



TO: Interested Parties / Applicant

RE: Allison Transmission Division of General Motors Corporation / MSM097-23010-00310

FROM: Felicia A. Robinson
Administrator

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 13-17-3-4 and 326 IAC 2, this approval is effective immediately, unless a petition for stay of effectiveness is filed and granted, 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 4-21.5-3-7 and IC 13-15-7-3 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 Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within fifteen (15) calendar days of the receipt 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 Indianapolis Office of Environmental Services, Air Permits at (317) 327-2234.

Enclosures



Air Quality Hotline: 317-327-4AIR | knozone.com

Department of Public Works
Office of Environmental Services

2700 Belmont Avenue
Indianapolis, IN 46221

317-327-2234
Fax 327-2274
TDD 327-5186
indygov.org/dpw



June 14, 2006

Mr. Charles Knuckles
Allison Transmission Division of General Motors Corporation
4700 West 10th Street (M-29)
Indianapolis, Indiana 46222

CERTIFIED MAIL:

Re: **097-23010-00310**
First Minor Source Modification to:
Part 70 Operating Permit No.: **T097-6898-00310**

Dear Mr. Knuckles:

Allison Transmission Division of General Motors Corporation was issued Part 70 Operating Permit No. T097-6898-00310 on June 21, 2004 for a transmission manufacturing and testing plant. An application to modify the source was received on April 21, 2006. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

One (1) Nebraska natural gas fired rental boiler, model number NOX-2A-67, identified as Emission Unit ID BLR 6, to be installed in 2006, with a maximum heat input capacity of 96.97 million Btu per hour. Emission Unit ID BLR 6 is equipped with low-NO_x burners and flue gas recirculation.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ) and the City of Indianapolis Office of Environmental Services (OES).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.
6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.



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The source may begin construction when the source modification has been issued. The source must comply with the requirements of 326 IAC 2-7-10.5(l)(2) and 326 IAC 2-7-12 before operation of any of the proposed emission units can begin.

This decision is subject to the Indiana Administrative Orders and Procedures Act – IC 4-21.5-3-5. If you have any questions on this matter, please contact Mr. Mark Caraher, City of Indianapolis, Office of Environmental Services, 2700 South Belmont, Indianapolis, Indiana, 46221, or call (317) 327-2272.

Sincerely,

ORIGINAL SIGNED BY:

Felicia A. Robinson
Administrator
Office of Environmental Services

Attachments:

MBC

cc: Files
Marion County Health Department
Matt Mosier – OES Air Compliance Section
Mindy Hahn – IDEM, OAQ



PART 70 MINOR SOURCE MODIFICATION
INDIANA DEPARTMENT of ENVIRONMENTAL MANAGEMENT
OFFICE of AIR QUALITY
 and
CITY of INDIANAPOLIS
OFFICE of ENVIRONMENTAL SERVICES

Allison Transmission Division of General Motors Corporation
4700 West 10th Street
Indianapolis, Indiana 46222

(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. Noncompliance with any provisions of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. 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 2-7 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 and the Code of Indianapolis and Marion County, Chapter 511. This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to IAC 2-7-10.5, applicable to those conditions.

Operation Permit No.: T097-6898-00310	
Issued by: Original signed by: Janet G. McCabe, Assistant Commissioner Office of Air Quality Original signed by: John B. Chavez, Administrator Office of Environmental Services	Issuance Date: June 21, 2004 Expiration Date: June 21, 2009
First Significant Permit Modification: 097-19373-00310. Issued March 7, 2006.	
First Minor Source Modification: 097-23010-00310 Conditions Affected: A.1; A.3; Section D.10	
Issued by: ORIGINAL SIGNED BY: Felicia A. Robinson Administrator, Indianapolis OES	Issuance Date: June 14, 2006



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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) and the Indianapolis Office of Environmental Services (OES). The information describing the source contained in conditions A.1, A.3 and 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 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a transmission manufacturing and testing plant under a Standard Industrial Classification Code (SIC) of 3714 (establishments primarily engaged in manufacturing motor vehicle power transmission equipment).

Responsible Official:	General Director of Operations
Source Address:	4700 West 10 th Street, Indianapolis, Indiana 46222
Mailing Address:	4700 West 10 th Street (M-29), Indianapolis, Indiana, 46222
SIC Code:	3714
County Location:	Marion
County Status:	Nonattainment for ozone under the 8-hour standard Nonattainment for PM2.5 Attainment for all other criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

A.2 Part 70 Source Definition [326 IAC 2-7-1(22)]

This transmission manufacturing and testing plant consists of three (3) plants:

- (a) Plant 3 is located at 4700 West 10th Street, Indianapolis, IN 46254;
- (b) Plants 12 and 14 are both located at 901 Grande Avenue, Indianapolis, IN 46254

Since the three (3) plants are located on contiguous or adjacent properties, belong to the same industrial grouping and are under common control of the same entity, they will be considered one (1) source, effective from the date of issuance of this Part 70 permit.

