



*Mitchell E. Daniels, Jr.*  
Governor

*Thomas W. Easterly*  
Commissioner

100 North Senate Avenue  
Indianapolis, Indiana 46204  
MC 61-53  
(317) 232-8603  
(800) 451-6027  
www.IN.gov/idem

TO: Interested Parties / Applicant  
DATE: February 12, 2008  
RE: NIPSCO - Grass Creek Gas Storage Field / 049-22765-00022  
FROM: Matthew Stuckey, Deputy 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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Commissioner

100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
(317) 232-8603  
(800) 451-6027  
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## FEDERALLY ENFORCEABLE STATE OPERATING PERMIT RENEWAL OFFICE OF AIR QUALITY

### NIPSCO - Grass Creek Gas Storage Field 900 South 1100 West Fulton County, Indiana 46975

(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 provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or 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.

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.: F049-22765-00022	
Issued by/Original Signed By:  Matthew Stuckey, Deputy Branch Chief Permits Branch Office of Air Quality	Issuance Date: February 12, 2008  Expiration Date: February 12, 2013

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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.4 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)]

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The Permittee owns and operates a stationary underground natural gas storage plant.

Source Address:	900 South 1100 West, Fulton County, Indiana 46975
Mailing Address:	Arthur E. Smith, Jr. Senior Vice President and Environmental Counsel Environmental, Health and Safety 801 E. 86th Ave. Merrillville, IN 46410
General Source Phone Number:	(219) 647-5252
SIC Code:	4922
County Location:	Fulton
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

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

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

- (a) Two (2) dehydration reboiler process vents, identified as GC-20 and GC-21, associated with the two (2) natural gas dehydrators identified as GC-12 and GC-13. The natural gas dehydrators were constructed in 1972 and 1976, respectively, each with a maximum design processing capacity of 100 MMSCFD at a pressure of 1200 psig. The dehydration system glycol reboiler process vents are part of the natural gas cleanup system.
- (b) One (1) natural gas-fired pipeline gas heater (boiler), identified as GC-10, constructed in 1971, with a design heat input of 20 MMBtu/hr.
- (c) One (1) natural gas-fired Delaval model HV8C-4 compressor engine, rated at approximately 2000 horsepower, identified as GC-6, constructed in 1971, with a design heat input of 14 MMBtu/hr, and exhausting to the Delaval Engine Exhaust Stack.

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

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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 million (10,000,000) British thermal units per hour including:
  - (1) Two (2) natural gas dehydration reboilers on units GC-12 and GC-13, constructed in 1972 and 1976, respectively, each with a design heat input capacity of 2.5 MMBtu/hr, exhausting to stacks GC-12 and GC-13, respectively;

- (2) One (1) natural gas-fired boiler, identified as GC-14, constructed in 1971, with a design heat input of 1.67 MMBtu/hr; and
- (3) Various space heaters with a combined heat input capacity of 1.8 MMBtu/hr.
- (b) Storage tanks with capacity less than or equal to one thousand (1,000) gallons and annual throughput less than twelve thousand (12,000) gallons, including but not limited to:
  - (1) One (1) ethylene glycol storage tank, identified as GC-5, constructed in 1994; and
  - (2) One (1) triethylene glycol storage tank, identified as GC-11, constructed in 1983.
- (c) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids, including but not limited to one (1) waste oil storage tank, identified as GC-2, constructed in 1995, with a capacity of three hundred (300) gallons;
- (d) 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.
- (e) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]
- (f) Emission units with single HAP emissions less than one (1) ton per year, and combination of HAPs emissions less than two and a half (2.5) tons per year, including two (2) methanol storage tanks, jointly identified as GC-15, both constructed in 1972, each with a capacity of five thousand (5,000) gallons;
- (g) Propane or liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) Btu per hour.
- (h) Equipment powered by internal combustion engines of capacity equal to or less than five hundred thousand (500,000) Btu per hour, except where total capacity of equipment operated by one stationary source exceeds two million (2,000,000) Btu per hour;
- (i) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to one percent (1%) by volume.
- (j) Heat exchanger cleaning and repair.
- (k) Process vessel degreasing and cleaning to prepare for internal repairs. This unit was installed before 1980.
- (l) Stockpiled soils from soil remediation activities that are covered and waiting transportation for disposal.
- (m) 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.
- (n) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (o) Emergency generators as follows:
  - (1) Gasoline generators not exceeding 110 horsepower;

- (2) Diesel generators not exceeding 1,600 horsepower;
  - (3) Natural gas turbines or reciprocating engines not exceeding 16,000 horsepower;  
and
  - (4) One (1) natural gas-fired Generac model SG85/1218 emergency generator, identified as GC-1, constructed in 1972, with a design heat input of 1.86 MMBtu/hr, and exhausting to the Generator Exhaust Stack. This stationary reciprocating internal combustion engine is rated at approximately 265 horsepower [326 IAC 6-2-3].
- (p) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons.
- (q) Purge double block and bleed valves.

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]**

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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)]**

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- (a) This permit, 049-22765-00022, is issued for a fixed term of five (5) 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]**

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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]**

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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)]**

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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)]**

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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)]**

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- (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. The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). 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)]**

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- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an "authorized individual" of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, 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)]**

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- (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 July 1 of each year to:

Indiana Department of Environmental Management  
Compliance 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 the certification 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)]**

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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) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) 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.
- (b) 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 or potential to emit. The PMPs do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) 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 Section), or  
Telephone Number: 317-233-0178 (ask for Compliance Section)  
Facsimile Number: 317-233-6865  
Telephone No.: 574-245-4870 (Northern Regional Office)  
Facsimile No.: 574-245-4877 (Northern Regional Office)

- (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 Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

and

Northern Regional Office  
220 W. Colfax Ave., Ste 200  
South Bend, IN 46601-1634

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 the certification 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.

- (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

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

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- (a) All terms and conditions of permits established prior to 049-22765-00022 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)]**

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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 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]**

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- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

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

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. 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.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

**B.16 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]

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- (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 the certification 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.17 Permit Renewal [326 IAC 2-8-3(h)]**

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- (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 the certification 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  
Permits Branch, 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 in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.18 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  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251
- Any such application shall be certified 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.19 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  
Permits Branch, 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.20 Source Modification Requirement [326 IAC 2-8-11.1]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-8-11.1.

B.21 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.22 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  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
  
The application which shall be submitted by the Permittee does require the certification 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.23 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 within 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.24 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), from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period. This limitation shall make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) not applicable.
- (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.

(b) 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.

(c) 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 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) 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]

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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]

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The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.

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

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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]

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- (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  
Asbestos Section, Office of Air Quality  
MC 61-52 IGCN 1003  
100 North Senate Avenue  
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 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 Accredited 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 Accredited 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]**

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- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, 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 certification 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 certification 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]**

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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)]**

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Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, 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 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 the certification 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 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]**

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Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60, Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

#### **C.12 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.13 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.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 take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) 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 the certification 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, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

#### **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. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, 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) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) 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 the standards for recycling and emissions reduction:

- (a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- (b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

## SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (a) Two (2) dehydration reboiler process vents, identified as GC-20 and GC-21, associated with the two (2) natural gas dehydrators identified as GC-12 and GC-13. The natural gas dehydrators were constructed in 1972 and 1976, respectively, each with a maximum design processing capacity of 100 MMSCFD at a pressure of 1200 psig. The dehydration system glycol reboiler process vents are part of the natural gas cleanup system.
- (c) One (1) natural gas-fired Delaval model HV8C-4 compressor engine, rated at approximately 2,000 horsepower, identified as GC-6, constructed in 1971, with a design heat input of 14 MMBtu/hr, and exhausting to the Delaval Engine Exhaust Stack.

### Insignificant Activity

- (o) Emergency generators as follows:
  - (1) Gasoline generators not exceeding 110 horsepower;
  - (2) Diesel generators not exceeding 1,600 horsepower;
  - (3) Natural gas turbines or reciprocating engines not exceeding 16,000 horsepower; and
  - (4) One (1) natural gas-fired Generac model SG85/1218 emergency generator, identified as GC-1, constructed in 1972, with a design heat input of 1.86 MMBtu/hr, and exhausting to the Generator Exhaust Stack. This stationary reciprocating internal combustion engine is rated at approximately 265 horsepower [326 IAC 2-8].

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions. The emission unit identifiers in the emission unit box correspond to the emission units listed both in the TSD and Conditions A.2 and A.3.)

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

#### D.1.1 Nitrogen Oxide FESOP Limit [326 IAC 2-8]

Pursuant to 326 IAC 2-8-4, the Permittee shall comply with the following limitation:

The combined natural gas fuel usage for the compressor (GC-6) and the emergency generator (GC-1) shall be limited to less than 47 million cubic feet (MMCF) per twelve (12) consecutive month period.

This condition renders the requirements of 326 IAC 2-7 (Part 70 Permit Program) not applicable.

#### D.1.2 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the compressor engine (GC-6).

## **Compliance Determination Requirements**

### **D.1.3 Fuel Usage**

---

Compliance with the fuel usage limitation in Condition D.1.1 shall be determined by monitoring the natural gas usage using twelve (12) consecutive month composites of gas meter readings unless the gas meters are not functioning properly, in which case natural gas usage shall be estimated based on engineering judgement until such time as the gas meters are repaired or replaced and are functioning properly.

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

### **D.1.4 Record Keeping Requirement**

---

- (a) To document compliance with Conditions D.1.1, the Permittee shall maintain records of the natural gas fuel usage for the compressor (GC-6) and the emergency generator (GC-1) as specified in Condition D.1.3. Records maintained shall be taken monthly and shall be complete and sufficient to establish compliance with the fuel usage limits.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

### **D.1.6 Reporting Requirements**

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A quarterly summary of the information to document compliance with Condition D.1.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

## SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (b) One (1) natural gas-fired pipeline gas heater (boiler), identified as GC-10, constructed in 1971, with a design heat input of 20 MMBtu/hr.

### Insignificant Activities

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour including:
- (1) Two (2) natural gas dehydration reboilers on units GC-12 and GC-13, constructed in 1972 and 1976, respectively, each with a design heat input capacity of 2.5 MMBtu/hr, exhausting to stacks GC-12 and GC-13, respectively;
  - (2) One (1) natural gas-fired boiler, identified as GC-14, constructed in 1971, with a design heat input of 1.67 MMBtu/hr; and

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions. The emission unit identifiers in the emission unit box correspond to the emission units listed both in the TSD and Conditions A.2 and A.3.)

