ID: **097-00141**
Reviewer: **Jason R. Krawczyk**
Date: **February 15, 2012**

Emissions calculated based on output rating (hp)

Output Horsepower Rating (hp)	460.0
Maximum Hours Operated per Year	500
Potential Throughput (hp-hr/yr)	230,000

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.0022	0.0022	0.0021	0.0310	0.0025	0.0067
Potential Emission in tons/yr	0.25	0.25	0.25	0.24	3.57	0.29	0.77

*PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

Hazardous Air Pollutants (HAPs)

	Pollutant							
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	6.53E-06	2.86E-06	2.00E-06	2.74E-07	8.26E-06	5.37E-06	6.48E-07	1.18E-06
Potential Emission in tons/yr	7.51E-04	3.29E-04	2.29E-04	3.15E-05	9.50E-04	6.17E-04	7.45E-05	1.35E-04

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 8,000 Btu / hp-hr (AP-42 Table 3.3-1).

Potential Emission of Total HAPs (tons/yr)	**3.12E-03**

Green House Gas Emissions (GHG)

	Pollutant		
	CO2	CH4	N2O
Emission Factor in lb/hp-hr	1.15E+00	4.63E-05	9.26E-06
Potential Emission in tons/yr	1.32E+02	5.32E-03	1.06E-03

164	lb/mmbtu
0.007	MMBtu/hp-hr
1.148	

Summed Potential Emissions in tons/yr	**132**
CO2e Total in tons/yr	**133**

Methodology:
Emission Factors are from AP42 (Supplement B 10/96), Tables 3.3-1 and 3.3-2
CH4 and N2O Emission Factor from 40 CFR 98 Subpart C Table C-2.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310

Appendix A: Emissions Calculations
Natural Gas Combustion

Company Name: Citizens Gas
Address City IN Zip: 4536 West 86th Street, Indianapolis, IN 46268
Permit Number: 097-31494-00141
Plt ID: 097-00141
Reviewer: Jason R. Krawczyk
Date: February 15, 2012

Heat Input Capacity MMBtu/hr	HHV mmBtu/mmscf	Potential Throughput MMCF/yr	Emission Units
6.50		56.9	1 salt bath heater (SBH-01)
6.50	1000	56.9	

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.05	0.22	0.22	0.02	2.85	0.16	2.39

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology:
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Hazardous Air Pollutant Emissions

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	5.979E-05	3.416E-05	2.135E-03	5.125E-02	9.680E-05

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	1.424E-05	3.132E-05	3.986E-05	1.082E-05	5.979E-05
				Combined HAPs:	**0.05**

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Greenhouse Gas Emissions

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	3,416	0.1	0.1
Summed Potential Emissions in tons/yr	3,417		
CO2e Total in tons/yr	3,437		

Methodology:
The N2O Emission Factor for uncontrolled is 2.2.
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A: Emission Calculations
Tank Storage

Company Name: Citizens Gas
Address City IN Zip: 4536 West 86th Street, Indianapolis, IN 46268
Permit Number: 097-31494-00141
Plt ID: 097-00141
Reviewer: Jason R. Krawczyk
Date: February 15, 2012

Components	Working Loss (lbs)	Breathing Loss (lbs)	Total Emissions (lbs)	(tons)
Pentane	102.65	1883.8	1986.46	0.99

Methodology:

Emission calculations based on EPA program "TANKS" Version 4.09b

Appendix A: Emissions Calculations
Greenhouse Gas Permit Limit Equation Inputs

Company Name: Citizens Gas
Address City IN Zip: 4536 West 86th Street, Indianapolis, IN 46268
Permit Number: 097-31494-00141
Plt ID: 097-00141
Reviewer: Jason R. Krawczyk
Date: February 15, 2012

Referenced Greenhouse Gas Emisson Factors

		Emission Factors		
Emission Unit	Emission Factor Units	CO2	CH4	N2O
Turbine (01)	lb/MMBtu	110	8.60E-03	3.00E-03
Vaporizers (02, 03, 04)	lb/MMscf	120,000	2.3	2.2
Generator (WEG 1)	lb/MMBtu	110	1.45	1.00E-04
Fire Pump (EFP-01)	lb/MMBtu	164	---	---
Fire Pump (EFP-01)	kg/MMBtu	---	3.00E-03	6.00E-04

Emission Factors:

Turbine (01)
Emission Factors are from AP 42, Table 3.1-2a, SCC #2-01-002-01, 2-02-002-01 & 03, and 2-03-002-02 & 03.