This transmission manufacturing and testing operation consists of a source with an on-site contractor, both listed as follows:

- (a) Plants 3, 12 and 14, the primary operation and considered one (1) source, located at 4700 West 10th Street, Indianapolis, IN 46254 and 901 Grande Avenue, Indianapolis, IN 46254, respectively; and
- (b) Environmental Corporate Remediation Company (ENCORE), the on-site remediation systems contractor supporting operation, located at 4700 West 10th Street, Indianapolis, IN 46254.

IDEM, OAQ and OES have determined that Plant 3, 12 and 14 and the remedial activities operated by ENCORE, the on-site contractor, are each under the common control of the General Motors Corporation, and are, therefore, considered one source. Therefore, the term "source" in the Part 70 documents refers to both the Allison Transmission Division of General Motors and Environmental Corporate Remediation Company, Inc. (herein known as ENCORE) as one source.

One combined Part 70 permit will be issued to Allison Transmission Division of General Motors and Environmental Corporate Remediation Company (ENCORE) for the combined source.

A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]
 [326 IAC 2-7-5(15)]

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

- (a) One (1) Union Iron Works Boiler, identified as emission unit BLR 1, capable of combusting #4 reclaimed oil or #2 fuel oil, with a maximum capacity of thirty six (36) million British thermal units (MMBtu) Btu per hour, exhausting out one stack identified as stack ID# 3109 and constructed in 1940.
- (b) One (1) Union Iron Works Boiler, identified as emission unit BLR 2, capable of combusting #4 reclaimed oil, #2 fuel oil, and natural gas, with a maximum capacity of thirty six (36) million British thermal units (MMBtu) Btu per hour, exhausting out one stack identified as stack ID# 3110 and constructed in 1940.
- (c) One (1) Union Iron Works Boiler, identified as emission unit BLR 3, capable of combusting #4 reclaimed oil or #2 fuel oil, with a maximum capacity of forty eight (48) million British thermal units (MMBtu) Btu per hour, exhausting out one stack identified as stack ID# 3112 and constructed in 1942.
- (d) One (1) Union Iron Works Boiler, identified as emission unit BLR 4, capable of combusting #4 reclaimed oil, #2 fuel oil, and natural gas, with a maximum capacity of seventy two (72) million British thermal units (MMBtu) Btu per hour, exhausting out one stack identified as stack ID# 3107 and constructed in 1953.
- (e) One (1) Union Iron Works Boiler, identified as emission unit BLR 5, capable of combusting #4 reclaimed oil, #2 fuel oil, and natural gas, with a maximum capacity of ninety six (96) million British thermal units (MMBtu) Btu per hour, exhausting out one stack identified as stack ID# 3108 and constructed in 1969.
- (f) Emission Unit ETC consists of the following twenty five (25) engineering development transmission test cells; 701, 704, 705, 706, 707, 709, 710, 711, 712, 32N, 32S, 38N, 39N, 39S, 40N, 40S, 41N, 41S, 48N, 48S, 49N, 49S, 50, 51N and 51S. The emissions from each test cell 701, 704, 705, 706, 707, 709, 710, 711, 712, 32N, 32S, 38N, 39N, 39S, 40N, 40S, 41N, 41S, 48N, 48S, 49N, 49S, 50, 51N and 51S are exhausted out Stack/Vent PTE 057, PTE 065, PTE 067 PTE 069, PTE 071, PTE 075, PTE 077, PTE 079, PTE 080, PTE 008, PTE 006, PTE 011, PTE 018, PTE 020, PTE 013, PTE 014, PTE 023, PTE 021, PTE 040, PTE 041, PTE 086, PTE 087, PTE 093, PTE 084, and PTE 082, respectively. All test cells were constructed prior to 1977. Test cell 39N was modified during the 1980's. The table below lists the fuel type and engine type that each cell is capable of accommodating based on the physical characteristics of each cell.