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

#### D.2.1 Nitrogen Oxide FESOP Limit [326 IAC 2-8]

Pursuant to 326 IAC 2-8-4, the Permittee shall comply with the following limitation:

The gas pipeline heater (GC-10) shall not operate and therefore, it will have a maximum natural gas consumption limit of zero (0) million cubic feet (MMCF) per year.

This condition renders the requirements of 326 IAC 2-7 (Part 70 Permit Program) not applicable.

#### D.2.2 Particulate Matter (PM) [326 IAC 6-2-3]

- (a) Pursuant to 326 IAC 6-2-3(d) (Emission limitations for facilities specified in 326 IAC 6-2-1(c)), the particulate matter (PM) from GC-10, GC-14, and the dehydrator reboiler on GC-12, which were in existence on June 8, 1972, shall be limited to 0.76 lb/MMBtu.
- (b) Pursuant to 326 IAC 6-2-3(e) (Emission limitations for facilities specified in 326 IAC 6-2-1(c)), the particulate matter (PM) from the dehydrator reboiler, GC-13, shall be limited to 0.65 lb/MMBtu.

### Compliance Determination Requirements

#### D.2.3 Nitrogen Oxide (NOx) Limit

Compliance with the NOx limit in Condition D.2.1 shall be determined by certifying annually whether or not the gas pipeline heater (GC-10) operated. This certification shall be based on the annual operating schedule for this unit.

### Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

#### D.2.4 Record Keeping Requirements

- (a) To document compliance with Condition D.2.1, the Permittee shall maintain records

indicating that gas consumption by the pipeline heater (GC-10) was equal to zero (0) million cubic feet (MMCF) per year.

- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.2.5 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.2.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

### FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: NIPSCO - Grass Creek Gas Storage Field  
Source Address: 900 South 1100 West, Fulton County, Indiana 46975  
Mailing Address: Environmental, Health and Safety  
801 E. 86th Ave.  
Merrillville, IN 46410  
FESOP Permit No.: 049-22765-00022

**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 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: NIPSCO - Grass Creek Gas Storage Field  
Source Address: 900 South 1100 West, Fulton County, Indiana 46975  
Mailing Address: Environmental, Health and Safety  
801 E. 86th Ave.  
Merrillville, IN 46410  
FESOP Permit No.: 049-22765-00022

**This form consists of 2 pages**

**Page 1 of 2**

- |  |
|--|
| <input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12) <ul style="list-style-type: none"><li>• The Permittee must notify the Northern Regional Office, within four (4) business hours (574-245-4870); and</li><li>• The Permittee must submit notice in writing or by facsimile within two (2) working days (Office of Air Quality (OAQ) Facsimile Number: 317-233-6865 and Northern Regional Office 574-245-4877), and follow the other requirements of 326 IAC 2-7-16</li></ul> |
|--|

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 <sub>2</sub> , VOC, NO <sub>x</sub> , 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: \_\_\_\_\_

A certification is not required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**FESOP Quarterly Report**

Source Name: NIPSCO - Grass Creek Gas Storage Field  
Source Address: 900 South 1100 West, Fulton County, Indiana 46975  
Mailing Address: Environmental, Health and Safety  
801 E. 86th Ave.  
Merrillville, IN 46410  
FESOP Permit No.: 049-22765-00022  
Facility: Gas pipeline heater (GC-10)  
Parameter: Shall not operate  
Limit: Maximum natural gas consumption zero (0) million cubic feet (MMCF) per year.

YEAR: \_\_\_\_\_

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	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: \_\_\_\_\_

Attach a signed certification to complete this report.

## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY COMPLIANCE DATA SECTION

### FESOP Quarterly Report

Source Name: NIPSCO - Grass Creek Gas Storage Field  
Source Address: 900 South 1100 West, Fulton County, Indiana 46975  
Mailing Address: Environmental, Health and Safety  
801 E. 86th Ave.  
Merrillville, IN 46410  
FESOP Permit No.: 049-22765-00022  
Facility: Compressor (GC-6) and the Emergency Generator (GC-1)  
Parameter: Natural Gas Fuel Usage (MMCF)  
Limit: Less than 47 million cubic feet (MMCF) per twelve (12) consecutive month period.

YEAR: \_\_\_\_\_

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	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: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE DATA SECTION  
 FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
 QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: NIPSCO - Grass Creek Gas Storage Field  
 Source Address: 900 South 1100 West, Fulton County, Indiana 46975  
 Mailing Address: Environmental, Health and Safety  
 801 E. 86th Ave.  
 Merrillville, IN 46410  
 FESOP Permit No.: 049-22765-00022

**Months:** \_\_\_\_\_ **to** \_\_\_\_\_ **Year:** \_\_\_\_\_

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, 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".	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

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

Form Completed by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

# Indiana Department of Environmental Management Office of Air Quality

## Addendum to the Technical Support Document to a Federally Enforceable State Operating Permit (FESOP)

### Source Background and Description

Source Name:	NIPSCO - Grass Creek Gas Storage Field
Source Location:	900 South 1100 West, Fulton County, Indiana 46975
County:	Fulton
SIC Code:	4922
Operation Permit No.:	F049-14194-00022
Operation Permit Issuance Date:	December 11, 2001
Permit Renewal No.:	F049-22765-00022
Permit Reviewer:	ERG/BL

On September 28, 2007, the Office of Air Quality (OAQ) had a notice published in the Rochester Sentinel, in Fulton County, Rochester, Indiana, stating that NIPSCO- Grass Creek Gas Storage Field had applied for a Permit Renewal to their Federally Enforceable State Operating Permit (FESOP). The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On October 29, 2007, comments on the draft permit were submitted by John M. Ross of NiSource Corporate Services on behalf of NIPSCO - Grass Creek Gas Storage Field. The summary of the comments is as follows. Changes made as a result of these comments are shown throughout this addendum. New language is in **bold** while deleted language is in ~~strikeout~~. The Table of Contents has been updated as necessary.

### NiSource Corporate Services Comments

#### Comment 1:

Mr. Ross commented that the previous FESOP Renewal No. 049-14194-00022 included the authorized individual by position title (i.e., Manager, Gas Storage Operations). Mr. Ross recommends the title of the authorized individual be included in this Permit Renewal No. 049-22765-00022 as well.

#### Response to Comment 1:

IDEM, OAQ has decided to remove the information regarding the authorized individual from Section A.1 of the permit. Listing the name and/or title in the permit has resulted in unnecessary administrative amendments in the past. Therefore, IDEM, OAQ does not consider it beneficial to maintain or update this information in the permits. IDEM, OAQ will continue to retain this information up-to-date in their permit tracking system. No change to the permit was made based on this comment.

#### Comment 2:

The first sentence of Condition A.3 includes the phrase "...insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21)." Mr. Ross believes this blanket statement is inappropriate and not applicable to the entire list of activities include in Condition A.3. He

requests the first sentence of Condition A.3 be modified to: 1) clarify that not all of the listed insignificant activities are specifically regulated; and 2) identify those that are specifically regulated and list the applicable regulatory citation for the activity.

Pursuant to 326 IAC 2-7-1(21)(G)(xxii), Indiana permit rules define certain activities associated with emergencies as insignificant. Mr. Ross requests that the identified categories of emergency generators certain be listed in the Grass Creek permit. The categories of emergency generators should include the Generac emergency generator (GC-1).

Also, limits for the Generac emergency generator (GC-1) should not be included in both Section D.1 and D.2. Mr. Ross requests that all the permit conditions for this unit be consolidated in one section of the permit.

### Response to Comment 2:

Section A.3 should include both regulated and unregulated insignificant activities. IDEM has revised the first sentence of Condition A.3.

As requested, IDEM has included the insignificant categories of emergency generators. Detailed information concerning these emission units is not required; however, detailed emissions information must be provided upon request by the department. The emergency generator GC-1 is included in the identified insignificant categories.

The emergency generator GC-1 has been removed from Section D.2. The natural gas-fired generator (GC-1) does not produce usable heat that is transferred through a heat conducting materials barrier or by a heat storage medium to a material to be heated. Therefore, 326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating) does not apply. The condition numbers and permit limits have been revised where appropriate. The following changes have been made to the permit as a result of this comment:

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

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

...

(o) **Emergency generators as follows:**

- (1) **Gasoline generators not exceeding 110 horsepower;**
- (2) **Diesel generators not exceeding 1,600 horsepower;**
- (3) **Natural gas turbines or reciprocating engines not exceeding 16,000 horsepower; and**
- (4) One (1) natural gas-fired Generac model SG85/1218 emergency generator, identified as GC-1, constructed in 1972, with a design heat input of 1.86 MMBtu/hr, and exhausting to the Generator Exhaust Stack. This stationary reciprocating internal combustion engine is rated at approximately 265 horsepower ~~[326 IAC 6-2-3]~~ **[326 IAC 2-8]**.

...

## SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (a) Two (2) dehydration reboiler process vents, identified as GC-20 and GC-21, associated with the two (2) natural gas dehydrators identified as GC-12 and GC-13. The natural gas dehydrators were constructed in 1972 and 1976, respectively, each with a maximum design processing capacity of 100 MMSCFD at a pressure of 1200 psig. The dehydration system glycol reboiler process vents are part of the natural gas cleanup system.
- (c) One (1) natural gas-fired Delaval model HV8C-4 compressor engine, rated at approximately 2,000 horsepower, identified as GC-6, constructed in 1971, with a design heat input of 14 MMBtu/hr, and exhausting to the Delaval Engine Exhaust Stack.

### Insignificant Activity

- (o) Emergency generators as follows:
    - (1) Gasoline generators not exceeding 110 horsepower;
    - (2) Diesel generators not exceeding 1,600 horsepower;
    - (3) Natural gas turbines or reciprocating engines not exceeding 16,000 horsepower; and
    - (4) One (1) natural gas-fired Generac model SG85/1218 emergency generator, identified as GC-1, constructed in 1972, with a design heat input of 1.86 MMBtu/hr, and exhausting to the Generator Exhaust Stack. This stationary reciprocating internal combustion engine is rated at approximately 265 horsepower [326 IAC 2-8].
- ...

## SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (b) One (1) natural gas-fired pipeline gas heater (boiler), identified as GC-10, constructed in 1971, with a design heat input of 20 MMBtu/hr.

### Insignificant Activities

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour including:
  - (1) Two (2) natural gas dehydration reboilers on units GC-12 and GC-13, constructed in 1972 and 1976, respectively, each with a design heat input capacity of 2.5 MMBtu/hr, exhausting to stacks GC-12 and GC-13, respectively;
  - (2) One (1) natural gas-fired boiler, identified as GC-14, constructed in 1971, with a design heat input of 1.67 MMBtu/hr; and
- ~~(c) One (1) natural gas-fired Generac model SG85/1218 emergency generator, identified as GC-1, constructed in 1972, with a design heat input of 1.86 MMBtu/hr, and exhausting to the Generator Exhaust Stack. This stationary reciprocating internal combustion engine is rated at approximately 265 horsepower [326 IAC 6-2-3].~~



...

**D.2.2 Particulate Matter (PM) [326 IAC 6-2-3]**

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- (a) Pursuant to 326 IAC 6-2-3(d) (Emission limitations for facilities specified in 326 IAC 6-2-1(c)), the particulate matter (PM) from GC-10, GC-14, ~~GC-1~~, and the dehydrator reboiler on GC-12, which were in existence on June 8, 1972, shall be limited to ~~0.7~~ **0.76** lb/MMBtu.
- (b) Pursuant to 326 IAC 6-2-3(e) (Emission limitations for facilities specified in 326 IAC 6-2-1(c)), the particulate matter (PM) from the dehydrator reboiler, GC-13, shall be limited to **0.65** lb/MMBtu.

**Comment 3:**

Mr. Ross requests the language of Condition B.3 (Term of Conditions [326 IAC 2-1.1-9.5]) be modified as follows to reflect regulatory applicability:

**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 into 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

**Response to Comment 3:**

Paragraph (a) in Condition B.3 refers to requirements established pursuant to Title I of the Clean Air Act (CAA). These include New Source Performance Standards, National Emission Standards for Hazardous Air Pollutants, Prevention of Significant Deterioration (PSD) and Emission Offset for nonattainment areas. Since paragraph (a) correctly references Title I of the CAA as written, no changes have been made as a result of this comment. No change to the permit was made based on this comment.

**Comment 4:**

The Emergency Provisions in Condition B.12 (b) include requirements to notify both the main IDEM office in Indianapolis and the Northern Regional Office for emergencies lasting one (1) hour or more and submit an Emergency Occurrence Report Form to both parties. Mr. Ross contends this requirement is redundant, unnecessary, and inappropriately transfers an internal IDEM administrative burden to the Permittee during a time when the Permittee will be otherwise occupied addressing the emergency situation. If the intention was to include the information for the Northern Indiana Office of IDEM as an alternative and optional point of contact, a statement clarifying that intention should be added.

**Response to Comment 4:**

IDEM recognizes that emergencies require immediate corrective action to restore normal operations. At this time, the requirement to notify the Indianapolis Compliance Branch by telephone within four (4) daytime business hours has been removed. The permit still requires that the Permittee submit written Emergency Occurrence Report Form to both the Indianapolis and the Northern Regional Offices.

The intent of the original permit condition was not to provide an alternative and optional point of contact. If future operations show emergency occurrences require more timely notification of the Indianapolis Office, then additional requirements will be inserted during future permit revisions.

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

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...

(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 Section), or~~

~~Telephone Number: 317-233-0178 (ask for Compliance Section)~~

~~Facsimile Number: 317-233-6865~~

Telephone No.: 574-245-4870 (Northern Regional Office)

Facsimile No.: 574-245-4877 (Northern Regional Office)

- (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 Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

and

Northern Regional Office  
220 W. Colfax Ave., Ste 200  
South Bend, IN 46601-1634

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 the certification 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.

...

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE 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: NIPSCO - Grass Creek Gas Storage Field  
Source Address: 900 South 1100 West, Fulton County, Indiana 46975  
Mailing Address: Environmental, Health and Safety  
801 E. 86th Ave.  
Merrillville, IN 46410  
FESOP Permit No.: 049-22765-00022

**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)~~ **Northern Regional Office**, within four (4) business hours (~~1-800-451-6027 or 317-233-0178, ask for Compliance Section 574-245-4870~~); and
  - The Permittee must submit notice in writing or by facsimile within two (2) working days (**Office of Air Quality (OAQ) Facsimile Number: 317-233-6865 and Northern Regional Office 574-245-4877**), and follow the other requirements of 326 IAC 2-7-16

...

**Comment 5:**

Throughout the permit, limits are expressed in terms of twelve (12) consecutive month periods. These limits are inconsistent with regulatory language. Limits should be expressed in terms of a yearly basis (i.e., per year). Specific conditions with limits expressed in terms of twelve (12) consecutive month periods include: condition C.2 (a)(1), (a)(2), (a)(3) and C.2(b); and condition D.1.1.

**Response to Comment 5:**

IDEM limits are not expressed in terms of calendar year, because sources must comply with limits on a rolling twelve (12) month basis. Time periods for limits must be small enough to allow compliance to be determined at a sufficient enough frequency. IDEM requires compliance be determined at the end of each month for the previous twelve month period. No change to the permit was made based on this comment.

**Comment 6:**

In the emission unit box in Section D.1, Mr. Ross recommends the following revisions to the emission unit identifiers:

The "(c)" identifier for the One (1) natural gas-fired Delavel model HV8C-4 compressor engine should be relabeled "(b)". With this revision the emission units in the Section D.1 box will follow an alphabetically chronology; and

Likewise, the "(o)" identifier for the "Emergency generators as follows:" should be changed to "(c)".

**Response to Comment 6:**

The emission unit identifiers in the emission unit box are designed to correspond with the emission units listed both in the TSD and Conditions A.2 and A.3. For this reason the identifiers have not been changed. Section D.1 has been revised to more consistently label the emergency generator GC-1 and the applicable regulation. A footnote has been added to each text boxes in Sections D.1 and D.2 to clarify the relationship between Conditions A.2 and A.3.

**SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS**

**Emissions Unit Description:**

- (a) Two (2) dehydration reboiler process vents, identified as GC-20 and GC-21, associated with the two (2) natural gas dehydrators identified as GC-12 and GC-13. The natural gas dehydrators were constructed in 1972 and 1976, respectively, each with a maximum design processing capacity of 100 MMSCFD at a pressure of 1200 psig. The dehydration system glycol reboiler process vents are part of the natural gas cleanup system.
- (c) One (1) natural gas-fired Delaval model HV8C-4 compressor engine, rated at approximately 2,000 horsepower, identified as GC-6, constructed in 1971, with a design heat input of 14 MMBtu/hr, and exhausting to the Delaval Engine Exhaust Stack.

**Insignificant Activity**

- (o) Emergency generators as follows:
  - (1) Gasoline generators not exceeding 110 horsepower;
  - (2) Diesel generators not exceeding 1,600 horsepower;
  - (3) Natural gas turbines or reciprocating engines not exceeding 16,000 horsepower; and
  - (4) One (1) natural gas-fired Generac model SG85/1218 emergency generator, identified as GC-1, constructed in 1972, with a design heat input of 1.86 MMBtu/hr, and exhausting to the Generator Exhaust Stack. This stationary reciprocating internal combustion engine is rated at approximately 265 horsepower [326 IAC 2-8].

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions. **The emission unit identifiers in the emission unit box correspond to the emission units listed both in the TSD and Conditions A.2 and A.3.**)

...

## SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (b) One (1) natural gas-fired pipeline gas heater (boiler), identified as GC-10, constructed in 1971, with a design heat input of 20 MMBtu/hr.

### Insignificant Activities

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour including:
- (1) Two (2) natural gas dehydration reboilers on units GC-12 and GC-13, constructed in 1972 and 1976, respectively, each with a design heat input capacity of 2.5 MMBtu/hr, exhausting to stacks GC-12 and GC-13, respectively;
  - (2) One (1) natural gas-fired boiler, identified as GC-14, constructed in 1971, with a design heat input of 1.67 MMBtu/hr; and
- ~~(c) One (1) natural gas-fired Generac model SG85/1218 emergency generator, identified as GC-1, constructed in 1972, with a design heat input of 1.86 MMBtu/hr, and exhausting to the Generator Exhaust Stack. This stationary reciprocating internal combustion engine is rated at approximately 265 horsepower [326 IAC 6-2-3].~~

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions. **The emission unit identifiers in the emission unit box correspond to the emission units listed both in the TSD and Conditions A.2 and A.3.**)

### Comment 7:

Condition D.1.1(b)(1) and D.1.1(b)(2) should be deleted. The limit is identical to the emission factor contained in the EPA's AP-42 Chapter 3.2 - Natural Gas-fired Reciprocating Engines (August 2000 edition). It is inappropriate to require compliance with an emission factor. The effective limitation for these units is a fuel input quantity limitation that is calculated based upon the use of the AP-42 emission factor. Such a limitation is already included in the annual fuel input limitation "less than 47 million cubic feet" in Condition D.1.1(a). Although Mr. Ross agrees that both components contribute to the demonstration that the Title V applicability emission threshold of 100 tons per year (25 tons per year for HAPs) is not exceeded, the use of an AP-42 emission factor, as a separate compliance condition (limit) within the FESOP, is inappropriate, unlawful, and arbitrary and capricious, and should be removed from the permit.

### Response to Comment 7:

Upon further review, IDEM has agreed to remove the short term limits. The following revisions have been made to the permit as a result of this comment:

#### D.1.1 Nitrogen Oxide FESOP Limit [326 IAC 2-8]

Pursuant to 326 IAC 2-8-4, the Permittee shall comply with the following limitation:

- ~~(a) The combined natural gas fuel usage for the compressor (GC-6) and the emergency generator (GC-1) shall be limited to less than 47 million cubic feet (MMCF) per twelve (12) consecutive month period.~~
- ~~(b) The allowable NO<sub>x</sub> emission rates shall not exceed the following:~~

- (1) ~~When burning natural gas NO<sub>x</sub> emissions from compressor GC-6 shall not exceed 4.08 lb/MMBtu. Compressor GC-6 is a 4-stroke lean-burn engine.~~
- (2) ~~When burning natural gas NO<sub>x</sub> emission rates from emergency generator GC-1 shall not exceed 2.21 lb/MMBtu. Emergency generator GC-1 is a 4-stroke rich-burn engine.~~

This condition renders the requirements of 326 IAC 2-7 (Part 70 Permit Program) not applicable.