Vaporizers (02, 03, 04)
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.

Diesel Generator (WEG 1)
The N2O Emission Factor is the default factor from 40 CFR 98, Subpart C, Table C-2
CO2 and CH4 Emission Factors are from AP 42, Chapter 3.2, Table 3.2-1, SCC #2-02-002-52.

Fire Pump (EFP-01)
Emission Factors are from A Emission Factors are from AP42 (Supplement B 10/96), Tables 3.3-1 and 3.3-2
CH4 and N2O Emission Factor from 40 CFR 98 Subpart C Table C-2.

Calculated Greenhouse Gas Emission Values

Natural Gas Heating Value	1020	(MMBtu/MMscf)
Density of Diesel	7.1	lb/gal
Diesel Heating Value	19,300	Btu/lb

			Values		
Emission Unit	Equation Input	Units	CO2	CH4	N2O
Turbine (01)*	EG1	lb/MMscf	112,200	8.77	3.06E+00
Vaporizers (02, 03, 04)	EG2	lb/MMscf	120,000	2.3	2.2
Generator (WEG 1)*	EG3	lb/MMscf	112,200	1,479	0.10
Fire Pump (EFP-01)**	ED	lb/kgal	22,473	0.91	0.18

Methodology:
*An assumed heat content of 1020 Btu/scf was used to convert from lb/MMBtu to lb/MMscf.
**The ED Values were determined assuming diesel has a heating value of 19,300 Btu/lb and a density of 7.1 lbs/gal (137,030 Btu/gal).
EG1 (lb/MMscf) = [Emission Factor (lb/MMBtu)] * [Natural Gas Heating Value (MMBtu/MMscf)]
EG3 (lb/MMscf) = [Emission Factor (lb/MMBtu)] * [Natural Gas Heating Value (MMBtu/MMscf)]
ED CO2 (lb/kgal) = [Emission Factor (lb/MMBtu)] * [Diesel Heating Value (Btu/lb) / 1000000 (Btu/MMBtu)] * [Density of Diesel (lb/gal) * 1000 (gal/kgal)]
ED CH4/N2O (lb/kgal) = [Emission Factor (kg/MMBtu) * 2.20462 (lb/kg)] * [Diesel Heating Value (Btu/lb) / 1000000 (Btu/MMBtu)] * [Density of Diesel (lb/gal) * 1000 (gal/kgal)]

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Drew McClay
Citizens Gas
2700 S Belmont Ave
Indianapolis, IN 46221

DATE: April 19, 2012

FROM: Matt Stuckey, Branch Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
Significant Permit Revision
097-31494-00141

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
Chris Braun – VP Energy Operations
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

April 19, 2012

TO: Indianapolis-Marion County Public Library

From: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: **Citizens Gas**
Permit Number: **097-31494-00141**

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 11/30/07

Mail Code 61-53

IDEM Staff	GHOTOPP 4/19/2012 Citizens Gas 097-31494-00141 Final		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Drew McClay Citizens Gas 2700 S Belmont Ave Indianapolis IN 46221 (Source CAATS) via confirmed delivery									
2		Chris Braun VP - Energy Ops Citizens Gas 2020 N Meridian St Indianapolis IN 46202 *(RO CAATS)*									
3		Marion County Health Department 3838 N, Rural St Indianapolis IN 46205-2930 *(Health Department)*									
4		Indianapolis City Council and Mayors Office 200 East Washington Street, Room E Indianapolis IN 46204 *(Local Official)*									
5		Lawrence City Council and Mayors Office 9001 East 59th Street #205 Lawrence IN 46216 *(Local Official)*									
6		Marion County Commissioners 200 E. Washington St. City County Bldg., Suite 801 Indianapolis IN 46204 *(Local Official)*									
7		Pike Branch Library 6525 Zionsville Road Indianapolis IN 46268 *(Library)*									
8		Matt Mosier Office of Sustainability 1200 S Madison Ave #200 Indianapolis IN 46225 *(Local Official)*									
9											
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Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See ***Domestic Mail Manual*** **R900, S913**, and **S921** for limitations of coverage on inured and COD mail. See ***International Mail Manual*** for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
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