Test Cell ID	Fuel Type	Engine Type	Estimated Maximum Engine Size in Horsepower
701	Diesel	Reciprocating or Gas Turbine	4000
704	Diesel	Reciprocating	2400
705	Diesel	Reciprocating or Gas Turbine	2400 for reciprocating; 4000 for gas turbine

Test Cell ID	Fuel Type	Engine Type	Estimated Maximum Engine Size in Horsepower
706	Diesel	Reciprocating	4000
707	Diesel	Reciprocating	2400
709	Diesel	Reciprocating	2400
710	Diesel	Reciprocating	1500
711	Diesel	Reciprocating	2400
712	Diesel	Reciprocating	1500
32N	Diesel	Reciprocating	2400
32S	Diesel	Reciprocating	1500
38N	Diesel	Reciprocating	4000
39N	Diesel	Reciprocating	2400
39S	Diesel	Reciprocating	1500
40N	Diesel	Reciprocating	1500
40S	Diesel	Reciprocating	1500
41N	Diesel	Reciprocating	1200
41S	Diesel	Reciprocating	1200
48N	Diesel	Reciprocating	1200
48S	Diesel	Reciprocating	1200
49N	Diesel	Reciprocating	1500
49S	Diesel	Reciprocating	1500
50	Diesel	Reciprocating	2400
51N	Diesel	Reciprocating	1200
51S	Gasoline or Diesel	Reciprocating	700

- (g) Emission unit DTC consists of the following four (4) transmission reliability test cells, TC-107, TC-109, TC-111 and TC-112. The emissions from test cells TC-107, TC-109, TC-111 and TC-112 are exhausted out stacks PTE045, PTE043, PTE049 and PTE050, respectively. All test cells were constructed in 1985. The following engines can be used in any one of the individual test cells mentioned above:

Test Cell ID	Fuel Type	Engine Type	Estimated Maximum Engine Size in Horsepower
TC-107	Diesel	Reciprocating	1500
TC-109	Diesel	Reciprocating	1500
TC-111	Diesel	Reciprocating	1500

Test Cell ID	Fuel Type	Engine Type	Estimated Maximum Engine Size in Horsepower
TC-112	Diesel	Reciprocating	1500

- (h) Emission unit PTS12 consists of the following two (2) transmission test stands, identified as test stand C-32 and C-33. Test stands C-32 and C-33 were constructed in 1976 and 1981 respectively. The emissions from test stands C-32 and C-33 are exhausted out stacks 12060 and 12058, respectively. The following engines can be used in any one of the individual test stands mentioned above:

Test Cell ID	Fuel Type	Engine Type	Estimated Maximum Engine Size in Horsepower
C-32	Diesel	Reciprocating	600
C-33	Diesel	Reciprocating	600

- (i) Emission unit PTS14 consists of the following five (5) transmission test stands, identified as test stand O-1, O-2, O-24, O-25 and O-31. Test stands O-1, O-2, O-24, O-25 and O-31 were constructed in 1978, 1979, 1986, 1986, and 1984 respectively. The emissions from test stands O-1, O-2, O-24, O-25 and O-31 are exhausted out stacks 14041, 14038, 14024, 14023, and 14045, respectively. The following engines can be used in any one of the individual test stands mentioned above:

Test Cell ID	Fuel Type	Engine Type	Estimated Maximum Engine Size in Horsepower
O-1	Diesel	Reciprocating	2400
O-2	Diesel	Reciprocating	2400
O-24	Diesel	Reciprocating	600
O-25	Diesel	Reciprocating	600
O-31	Diesel	Reciprocating	2400

- (j) Cold solvent degreasing using mineral spirits identified as emission unit CSD. Emissions are vented inside the building. Each degreasing unit was installed prior to 1977.
- (k) Transmission Test Cell 702 identified as Emission Unit ID ETC702 consisting of one (1) reciprocating engine firing diesel fuel at 8.55 million Btu per hour and exhausting at Stack/Vent ID PTE062. This emission unit can accommodate engines of greater than 600 horsepower. Constructed in 2002.
- (l) One (1) Nebraska natural gas fired rental boiler, model number NOX-2A-67, identified as Emission Unit ID BLR 6, to be installed in 2006, with maximum heat input capacity of 96.97 million Btu per hour. Emission Unit ID BLR 6 is equipped with low-NO_x burners and flue gas recirculation.