...

#### D.1.3 ~~Nitrogen Oxide (NO<sub>x</sub>) Fuel Usage~~

Compliance with the ~~NO<sub>x</sub> fuel usage~~ limitation in Condition D.1.1 shall be determined by monitoring the natural gas usage using twelve (12) consecutive month composites of gas meter readings unless the gas meters are not functioning properly, in which case natural gas usage shall be estimated based on engineering judgement until such time as the gas meters are repaired or replaced and are functioning properly.

#### Comment 8:

Mr. Ross believes the phrase "...shall be complete and sufficient..." should be deleted from the last sentence of Condition D.1.4 (a) because the phrase implies a subjective judgment. Also, the language of D.1.4 (b) is redundant with the language of Section C – General Record keeping Requirements of the permit. Mr. Ross questions the need for retention of the language of D.1.4 (b) and recommends it be deleted since the Section C – General Record Keeping Requirements of the permit already address this requirement. The recommended change is shown below:

#### D.1.4 Record Keeping Requirement

- (a) To document compliance with Conditions D.1.1, the Permittee shall maintain records of the natural gas fuel usage for the compressor (GC-6) and the emergency generator (GC-1) as specified in Condition D.1.3. Records maintained shall be taken monthly ~~and shall be complete and sufficient~~ to establish compliance with the fuel usage limits.
- (b) ~~All records shall be maintained in accordance with Section C – General Record Keeping Requirements, of this permit.~~

#### Response to Comment 8:

No change to the permit was made based on this comment. The phrase "...shall be complete and sufficient..." appropriately characterizes the fuel usage records required to demonstrate compliance.

Condition D.1.4(b) has also not been removed, since Section C contains relevant descriptions of record retention requirements.

#### Comment 9:

IDEM has included in the general conditions sections (Sections B and C) the mail code of the compliance branch in the IDEM addresses for the Permittee's submittal of the various written notifications. However, these mail codes are not included in the various forms attached to the permit.

#### Response to Comment 9:

Specific mail codes (MC) for each of the IDEM branches have been added to IDEM's address as follows:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE 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: NIPSCO - Grass Creek Gas Storage Field  
Source Address: 900 South 1100 West, Fulton County, Indiana 46975  
Mailing Address: Environmental, Health and Safety  
801 E. 86th Ave.  
Merrillville, IN 46410  
FESOP Permit No.: 049-22765-00022

...

**Comment 10:**

Mr. Ross recommends the addition of "(MMCF)" to the end of the phrase "Natural Gas Fuel Usage" in the "Parameter" portion of the FESOP Quarterly Report form for the Compressor (GC-6) and the Emergency Generator (GC-1).

**Response to Comment 10:**

The following change has been made to the permit as a result of this comment:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**FESOP Quarterly Report**

Source Name: NIPSCO - Grass Creek Gas Storage Field  
Source Address: 900 South 1100 West, Fulton County, Indiana 46975  
Mailing Address: Environmental, Health and Safety  
801 E. 86th Ave.  
Merrillville, IN 46410  
FESOP Permit No.: 049-22765-00022  
Facility: Compressor (GC-6) and the Emergency Generator (GC-1)  
Parameter: Natural Gas Fuel Usage (**MMCF**)  
Limit: Less than 47 million cubic feet (MMCF) per twelve (12) consecutive month period.

**Comment 11:**

Mr. Ross requests the addition of a new Section D.3 to specifically address the remaining insignificant sources. The new Section should indicate the following: "There are no specific regulations applicable to these units that are not specifically regulated."

**Response to Comment 11:**

Although IDEM, OAQ previously include D sections in FESOPs for emission units that have no specific requirements, IDEM, OAQ discontinued this practice some time ago because IDEM believed it misrepresented the requirements for these units. All emission units are subject to some requirements under state regulations. For example, the opacity limitation is 326 IAC 5-1 are applicable to all emission units. Therefore, no change to the permit was made based on this comment.

**Indiana Department of Environmental Management  
Office of Air Quality**

Technical Support Document (TSD) for a Federally Enforceable State Operating Permit  
(FESOP) Renewal

**Source Background and Description**

Source Name:	NIPSCO - Grass Creek Gas Storage Field
Source Location:	900 South 1100 West, Fulton County, Indiana 46975
County:	Fulton
SIC Code:	4922
Operation Permit No.:	049-14194-00022
Operation Permit Issuance Date:	December 11, 2001
Permit Renewal No.:	049-22765-00022
Permit Reviewer:	ERG/BL

The Office of Air Quality (OAQ) has reviewed a FESOP renewal application from Northern Indiana Public Service Company (NIPSCO), Grass Creek Gas Storage Field relating to the operation of an underground natural gas storage plant.

**Permitted Emission Units and Pollution Control Equipment**

The source consists of the following permitted emission units and pollution control devices:

- (a) Two (2) dehydration reboiler process vents, identified as GC-20 and GC-21, associated with the two (2) natural gas dehydrators identified as GC-12 and GC-13. The natural gas dehydrators were constructed in 1972 and 1976, respectively, each with a maximum design processing capacity of 100 MMSCFD at a pressure of 1200 psig. The dehydration system glycol reboiler process vents are part of the natural gas cleanup system.
- (b) One (1) natural gas-fired pipeline gas heater (boiler), identified as GC-10, constructed in 1971, with a design heat input of 20 MMBtu/hr. The pipeline gas heater is installed but not operational.
- (c) One (1) natural gas-fired Delaval model HV8C-4 compressor engine, rated at approximately 2,000 horsepower, identified as GC-6, constructed in 1971, with a design heat input of 14 MMBtu/hr, and exhausting to the Delaval Engine Exhaust Stack.

**Unpermitted Emission Units and Pollution Control Equipment**

There are no unpermitted emission units operating at this source during this review process.

**Insignificant Activities**

The source also consists of 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 million (10,000,000) British thermal units per hour including:
  - (1) Two (2) natural gas dehydration reboilers on units GC-12 and GC-13, constructed in 1972 and 1976, respectively, each with a design heat input capacity of 2.5 MMBtu/hr, exhausting to stacks GC-12 and GC-13, respectively [326 IAC 6-2-3];
  - (2) One (1) natural gas-fired boiler, identified as GC-14, constructed in 1971, with a design heat input of 1.67 MMBtu/hr [326 IAC 6-2-3]; and

- (3) Various space heaters with a combined heat input capacity of 1.8 MMBtu/hr.
- (b) Storage tanks with capacity less than or equal to one thousand (1,000) gallons and annual throughput less than twelve thousand (12,000) gallons, including but not limited to:
  - (1) One (1) ethylene glycol storage tank, identified as GC-5, constructed in 1994; and
  - (2) One (1) triethylene glycol storage tank, identified as GC-11, constructed in 1983.
- (c) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids, including but not limited to one (1) waste oil storage tank, identified as GC-2, constructed in 1995, with a capacity of three hundred (300) gallons;
- (d) 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.
- (e) Paved and unpaved roads and parking lots with public access [326 IAC 6-4].
- (f) Emission units with single HAP emissions less than one (1) ton per year, and combination of HAPs emissions less than two and a half (2.5) tons per year, including two (2) methanol storage tanks, jointly identified as GC-15, both constructed in 1972, each with a capacity of five thousand (5,000) gallons;
- (g) Propane or liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) Btu per hour.
- (h) Equipment powered by internal combustion engines of capacity equal to or less than five hundred thousand (500,000) Btu per hour, except where total capacity of equipment operated by one stationary source exceeds two million (2,000,000) Btu per hour;
- (i) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to one percent (1%) by volume.
- (j) Heat exchanger cleaning and repair.
- (k) Process vessel degreasing and cleaning to prepare for internal repairs. This unit was installed before 1980.
- (l) Stockpiled soils from soil remediation activities that are covered and waiting transportation for disposal.
- (m) 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.
- (n) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (o) One (1) natural gas-fired Generac model SG85/1218 emergency generator, identified as GC-1, constructed in 1972, with a design heat input of 1.86 MMBtu/hr, and exhausting to the Generator Exhaust Stack. This stationary reciprocating internal combustion engine is rated at approximately 265 horsepower [326 IAC 6-2-3].
- (p) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons.
- (q) Purge double block and bleed valves.

### Existing Approvals

The source has been operating under the previous FESOP 049-14194-00022 issued on December 11, 2001 with an expiration date of December 11, 2006, and the following amendment:

AA 049-17444-00022 issued on July 2, 2003

All conditions from previous approvals were incorporated into this FESOP renewal.

### Enforcement Issue

There are no enforcement actions pending.

### Recommendation

The staff recommends to the Commissioner that the FESOP renewal be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete FESOP renewal application for the purposes of this review was received on March 13, 2006. Additional information was received on September 12, 2006.

### Emission Calculations

See Appendix A of this document for detailed emission calculations.

### Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source, excluding the emission limits that were contained in the previous FESOP.

Pollutant	Unrestricted Potential Emissions (tons/yr)
PM	0.85
PM10	0.94
SO <sub>2</sub>	0.11
VOC	21.5
CO	31.4
NO <sub>x</sub>	263

HAPs	Unrestricted Potential Emissions (tons/yr)
Formaldehyde	3.26
Toluene	3.12
Total	12.3

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of NO<sub>x</sub> is greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7. The source will be issued a FESOP because the source will limit its emissions below the Title V levels.

- (b) Fugitive Emissions  
 Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

**Potential to Emit After Issuance**

The source has opted to remain a FESOP source. The table below summarizes the potential to emit, reflecting all limits of the emission units. Any control equipment is considered enforceable only after issuance of this FESOP and only to the extent that the effect of the control equipment is made practically enforceable in the permit. Since the source has not constructed any new emission units, the source's potential to emit is based on the emission units included in the original FESOP.

