



Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant
DATE: May 18, 2005
RE: DTE Energy Technologies / 095-21028-00123
FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision – Approval

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 326 IAC 2, this approval was effective immediately upon submittal of the application.

If you wish to challenge this decision, IC 4-21.5-3-7 requires 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, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days from 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-AM.dot 1/10/05



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

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Mr. Larry George
Sr. Product Engineer
4640 Dr. Martin Luther King Blvd.
Anderson, Indiana 46013

May 18, 2005

Dear Mr. George:

Re: Exempt Construction and Operation Status,
095-21028-00123

The application from DTE Energy Technologies, Inc, received on April 8, 2005, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the following electric generation operation, to be located at 2902 Enterprise Dr., Anderson, IN 46013, Indiana, is classified as exempt from air pollution permit requirements:

- (a) Two (2) natural gas fired 85 Kw electric generators, identified as #86 and #89, each with a heat input capacity of 0.987 million British Thermal Units per hour (MMBtu/hr), and exhausting to atmosphere.

The following conditions shall be applicable:

- (1) Pursuant to 326 IAC 3-6 (Performance Testing)
 - (a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. 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
Indianapolis, Indiana 46204

and

Anderson Office of Air Management
P.O. Box 2100
120 East 8th Street
Anderson, Indiana 46011

no later than thirty-five (35) days prior to the intended test date.

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual date.
 - (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ (and local agency) not later than forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAQ, (and local agency), 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.
- (2) 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:
- (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 in a 6-hour period 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.

This exemption is the first air approval issued to this source.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Original signed by
Kathy Moore, Section Chief
Permits Branch
Office of Air Quality

JLA

cc: File – Madison County
Madison County Health Department
Air Compliance Section Inspector – Jennifer Schick
Compliance Data Section
Anderson Office of Air Management
Mr. Terry Pahls, Director of Anderson Operations
DTE Energy Technologies, Inc.
2902 Enterprise Dr.
Anderson, IN 46013

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

Technical Support Document (TSD) for a New Source Construction and Exemption

Source Background and Description

Authorized Individual:	Larry George, Sr. Production Engineer
Source Name:	DTE Energy Technologies
Source Location:	2902 Enterprise Dr., Anderson, IN 46013
Mailing Address:	4640 Dr. Martin Luther King Jr. Blvd, Anderson, IN 46013
County:	Madison County
SIC Code:	3621
Operation Permit No.:	095-21028-00123
Permit Reviewer:	Jenny Acker

The Office of Air Quality (OAQ) has reviewed an application from DTE Energy Technologies, relating to the construction and operation of an electrical energy generating facility.

Source Description

This electric generating source will provide prime electrical power to the Flagship Enterprise Center located at 2902 Enterprise Dr, Anderson IN. The Flagship Enterprise Center is a multi-functional building whose purpose is to serve as a new technology incubator for Madison County. The building provides space for 10 to 20 small companies to operate research and development laboratories, and classroom space for IUPUI and Anderson University.

New Permitted Emission Units and Pollution Control Equipment

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

- (a) Two (2) natural gas fired 85 Kw electric generators, identified as #86 and #89, each with a heat input capacity of 0.987 million British Thermal Units per hour (MMBtu/hr), and exhausting to atmosphere.

Unpermitted Emission Units and Pollution Control Equipment

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

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the construction and operation 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.

A complete application for the purposes of this review was received on April 8, 2005.

Emission Calculations

See Appendix A, pages 1 and 2, of this document for detailed emission calculations

Potential to Emit of the Source Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential to Emit (tons/yr)
PM	0.09
PM-10	Neg.
SO ₂	0.01
VOC	1.02
CO	2.74
NO _x	1.11
Total HAPs	0.62

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all regulated pollutants are less than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-1.1-3. An Exemption will be issued.

County Attainment Status

The source is located in Madison County.

Pollutant	Status (attainment, maintenance attainment, or unclassifiable; severe, moderate, or marginal nonattainment)
PM-2.5	Attainment
PM-10	Attainment
SO ₂	Attainment
NO ₂	Attainment
1-hour Ozone	Attainment
8-Hour Ozone	Nonattainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC emissions and NOx emissions

are considered when evaluating the rule applicability relating to the ozone standards. Madison County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.

- (b) Madison County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Source Status

New Source PSD 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	0.09
PM-10	Neg.
SO ₂	0.01
VOC	1.02
CO	2.74
NO _x	1.11
Single HAP	Neg.
Combination HAPs	0.62

- (a) This new source is **not** a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater, no nonattainment 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. Therefore, pursuant to 326 IAC 2-2 and 2-3, the PSD and Emission Offset requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons per year.

This is the first air approval issued to this source.

Federal Rule Applicability

NSPS

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) applicable to this source.

NESHAPs

- (a) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14, 20 and 40 CFR Part 61, 63) applicable to this source.

State Rule Applicability – Entire Source

326 IAC 5-1 (Opacity Limitations)

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 the 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.

Testing Requirements

326 IAC 2-1.1-11

Within one hundred and eighty (180) days after initial startup, the Permittee shall conduct a performance test to verify the NO_x emission rate for one (1) electric generator, utilizing methods as approved by the commissioner. This test shall be repeated at least once every five years from the date of the most recent valid compliance demonstration.

Conclusion

The construction and operation of this electric energy generating facility shall be subject to the conditions of the Exemption Approval 095-21028-00123.