Process/emission unit	Potential To Emit (tons/year)						
	PM	PM10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Natural gas dehydrators (GC-12 and GC-13)	-	-	-	13.6	-	-	Toluene: 3.12 HAPs: 7.90
Natural Gas Combustion Only	0.05	0.19	0.02	0.14	2.15	2.56	HAPs: 0.05
Pipeline Gas Heater (GC-10) *	0	0	0	0	0	0	0
Compressor (GC-6) and Emergency generator (GC-1) **	0.25	0.01	0.01	2.80	10.9	Less than 96.9	HAPs: 1.64
HAP Storage Tanks (GC-15, GC-5, GC-11)	-	-	-	0.05	-	-	0.05
Total Emissions	0.30	0.21	0.03	16.6	13.1	Less than 99.5	Toluene: 3.12 HAPs: 9.64

\* Pursuant to FESOP renewal permit 049-14194-00022 issued December 11, 2001 condition D.1.1 the gas pipeline heater (GC-10) shall not operate. This gas pipeline heater has not been removed.  
 \*\* The maximum natural gas consumption for the compressor (GC-6) and the emergency generator (GC-1) combined are limited pursuant to 326 IAC 2-8-4.

**County Attainment Status**

The source is located in Fulton County.

Pollutant	Status
PM10	Attainment
PM2.5	Attainment
SO <sub>2</sub>	Attainment
NO <sub>2</sub>	Attainment
8-hour Ozone	Attainment
CO	Attainment
Lead	Attainment

**Note:** On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.

- (a) Fulton County has been classified as attainment for PM2.5. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM2.5 emissions. Therefore, until the U.S. EPA adopts specific provisions for PSD

review for PM2.5 emissions, it has directed states to regulate PM10 emissions as a surrogate for PM2.5 emissions. See the State Rule Applicability - Entire Source section.

- (b) Volatile organic compounds (VOC) and Nitrogen Oxides 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. Fulton County has been designated as attainment or unclassifiable for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability - Entire Source section.
- (c) Fulton County has been classified as attainment or unclassifiable in Indiana for SO<sub>2</sub>, NO<sub>x</sub>, CO, and Lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability - Entire Source section.

### Source Status

Existing Source PSD, Part 70, or FESOP Definition (emissions after controls, based on 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/yr)
PM	0.5
PM10	0.5
SO <sub>2</sub>	0
VOC	21.4
CO	16.1
NO <sub>x</sub>	Less than 100
Single HAP	5.4
Combination HAPs	14.5

This existing source is not a major stationary source because no nonattainment regulated pollutant is emitted at a rate of 100 tons per year or greater, and it is not in one of the 28 listed source categories.

### Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in this permit. The requirements of the NSPS 40 CFR 60.40 - 60.46, Subpart D, Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced after August 17, 1971 (326 IAC 12) are not included in this permit because the maximum design input capacity of each boiler is less than 10 MMBtu/hr.
- (b) The requirements of the NSPS 40 CFR 60.40b - 60.49b, Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units (326 IAC 12) are not included in this permit because the maximum design input capacity of each boiler is less than 100 MMBtu/hr.
- (c) The requirements of the NSPS 40 CFR 60.110 - 60.113, Subpart K, New Source Performance Standard for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978 (326 IAC 12) are not included in this permit for the methanol and glycol storage tanks because these tanks do not store a petroleum liquid. The requirements of 40 CFR 60 Subpart K are not included in this permit for the waste oil storage tank (GC-2) is because the 300 gallon storage capacity is below the applicability capacity of 40,000 gallons.

- (d) The requirements of the NSPS 40 CFR 60.110a - 60.115a, Subpart Ka, New Source Performance Standard for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984 (326 IAC 12) are not included in this permit for the methanol and glycol storage tanks because these tanks do not store a petroleum liquid.
- (e) The requirements of the NSPS 40 CFR 60.110b - 60.117b, Subpart Kb, New Source Performance Standard for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 (326 IAC 12) are not included in this permit for the methanol and glycol storage tanks because these volatile organic liquid storage vessels have a capacity less than 75 cubic meters.
- (f) The requirements of the NSPS, 40 CFR 60.630 – 60.636, Subpart KKK, Standards of Performance for Equipment Leaks of VOC from On-Shore Natural Gas Processing Plants (326 IAC 12) are not included because the source was constructed prior to the applicability date of January 20, 1984.
- (g) The requirements of the NSPS 40 CFR 60.640 – 60.648, Subpart LLL, Standards of Performance for Onshore Natural Gas Processing: SO<sub>2</sub> Emissions (326 IAC 12) are not included in this permit because of the date of construction. All affected facilities at this source were constructed or modified prior to the applicability date of January 20, 1984.
- (h) The requirements of the NSPS 40 CFR 60.40c – 60.48c, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (326 IAC 12) are not included in this permit for the gas pipeline heater boiler (GC-10) because it was constructed prior to the applicability date of June 9, 1984.
- (i) The requirements of the NSPS, 40 CFR 63.760 – 63.777, Subpart HH, National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities (326 IAC 20-31) are not included in this permit for the triethylene glycol (TEG) natural gas dehydration unit, because Subpart HH applies to natural gas exploration and production facilities. Pursuant to 40 CFR 63.760(a) emission units must be located at oil and natural gas production facilities.
- (j) The requirements of the NESHAP 40 CFR 63.1270 - 63.1287, Subpart HHH, National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities (326 IAC 20-31) are not included in this permit because this natural gas processing facility is owned and operated by a local utility. Pursuant to 40 CFR 63.1270(a), local distribution companies that receive gas from natural gas transmission pipelines are not subject to the requirements of this rule. This source is not a major source of HAPs.
- (k) The requirements of the NESHAP 40 CFR 63.6580 - 63.6675, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (326 IAC 20-31) are not included in this permit for the compressor (GC-6) and emergency generator (GC-1). These generators are existing RICE engines, as defined by 40 CFR 63.6590. Pursuant to 40 CFR 63.6590(b)(3), there are no applicable requirements from 40 CFR 63, Subpart ZZZZ and 40 CFR 63, Subpart A for existing compression ignition (CI) stationary RICE or existing emergency stationary RICE. This source is not a major source of HAPs.
- (l) The requirements of the NESHAP 40 CFR 63.7480 - 63.7575, Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters (326 IAC 20-31) are not included in this permit.

On June 8th, the DC Court of Appeals vacated the National Emissions Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process

Heaters (40 CFR 63, Subpart DDDDD). Since NESHAP 40 CFR Part 63, Subpart DDDDD has been vacated, pursuant to Section 112(j) of the Clean Air Act, major sources of Hazardous Air Pollutants (HAPs), in specified source categories, require a case-by-case MACT determination when EPA fails to promulgate a scheduled MACT Standard by the regulatory deadline. However, this source is not a major source of Hazardous Air Pollutants (HAPs).

- (m) The requirements of the NESHAP 40 CFR 63.7880 - 63.7957, Subpart GGGGG, National Emission Standards For Hazardous Air Pollutants: Site Remediation (326 IAC 20-31) are not included in this permit. This source is not a major source of HAPs.

### State Rule Applicability – Entire Source

#### 326 IAC 2-2 (PSD)

The source was first constructed in 1971, prior to PSD applicability. Therefore, no PSD review occurred at the original construction. This existing source is not in 1 of 28 source categories defined in 326 IAC 2-2-1(gg). The potential to emit of all criteria pollutants is less than 250 tons per year.

The source's original FESOP 049-5540-00022, issued on December 12, 1996 required production limits to limit the NSR pollutants under Title V levels of potential to emit. The source is a minor source under 326 IAC 2-2. A FESOP renewal 049-14194-00022 was issued December 11, 2001. Since that date there has been one permit modification which did not increase the PTE. Under AA 049-17444-00022, issued July 2, 2003 a change was made in the authorized individual. This source remains a minor source under 326 IAC 2-2 and the requirements of 326 IAC 2-7 (Part 70 Program) are not applicable.

#### 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

This source emits less than 10 tons per year of a single HAP and less than 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

#### 326 IAC 2-6 (Emission Reporting)

This source is located in Fulton County, is not required to operate under a Part 70 permit, and emits less than five (5) tons of lead. Therefore, pursuant to 326 IAC 2-6-1(b), the source is only subject to additional information requests as provided in 326 IAC 2-6-5.

#### 326 IAC 2-8 (FESOP)

The source potential to emit NO<sub>x</sub> emissions is greater than one hundred (100) tons per year, but has accepted the following limitation on fuel usage to ensure NO<sub>x</sub> emissions are less than one hundred (100) tons per per twelve (12) consecutive month period:

- (a) Pursuant to F049-14194-00022 issued December 11, 2001 and 326 IAC 2-8 (FESOP) the combined natural gas fuel usage for the compressor (GC-6) and the emergency generator (GC-1) shall be limited to less than 67.5 million cubic feet (MMCF) per twelve (12) consecutive month period.

The fuel usage limit has been revised by this FESOP renewal permit, F049-22765-00022; due to changes in the AP-42 emission factors for internal combustion engines. The source shall limit the combined natural gas fuel usage for the compressor (GC-6) and the emergency generator (GC-1) to less than 47 million cubic feet (MMCF) per twelve (12) consecutive month period. This fuel usage will limit NO<sub>x</sub> emissions from the compressor (GC-6) and the emergency generator (GC-1) to less than a total of 96.9 tons per year. The fuel limit is structured such that when including the emissions from insignificant combustion sources, the source total emissions of NO<sub>x</sub> does not exceed one hundred (100) tons per year and the requirements of 326 IAC 2-7 (Part 70 Program) remain not applicable.

The allowable NO<sub>x</sub> emission rates shall not exceed the following:

- (1) When burning natural gas NO<sub>x</sub> emissions from compressor GC-6 shall not exceed 4.08 lb/MMBtu. Compressor GC-6 is a 4-stroke lean-burn engine.
- (2) When burning natural gas NO<sub>x</sub> emission rates from emergency generator GC-1 shall not exceed 2.21 lb/MMBtu. Emergency generator GC-1 is a 4-stroke rich-burn engine.

The allowable emission rate for this unit was calculated using uncontrolled emission factors, from EPA's AP-42 Chapter 3.2 - Natural Gas-fired Reciprocating Engines (August 2000 edition).

- (b) The gas pipeline heater (GC-10) shall not operate and therefore, it will have a maximum natural gas consumption limit of zero (0) million cubic feet (MMCF) per year. The pipeline gas heater is installed but not operational.

These limits are structured such that source-wide NO<sub>x</sub> emissions do not exceed one hundred (100) tons per twelve (12) consecutive month period. Therefore, the requirements of 326 IAC 2-7 do not apply.

#### 326 IAC 6-4 (Fugitive Dust Emissions)

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).

#### 326 IAC 10 (Nitrogen Oxides Rules)

326 IAC 10-1 (Nitrogen Oxides Rules) does not apply to this source because the rules apply only to sources in Clark or Floyd County. This source is located in Fulton County.

### State Rule Applicability – Boilers

#### 326 IAC 6-2-3 (Particulate Emission Limitations for Source of Indirect Heating)

- (a) This source is subject to 326 IAC 6-2-3 (Particulate Emission Limitations for Sources of Indirect Heating) because these sources of indirect heating (GC-10, GC-14, the emergency generator GC-1, the dehydrator reboiler on GC-12, and the dehydrator reboiler on GC-13, because they were constructed in 1971, 1971, 1972, 1972, and 1976 respectively, which are all before the applicability date of September 21, 1983 for Section 4 of this rule. Therefore, Section 3 is applicable.

- (1) Pursuant to 326 IAC 6-2-3(b) the particulate limit shall be calculated for all facilities in operation on June 8, 1972. Pursuant to 326 IAC 6-2-3(d) the particulate limit shall be lesser of 0.8 lb/MMBtu and value using the equation below:

$$Pt = (C \times a \times h) / (76.5 \times Q^{0.75} \times N^{0.25})$$

Where C = 50 u/m<sup>3</sup>

Pt = pounds of particulate matter emitted per million Btu heat input (lb/MMBtu)

Q = total source maximum operating capacity rating (MMBtu/hr)

N = number of stacks

a = plume rise factor (0.67)

h = stack height (ft)

The particulate matter (PM) from GC-10, GC-14, GC-1, and GC-12 shall be limited to 0.7 lb/MMBtu.

- (2) Pursuant to 326 IAC 6-2-3(c) the particulate limit from the dehydrator reboiler, GC-13, shall be calculated using the equation above where: Q, N, and h shall include the parameters for the facility in question (the dehydrator reboiler on GC-13) and

for those facilities which were previously constructed (GC-10, GC-14, and the dehydrator reboiler on GC-12). Pursuant to 326 IAC 6-2-3(e) the particulate emissions from any facility which began operation after June 8, 1972, shall in no case exceed 0.6 lb/mmBtu heat input.

The particulate matter (PM) from the dehydrator reboiler on GC-13 shall be limited to 0.6 lb/MMBtu.

Year	Unit	Total Source Max. Operating Capacity in the Year Installed, Q (MMBtu/hr)	Weighted Average Stack Height (ft)	Cumulative Number of Stacks	Emission Limit for All Units (lb/MMBtu)
1971	GC-10, GC-14	20 + 1.67 = 21.7	25	1	-
1972	Dehydrator reboiler on GC-12, GC-1	21.7 + 2.5 + 1.86 = 26.0	24.3	3	-
<b>Total</b>		<b>26.0</b>	<b>24.3</b>	<b>3</b>	<b>0.7</b>
1976	Dehydrator reboiler on GC-13	26.0 + 2.5 = 26.7	23.9	4	0.6

- (b) 326 IAC 6-2-3 (Particulate Emission Limitations for Sources of Indirect Heating) does not apply to the natural gas-fired pipeline heater (boiler identified as GC-10) because the FESOP limit requires that the pipeline heater not operate. Therefore there are no particulate emissions from this unit.

**State Rule Applicability – Emergency Generators, Space Heaters, and Storage Tanks**

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)

Emergency generators are not subject to 326 IAC 6-2 because they are not a source of indirect heating.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

Emergency Generator and space heaters are not specifically identified in 326 IAC 6-3-2(b) through (d). Pursuant to 326 IAC 1-2-59, "Process weight; weight rate," states that liquid and gaseous fuels will not be considered as part of the process rate. Therefore, the space heaters and emergency generators are not subject to 326 IAC 6-3-2(e).

326 IAC 7-4.1 (Lake County Sulfur Dioxide Emission Limitations)

Each fossil fuel-fired combustion source are not subject to the requirements of 326 IAC 7-4.1, because the source is located in Fulton County.

326 IAC 8-4 (Petroleum Sources)

This source is located in Fulton County, was constructed prior to January 1, 1980, and is not one of the types of operations regulated by 326 IAC 8-4. Therefore, the requirements of 326 IAC 8-4 do not apply to any of the facilities at this source.

326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)

Each of the storage vessels is not subject to the requirements of 326 IAC 8-9, because the source is located in Fulton County.

**State Rule Applicability – Insignificant Activities**

326 IAC 8-3 (Organic Solvent Degreasing Operations)

This source is located in Fulton County, was constructed prior to January 1, 1980. Therefore, the process vessel degreasing and cleaning unit not subject to 326 IAC 8-3.

## Testing Requirements

No stack testing is required for the emission units at this source because emission factors are from AP-42 and are considered to be reliable.

## Compliance Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

There are no compliance monitoring requirements for facilities at this source.

## Conclusion

The operation of this underground natural gas storage plant shall be subject to the conditions of the FESOP 049-22765-00022.

**Appendix A: Emission Calculations  
Emission Summary**

**Company Name:** NIPSCO - Grass Creek Gas Storage Field  
**Address:** 900 South 1100 West, Fulton County 46975  
**FESOP Renewal:** F049-22765-00022  
**Reviewer:** ERG/BL  
**Date:** September 3, 2007

	<b>Potential To Emit (tons/year)</b>								
	<i>PM</i>	<i>PM10</i>	<i>SO<sub>2</sub></i>	<i>VOC</i>	<i>CO</i>	<i>NOx</i>	<i>Total HAPs</i>	<i>CH<sub>2</sub>O</i>	<i>Toluene</i>
Natural Gas Dehydrators (GC-12 and GC-13)	0.02	0.08	0.01	13.6	0.90	1.07	7.9	-	3.12
Natural Gas Combustion ***	0.05	0.19	0.02	0.14	2.15	2.56	0.05	0.002	8.72E-05
Pipeline Gas Heater (GC-10)	0.16	0.65	0.05	0.47	7.21	8.59	0.16	0.01	2.92E-04
Compressor (GC-6)	0.61	0.00	0.04	7.24	19.4	250	4.16	3.24	-
Emergency Generator (GC-1)	0.01	0.004	0.0003	0.01	1.73	1.03	0.01	0.01	-
HAP Storage Tanks (GC-15, GC-5, and GC-11)	-	-	-	0.05	-	-	0.05	-	-
<b>Total</b>	<b>0.85</b>	<b>0.94</b>	<b>0.11</b>	<b>21.5</b>	<b>31.4</b>	<b>263</b>	<b>12.3</b>	<b>3.26</b>	<b>3.12</b>

	<b>Potential to Emit After Issuance (tons/year)</b>								
	<i>PM</i>	<i>PM10</i>	<i>SO<sub>2</sub></i>	<i>VOC</i>	<i>CO</i>	<i>NOx</i>	<i>Total HAPs</i>	<i>CH<sub>2</sub>O</i>	<i>Toluene</i>
Natural Gas Dehydrators (GC-12 and GC-13)	-	-	-	13.6	-	-	7.90	-	3.12
Natural Gas Combustion ***	0.05	0.19	0.02	0.14	2.15	2.56	0.05	0.002	8.72E-05
Pipeline Gas Heater (GC-10)	*	*	*	*	*	*	*	*	*
Compressor (GC-6)	0.24	0.01	0.01	2.79	9.2	less than 96.9	1.63	1.27	-
Emergency Generator (GC-1) **	0.01	4.42E-03	2.73E-04	0.01	1.73	**	0.01	0.01	-
HAP Storage Tanks (GC-15, GC-5, and GC-11)	-	-	-	0.05	-	-	0.05	-	-
<b>Total</b>	<b>0.30</b>	<b>0.21</b>	<b>0.03</b>	<b>16.6</b>	<b>13.1</b>	<b>less than 99.5</b>	<b>9.64</b>	<b>1.28</b>	<b>3.12</b>

\* Pursuant to FESOP renewal permit 049-14194-00022 issued December 11, 2001 condition D.1.1 the gas pipeline heater (GC-10) shall not operate. This gas pipeline heater has not been physically removed.

\*\* The maximum natural gas consumption for the compressor (GC-6) and the emergency generator (GC-1) combined are limited pursuant to 326 IAC 2-8-4.

\*\*\*The natural gas combustion units include GC-20, GC-21, GC-14, and various space heaters.

**Appendix A: Emission Calculations  
Glycol Dehydrator Reboiler  
Natural Gas Dehydrators (GC-12 and GC-13)**

**Company Name:** NIPSCO - Grass Creek Gas Storage Field  
**Address:** 900 South 1100 West, Fulton County 46975  
**FESOP Renewal:** F049-22765-00022  
**Reviewer:** ERG/BL  
**Date:** September 3, 2007

	Pollutants *					
Potential to Emit (tons/yr)	n-Hexane 0.36	Benzene 2.22	Toluene 3.12	Xylenes 1.77	VOC 13.6	Total HAPs 7.9

Gas is withdrawn from the underground storage reservoir during only during winter, the high demand heating season. The dehydration system has two reboilers for reliability with one redundant reboiler always available for back-up. The two reboilers are connected to a single, common glycol feed line and a single common return line to one dehydrator tower. The dehydrating operation utilizes one reboiler and can alternate between the two reboilers as needed.

\* Applicant provided input values and resulting emission from GRI-GLYCalc™ Version 4.0. A software program for estimating air emissions from glycol units. GRI-GLYCalc report calculated emissions for max operating conditions (throughput, temp, pressure) to derive worse-case lb/hr rate; Due to the inherent limitation of the facility storage field withdraw (dehydration) season, PTE is derived through use of max lb/hr emission rate multiplied by 4380 hours/yr pursuant to 40 CFR 63.1270 (a) and Fed Reg 64 FR 32620.