Appendix A: Emission Calculations
Internal Combustion Engine - Natural Gas
Reciprocating

Company Name: DTE Energy Technologies
Address City IN Zip: 2902 Enterprise Dr., Anderson, IN 46013
Permit Number: 095-21028
Plt ID: 095-00123
Reviewer: Jenny Acker
Date: April 21, 2005

Unit	Heat Input Capacity MM Btu/hr	Potential Throughput MM scf/hr	Breaking Horsepower (Bhp)
#86	0.987	920.00	141.00
#89	0.987	920.00	141.00

	Pollutant					
	⁽¹⁾ PM	⁽¹⁾ PM10	⁽¹⁾ SO2	⁽²⁾ NOx	⁽¹⁾ VOC	⁽¹⁾ CO
AP-42 Emission Factor (lb/MMBtu)	9.90E-03	7.71E-05	5.88E-04		0.12	0.32
Manufacturer Provided Specifications (lb/MW-hr)				0.44		
Potential Emission in tons/yr						
#86	0.04	3.33E-04	2.54E-03	0.56	0.51	1.37
#89	0.04	3.33E-04	2.54E-03	0.56	0.51	1.37
PTE	0.09	Neg.	0.01	1.11	1.02	2.74

Methodology

MM Btu = 0.293 MM W-hr

Bhp = Heat Input Capacity (MM Btu/hr) / 0.007 (MM Btu/hp-hr)

Bhp = 0.987 (MM Btu/hr) / 0.007 (MM Btu/hp-hr)

AP-42 Emission Factors (Supplement F 10/2000), Table 3.2-2

⁽¹⁾ Emission (tons/yr) = [Heat input rate (MMBtu/hr) x Emission Factor (lb/MMBtu)] * 8760 hr/yr / (2,000 lb/ton)

⁽²⁾ Emission (tons/yr) = [Heat input rate (MM Btu/hr) x 0.293 MM W-hr/MM Btu * Emission Factor (lb/KW-hr)] * 8760 hr/yr / (2,000 lb/ton)

**Appendix A: Emission Calculations
Internal Combustion Engine - Natural Gas
Reciprocating**

Company Name: DTE Energy Technologies
Address City IN Zip: 2902 Enterprise Dr., Anderson, IN 46013
Permit Number: 095-21028
Plt ID: 095-00123
Reviewer: Jenny Acker
Date: April 21, 2005

Unit	Heat Input Capacity (MM Btu/hr)	Rating (Hp)
#86	0.99	141.00
#89	0.99	141.00

HAPs Emissions - Uncontrolled			
Pollutant	Emission Factor (lbs/MMBtu)	Emissions (lbs/hr)	Emissions (tons/year)
1,1,2,2-Tetrachlorethane	4.00E-05	7.90E-05	3.46E-04
1,1,2-Trichloroethane	3.18E-05	6.28E-05	2.75E-04
1,1-Dichloroethane	2.36E-05	4.66E-05	2.04E-04
1,2,4-Trimethylbenzene	1.43E-05	2.82E-05	1.24E-04
1,2-Dichloroethane	2.36E-05	4.66E-05	2.04E-04
1,2-Dichloropropane	2.69E-05	5.31E-05	2.33E-04
1,3-Butadiene	2.67E-04	5.27E-04	2.31E-03
1,3-Dichloropropene	2.64E-05	5.21E-05	2.28E-04
2,2,4-Trimethylpentane	2.50E-04	4.94E-04	2.16E-03
Acetaldehyde	8.36E-03	1.65E-02	7.23E-02
Acrolein	5.14E-03	1.01E-02	4.44E-02
Benzene	4.40E-04	8.69E-04	3.80E-03
Biphenyl	2.12E-04	4.18E-04	1.83E-03
Carbon Tetrachloride	3.97E-05	7.84E-05	3.43E-04
Chlorobenzene	3.04E-05	6.00E-05	2.63E-04
Chloroethane	1.87E-06	3.69E-06	1.62E-05
Chloroform	2.85E-05	5.63E-05	2.46E-04
Ethylbenzene	3.97E-05	7.84E-05	3.43E-04
Ethylene Dibromide	4.43E-05	8.74E-05	3.83E-04
Formaldehyde	5.28E-02	1.04E-01	4.57E-01
Methanol	2.50E-03	4.94E-03	2.16E-02
Methylene Chloride	2.00E-05	3.95E-05	1.73E-04
n-Hexane	1.11E-03	2.19E-03	9.60E-03
Naphthalene	7.44E-05	1.47E-04	6.43E-04
Phenol	2.40E-05	4.74E-05	2.08E-04
Styrene	2.36E-05	4.66E-05	2.04E-04
Toluene	4.08E-04	8.05E-04	3.53E-03
Vinyl Chloride	1.49E-05	2.94E-05	1.29E-04
Xylene	1.84E-04	3.63E-04	1.59E-03
Total HAP Emissions		0.14	0.62

Methodology

Emission Factors are from AP-42, Chapter 3.2, Table 3.2-2, SCC #2-02-0002-54

Potential Emissions (lbs/hr) = Emission Factor(lbs/MM Btu) * Heat Input Capacity(MM Btu/hp)

Potential Emissions (tpy) = Potential Emissions(lbs/hr) * 8760(hr/yr) / 2000(lbs/ton)