**Appendix A: Emission Calculations  
Updated GRI-GLYCalc™, Version 4.0  
Potential Emissions Detail**

*Updated Wet Gas Analysis*

Station: **Grass Creek CS**  
 County: **Fulton** State: **IN**  
 Emissions Point: **GC12-GC13**  
 Unit Name: **TEG Dehy Glycol Re-Boilers** Agency ID: **GC12-GC13**  
 Manufacture: **N/A** Rating: **2.5 MMBtu/hr**

Unit Potential Production Basis for Hours		
Parameter	Stream	Value
Heat Input	Natural Gas - MMBTU/hr	2.5
Operating Hours	One Hour	1

Unit Potential Production Basis for Hours		
Parameter	Stream	Value
Heat Input	Natural Gas - MMBTU/hr	2.5
Operating Hours	One Year Continuous Operation	4380

Chemical	Potential Emissions in Lb./Hour		
	Lb/MMbtu	Emissions Factor Reference	Lb.
Carbon Monoxide	8.235E-02	AP-42 Table 1.4-1, Small Boilers, Uncontrolled (7/98)	0.412
Nitrogen Oxides (NOx)	9.804E-02	AP-42 Table 1.4-1, Small Boilers, Uncontrolled (7/98)	0.490
PM	1.863E-03	AP-42, Table 1.4-2, PM (Filt), 7/98	0.009
PM <sub>10</sub>	7.451E-03	AP-42, Table 1.4-2, PM (Filt), 7/98	0.037
Sulfur Dioxide	5.710E-02	Eng. Calc (20gr S/100 scf)	0.286
Hexane	1.765E-03	AP-42, Table 1.4-3, 7/98	0.00882
Formaldehyde	7.353E-05	AP-42, Table 1.4-3, 7/98	0.00037
VOC	5.392E-03	AP-42, Table 1.4-2, 7/98	0.027

Lb/Mmbtu	Potential Emissions in Tons/Year	
	Emissions Factor Reference	TPY
8.235E-02	AP-42 Table 1.4-1, Small Boilers, Uncontrolled (7/98)	0.90
9.804E-02	AP-42 Table 1.4-1, Small Boilers, Uncontrolled (7/98)	1.07
1.863E-03	AP-42, Table 1.4-2, PM (Filt), 7/98	0.020
7.451E-03	AP-42, Table 1.4-2, PM (Filt), 7/98	0.082
7.140E-04	Eng. Calc (0.25gr S/100 scf)	0.008
1.765E-03	AP-42, Table 1.4-3, 7/98	0.0193
7.353E-05	AP-42, Table 1.4-3, 7/98	0.0008
5.399E-03	AP-42, Table 1.4-2, 7/98	0.06

Unit Name: **TEGDEHY1-TEGDEHY2** Agency ID: **GC12-GC13**  
 Control: **N/A**  
 Manufacture: **N/A** Unit Rating: **100 MMscf/day** Emission Point: **GC12s-GC13s**

Unit Potential Production Basis for Hours		
Parameter	Stream	Value
Operating Hours	One Hour	1

Unit Potential Production Basis for Hours		
Parameter	Stream	Value
Operating Hours	One Year Continuous Operation	4380

Chemical	Potential Emissions in Lb./Hour		
	Lb/hr	Emissions Factor Reference	Lb/hr
Benzene	5.067E-01	GRI Gly-CALC Ver 4	1.013
n-Hexane	8.310E-02	GRI Gly-CALC Ver 4	0.166
Toluene	7.126E-01	GRI Gly-CALC Ver 4	1.425
Ethylbenzene	9.240E-02	GRI Gly-CALC Ver 4	0.185
Xylene	4.046E-01	GRI Gly-CALC Ver 4	0.809
HAPs	1.803E+00	GRI Gly-CALC Ver 4	3.606
VOC	3.110E+00	GRI Gly-CALC Ver 4	6.221

Lb/hr	Potential Emissions in Tons/Year	
	Emissions Factor Reference	TPY
5.067E-01	GRI Gly-CALC Ver 4	2.22
8.310E-02	GRI Gly-CALC Ver 4	0.36
7.126E-01	GRI Gly-CALC Ver 4	3.12
9.240E-02	GRI Gly-CALC Ver 4	0.40
4.046E-01	GRI Gly-CALC Ver 4	1.77
1.803E+00	GRI Gly-CALC Ver 4	7.90
3.110E+00	GRI Gly-CALC Ver 4	13.62

DEHY TOTAL (TPY)	
Carbon Monoxide	0.90
Formaldehyde	0.001
Nitrogen Oxides (NOx)	1.07
PM	0.02
PM10	0.08
Sulfur Dioxide	0.01
VOC	13.68
Benzene	2.22
n-Hexane	0.38
Toluene	3.12
Ethylbenzene	0.40
Xylene	1.77
HAPs	7.92



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 806-889-6821 • P.O. BOX 2428 • PAMPA, TX 79066-2428

GAS/VAPOR FRACTIONAL ANALYSIS

<b>SAMPLE ID</b>	<b>COMPONENT</b>	<b>MOLE %</b>	<b>GM%</b>
Customer..... Northern Indiana Public Service Company	Nitrogen N2	0.780	0.085
Station No.... N/A	Carbon D. CO2	0.877	0.149
Operator..... NIPSCO	Hyd. Sulf. H2S	-----	-----
Location..... Mt. Simon	Oxygen O2	-----	-----
	Helium He	-----	-----
Sample Of..... Gas	Hydrogen H2	-----	-----
Pressure..... 520 psig @ 150 F	Argon Ar	-----	-----
Temperature... N/A	Methane C1	94.480	15.962
Atm. Temp.... N/A	Ethane C2	3.036	0.809
Sample Date... N/A	Propane C3	0.515	0.141
Sampled By... NIPSCO	i-Butane iC4	0.991	0.036
Analysis Date. 12/28/98	n-Butane nC4	0.102	0.032
Sample Cyl.No. 8M72	i-Pentane iC5	0.035	0.013
	n-Pentane nC5	0.021	0.008
	Hexanes+ C6+	0.065	0.027
	<b>Totals:</b>	<b>100.000</b>	<b>17.256</b>

CALCULATIONS/METHODS

Real Gas, 14.65 psia @ 60 F  
 Applicable current GPA methods, procedures, and constants are used.

DISTRIBUTION

Northern Indiana Public Service Co.  
 1-Dennis J. Trelinski; Hammond, IN

GASOLINE CONTENT (GEM)

Ethane & Heavier .....	1.060
Propane & Heavier .....	0.251
Butanes & Heavier .....	0.110
Pentanes & Heavier .....	0.048
26% Gasolina .....	0.074

HEATING VALUE (Gross Btu/CF)

Water Vapor Saturated ..	1015.0
Dry.....	1031.8

SPECIFIC GRAVITY

Water Vapor Saturated ..	0.5927
Dry.....	0.5920

COMPRESSIBILITY FACTOR (Z)

Water Vapor Saturated ..	0.99748
Dry.....	0.99780

REMARKS/COMMENTS/OTHER

COMPOUND	Storage	Grass Creek
C6+ Mole % from Gas Sample		0.063
Other Hexanes	0.5319	0.0335
n-Hexane	0.1913	0.0121
Heptane	0.1002	0.0063
2,2,4 Trimethylpentane	0.0103	0.0006
Octanes+	0.1241	0.0078
Benzene	0.0205	0.0013
Toluene	0.0159	0.0010
Ethylbenzene	0.0011	0.0001
Xylenes	0.0046	0.0003

When an extended gas analysis is not available, the C6+ composition must be estimated. The following table lists suggested breakdowns of the C6+ group of compounds for storage field glycol dehydrators. These C6+ compositions are based on sampling data from more than 60 representative gas streams. (Ref. GRI Gly-Calc Version 4 Glycol Dehydrator Emissions: Sampling & Analytical Methods & Estimation Techniques. GRI Topical Report. Gas Research Institute, Chicago, IL. GRI-94/0324)

COMBINED REGENERATOR VENT/FLASH GAS EMISSIONS

Component	lbs/hr	lbs/day	tons/yr
Methane	6.0456	145.094	13.2399
Ethane	1.1686	28.047	2.5593
Propane	0.4420	10.609	0.9680
Isobutane	0.1449	3.477	0.3173
n-Butane	0.2200	5.281	0.4819
Isopentane	0.0876	2.102	0.1918
n-Pentane	0.0725	1.740	0.1588
n-Hexane	0.0831	1.993	0.1819
Other Hexanes	0.1706	4.094	0.3736
Heptanes	0.0902	2.165	0.1975
2,2,4-Trimethylpentane	0.0034	0.082	0.0075
Benzene	0.5067	12.162	1.1098
Toluene	0.7126	17.101	1.5605
Ethylbenzene	0.0924	2.218	0.2024
Xylenes	0.4046	9.711	0.8862
C8+ Heavies	0.0796	1.912	0.1744
<b>Total Emissions</b>	<b>10.3245</b>	<b>247.788</b>	<b>22.6106</b>
<b>Total Hydrocarbon Emissions</b>	<b>10.3245</b>	<b>247.788</b>	<b>22.6106</b>
Total VOC Emissions	3.1103	74.647	6.8115
Total HAP Emissions	1.8028	43.268	3.9482
Total BTEX Emissions	1.7163	41.192	3.7588

**Appendix A: Emission Calculations  
Natural Gas Combustion Only  
MM BTU/HR <100**

**Dehy Reboilers (GC-20 & GC-21) Boiler (GC-14)  
Various Space Heaters**

**Company Name:** NIPSCO - Grass Creek Gas Storage Field  
**Address:** 900 South 1100 West, Fulton County 46975  
**FESOP Renewal:** F049-22765-00022  
**Reviewer:** ERG/BL  
**Date:** September 3, 2007

Heat Input Capacity \*  
MMBtu/hr  
8.47

Potential Throughput  
MMCF/yr  
51.3

Criteria Pollutant

	PM**	PM10**	SO <sub>2</sub>	NOx***	VOC	CO
Emission Factor (lb/MMCF)	1.90	7.60	0.60	100	5.50	84.0
Potential to Emit (tons/yr)	0.05	0.19	0.02	2.56	0.14	2.15

\* Total heat input capacity includes: two (2) dehydrators reboilers (GC-20 and GC-21) each with a combined heat input of 2.5 MMBtu/hr; , one (1) boiler (GC-14) with a maximum heat input of 1.67 MMBtu/hr, and various space heaters with a combined heat input capacity of 1.8 MMBtu/hr.

\*\* PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM combined.

\*\*\* Emission factor for NOx (Uncontrolled) 100 lb/MMCF

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 (SUPPLEMENT D 7/98)

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

**Methodology**

Potential Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu (except GC-20 & GC-21 are based upon 4380 hrs/yr)

Potential to Emit (tons/yr) = Potential Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

**Appendix A: Emission Calculations**  
**HAPs Emissions from Natural Gas Combustion**  
**MM BTU/HR <100**

**Company Name:** NIPSCO - Grass Creek Gas Storage Field  
**Address:** 900 South 1100 West, Fulton County 46975  
**FESOP Renewal:** F049-22765-00022  
**Reviewer:** ERG/BL  
**Date:** September 3, 2007

HAPs - Organics

Emission Factor in lb/MMCF	Benzene 2.10E-03	Dichlorobenzene 1.20E-03	Formaldehyde 7.50E-02	Hexane 1.80E+00	Toluene 3.40E-03
Potential Emission in tons/yr	5.38E-05	3.08E-05	1.92E-03	4.61E-02	8.72E-05

HAPs - Metals

Emission Factor in lb/MMCF	Lead 5.00E-04	Cadmium 1.10E-03	Chromium 1.40E-03	Manganese 3.80E-04	Nickel 2.10E-03
Potential Emission in tons/yr	1.28E-05	2.82E-05	3.59E-05	9.74E-06	5.38E-05

Methodology is the same as page 5.

The five highest organic and metal HAPs emission factors are provided above.  
 Additional HAPs emission factors are available in AP-42, Chapter 1.4-3 (7/98)

**Appendix A: Emission Calculations  
 Natural Gas Combustion Only  
 MM BTU/HR <100  
 Pipeline Gas Heater (GC-10)**

**Company Name:** NIPSCO - Grass Creek Gas Storage Field  
**Address:** 900 South 1100 West, Fulton County 46975  
**FESOP Renewal:** F049-22765-00022  
**Reviewer:** ERG/BL  
**Date:** September 3, 2007

Heat Input Capacity  
 MMBtu/hr  
 20.0

Potential Throughput  
 MMCF/yr  
 172

	Criteria Pollutant					
	PM*	PM10*	SO <sub>2</sub>	NOx**	VOC	CO
Emission Factor (lb/MMCF)	1.90	7.60	0.60	100	5.50	84.0
Potential to Emit (tons/yr)	0.16	0.65	0.05	8.59	0.47	7.21

\*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM combined.

\*\*Emission factor for NOx (Uncontrolled) 100 lb/MMCF

Pursuant to FESOP renewal permit 049-14194-00022 issued December 11, 2001 condition D.1.1 the gas pipeline heater (GC-10) shall not operate.

Emission factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2 & 1.4-3 (7/98) *External Combustion Sources--Small Boilers <100 MMBtu/hr*

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

**Methodology**

Potential Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu

Potential to Emit (tons/yr) = Potential Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

**Appendix A: Emission Calculations**  
**HAPs Emissions from Natural Gas Combustion**  
**MM BTU/HR <100**  
**Pipeline Gas Heater (GC-10)**

**Company Name:** NIPSCO - Grass Creek Gas Storage Field  
**Address City IN Zip:** 900 South 1100 West, Fulton County 46975  
**FESOP Renewal:** F049-22765-00022  
**Reviewer:** ERG/BL  
**Date:** September 3, 2007

HAPs - Organics

Emission Factor (lb/MMCF)	Benzene 2.10E-03	Dichlorobenzene 1.20E-03	Formaldehyde 7.50E-02	Hexane 1.80E+00	Toluene 3.40E-03
Potential to Emit (tons/yr)	1.80E-04	1.03E-04	6.44E-03	1.55E-01	2.92E-04

HAPs - Metals

Emission Factor (lb/MMCF)	Lead 5.00E-04	Cadmium 1.10E-03	Chromium 1.40E-03	Manganese 3.80E-04	Nickel 2.10E-03
Potential to Emit (tons/yr)	4.29E-05	9.45E-05	1.20E-04	3.26E-05	1.80E-04

Methodology is the same as page 7.

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

**Appendix A: Emission Calculations  
Natural Gas Fired Reciprocating Engine  
Emergency Generator (GC-1)**

**Company Name:** NIPSCO - Grass Creek Gas Storage Field  
**Address:** 900 South 1100 West, Fulton County 46975  
**FESOP Renewal:** F049-22765-00022  
**Reviewer:** ERG/BL  
**Date:** September 3, 2007

Heat Input Capacity  
MMBtu/hr  
1.86

Total Potential Throughput  
MMCF/yr  
0.912

Pollutant

	PM*	PM10	SO <sub>2</sub>	NOx	VOC	CO
Emission Factor (lb/MMCF)	19.8	9.7	0.60	2,254	30	3794
Potential to Emit (tons/yr)	0.01	0.00	2.73E-04	1.03	0.01	1.73

HAPs - Organics

	Acetaldehyde	Acrolein	Benzene	Formaldehyde	1,3-Butadiene
Emission Factor (lb/MMSCF)	2.85E+00	2.68E+00	1.61E+00	2.09E+01	6.76E-01
Potential to Emit (tons/yr)	1.30E-03	1.22E-03	7.35E-04	9.53E-03	3.08E-04

\*PM emission factor is filterable and condensable PM combined.

*Worst case annual operating hours are 500 hours for emergency generators.*

GC-1 Emission factors are from AP-42 Tbl 3.2-3 (7/00) 4-stroke Rich

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

**Methodology**

Potential Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) x 500 hrs/yr x 1 MMCF/1,020 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

**Appendix A: Emission Calculations  
Natural Gas Fired Reciprocating Engine  
Compressor (GC-6)**

**Company Name:** NIPSCO - Grass Creek Gas Storage Field  
**Address:** 900 South 1100 West, Fulton County 46975  
**FESOP Renewal:** F049-22765-00022  
**Reviewer:** ERG/BL  
**Date:** September 3, 2007

Heat Input Capacity  
MMBtu/hr  
14.0

Potential Throughput  
MMCF/yr  
120

Criteria Pollutant

Emission Factor (lb/MMCF)	PM* 10.2	PM10 0.1	SO <sub>2</sub> 0.60	NO <sub>x</sub> 4,162	VOC 120	CO 323
Potential to Emit (tons/yr)	0.61	0.00	0.04	250	7.24	19.4

HAPs - Organics

Emission Factor (lb/MMSCF)	Formaldehyde 53.856	Acetaldehyde 8.53E+00	Acrolein 5.24E+00	n-Hexane 1.12E+00	Benzene 4.49E-01
Potential to Emit (tons/yr)	3.24E+00	5.13E-01	3.15E-01	6.75E-02	2.70E-02

\*PM emission factor is filterable and condensable PM combined.

GC-6 Emission factors are from AP-42 Tbl 3.2-2 (7/00) 4-stroke Lean  
 All emission factors are based on normal firing.  
 MMBtu = 1,000,000 Btu  
 MMCF = 1,000,000 Cubic Feet of Gas

**Methodology**

Potential Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu  
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

**Appendix A: Emission Calculations**  
**Natural Gas Fired Reciprocating Engine**  
**Compressor (GC-6) and Emergency Generator (GC-1) - Limited**

**Company Name:** NIPSCO - Grass Creek Gas Storage Field  
**Address:** 900 South 1100 West, Fulton County 46975  
**FESOP Renewal:** F049-22765-00022  
**Reviewer:** ERG/BL  
**Date:** September 3, 2007

Limited Potential Throughput

	47.0	MMCF/yr
Compressor (GC-6)	46.1	(MMCF/yr)
Em. Generator (GC-1)	0.91	(MMCF/yr)

Criteria Pollutant

	PM*	PM10*	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>
Compressor (GC-6) Emission Factor (lb/MMCF)	10.2	0.08	0.60	120	323	4,162
Em. Generator (GC-1) Emission Factor (lb/MMCF)	19.8	9.69	0.60	30.2	3,794	2,254
Compressor (GC-6) FESOP Potential to Emit (tons/yr)	0.23	0.002	0.014	2.77	7.45	95.9
Em Gen (GC-1) FESOP Potential to Emit (tons/yr)	0.01	4.42E-03	2.73E-04	0.01	1.73	1.03
FESOP Potential to Emit (tons/yr)	0.24	0.01	0.01	2.79	9.18	96.9

HAPs - Organics

	Formaldehyde	Acetaldehyde	Acrolein	n-Hexane	Benzene
Compressor (GC-6) Emission Factor (lb/MMCF)	53.9	8.53	5.24	1.12	0.45
Em. Generator (GC-1) Emission Factor (lb/MMCF)	20.9	2.85	2.68	-	1.61
Compressor (GC-6) FESOP Potential to Emit (tons/yr)	1.24	0.20	0.12	0.03	0.01
Em Gen (GC-1) FESOP Potential to Emit (tons/yr)	0.01	1.30E-03	1.22E-03	5.12E-04	7.35E-04
FESOP Potential to Emit (tons/yr)	1.27	0.20	0.12	0.03	0.01

\*PM emission factor is filterable and condensable PM combined.

GC-6 Emission factors are from AP-42 Tbl 3.2-2 (7/00) *4-stroke Lean*

GC-1 Emission factors are from AP-42 Tbl 3.2-3 (7/00) *4-stroke Rich*

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

**Methodology**

Potential to Emit (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

**Appendix A: Emission Calculations  
HAP Storage Tanks  
Natural Gas Dehydrators (GC-12 and GC-13)**

**Company Name:** NIPSCO - Grass Creek Gas Storage Field  
**Address:** 900 South 1100 West, Fulton County 46975  
**FESOP Renewal:** F049-22765-00022  
**Reviewer:** ERG/BL  
**Date:** September 3, 2007

	Tank Size (gallons)	Net Throughput (gallons/yr)	Methyl Alcohol (lbs/yr)	Total VOC (tons/yr)	Ethylene Glycol (lbs/yr)	Total HAPs (tons/yr)
Two Methanol Tanks (GC-15)	10,000	600	103	0.05	-	0.05
Glycol Tanks (GC-11 and GC-5)	2,056	106,912	-	-	0.10	5.00E-05
Potential to Emit (tons/yr)	-	-	103	0.05	0.10	0.05

Applicant provided input values and resulting emission from U.S. EPA Tanks 2.0, a software program for estimating VOC and HAP emissions from fixed- and floating-roof storage tanks. This information was originally provided in an additional information request dated 10/9/96 for the plants initial FESOP Permit No. 049-5540-00022 issued 12/12/1996.