A.4 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, 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) Btu per hour. [326 IAC 6.5-1-2]
- (b) Emergency diesel generators not exceeding 1600 horsepower.[326 IAC 6.5-1-2(a)]
- (c) Emergency Stationary fire pumps.[326 IAC 6.5-1-2(a)]
- (d) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. [326 IAC 6.5-1-2(a)]
 - (1) Shot Blast controlled with fabric filters. [326 IAC 6.5-1-2(a)]
- (e) Heat Treating. [326 IAC 6.5-1-2(a)]
- (f) Activities or categories of activities with individual HAP emissions not previously identified. Any unit emitting greater than 1 pound per day but less than 5 pounds per day or 1 ton per year of a single HAP.
 - (1) Production welding - manganese [326 IAC 6.5-1-2(a)]
- (g) One (1) soil and groundwater remediation system, identified as Emission Unit ENCORE, installed in 2003, consisting of [326 IAC 2-4.1]:
 - (1) Soil vapor extraction (SVE) system, including miscellaneous piping and:
 - (A) seventeen (17) soil vapor extraction wells;
 - (B) one (1) 90 gallon knock-out tank, and
 - (C) one (1) 30 -horsepower blower rated at 750 standard cubic feet per minute (scfm), with emissions exhausting to one (1) stack identified as SVE vent.
 - (2) Dense non-aqueous phase liquid (DNAPL)/groundwater recovery system, including miscellaneous piping, pneumatic pumps and:
 - (A) four (4) recovery wells; and
 - (B) one (1) 1000 gallon DNAPL/water storage tank, with emissions exhausting to one (1) stack identified as SVE vent.
- (h) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]

A.5 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection

Allison Transmission Division
Indianapolis, Indiana
Permit Reviewer: MBC

First Minor Source Modification
097-23010-00310
Modified by: M. Caraher

Page 7 of 12
OP No. T097-6898-00310

Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION D.10

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (l) One (1) Nebraska natural gas fired rental boiler, model number NOX-2A-67, identified as Emission Unit ID BLR 6, to be installed in 2006, with maximum heat input capacity of 96.97 million Btu per hour. Emission Unit ID BLR 6 is equipped with low-NO_x burners and flue gas recirculation.

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

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.10.1 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for Emission Unit ID BLR 6 and any control devices.

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

D.10.2 General Provisions Relating to NSPS [40 CFR Part 60, Subpart A][326 IAC 12-1]

- (a) The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to Emission Unit ID BLR 6 as described in this section except when otherwise specified in 40 CFR Part 60, Subpart GG, or 40 CFR Part 60, Subpart Dc.

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

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, IN 46204-2251

and

City of Indianapolis
Office of Environmental Services
Air Quality Management Section
2700 South Belmont Avenue
Indianapolis Indiana 46221-2097

D.10.3 Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units [40 CFR 60.40c, Subpart Dc] [326 IAC 12] [40 CFR 60.24(f)(3)]

Pursuant 40 CFR 60.40c, Subpart Dc (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units), the one (1) Nebraska natural gas fired rental boiler, identified as Emission Unit BLR 6, shall comply with the following:

§ 60.40c Applicability and delegation of authority.

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

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

(c) Steam generating units which meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide (SO₂) or particulate matter (PM) emission limits, performance testing requirements, or monitoring requirements under this subpart (§§60.42c, 60.43c, 60.44c, 60.45c, 60.46c, or 60.47c) during periods of combustion research, as defined in §60.41c.

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

(e) Heat recovery steam generators that are associated with combined cycle gas turbines and meet the applicability requirements of subpart KKKK of this part are not subject to this subpart. This subpart will continue to apply to all other heat recovery steam generators that are capable of combusting more than or equal to 2.9 MW (10 MMBtu/h) heat input of fossil fuel but less than or equal to 29 MW (100 MMBtu/h) heat input of fossil fuel. If the heat recovery steam generator is subject to this subpart, only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The gas turbine emissions are subject to subpart GG or KKKK, as applicable, of this part).

(f) Any facility covered by subpart AAAA of this part is not covered by this subpart.

(g) Any facility covered by an EPA approved State or Federal section 111(d)/129 plan implementing subpart BBBB of this part is not covered by this subpart.

§ 60.41c Definitions.

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

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

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

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

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

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

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

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

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

Dry flue gas desulfurization technology means a sulfur dioxide (SO₂) control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline reagents used in dry flue gas desulfurization systems include, but are not limited to, lime and sodium compounds.

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

Emerging technology means any SO₂ control system that is not defined as a conventional technology under this section, and for which the owner or operator of the affected facility has received approval from the Administrator to operate as an emerging technology under §60.48c(a)(4).

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

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

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

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

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

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

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

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

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

Potential sulfur dioxide emission rate means the theoretical SO₂ emissions (nanograms per joule [ng/J], or pounds per million Btu [lb/million Btu] heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems.

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

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

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

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

Wet flue gas desulfurization technology means an SO₂ control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a liquid material. This definition includes devices where the liquid material is subsequently converted to another form. Alkaline reagents used in wet flue gas desulfurization systems include, but are not limited to, lime, limestone, and sodium compounds.

Wet scrubber system means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of particulate matter (PM) or SO₂.

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

Sec. 60.43c Standard for particulate matter.

(e)(1) On or after the date on which the initial performance test is completed or is required to be completed

under Sec. 60.8, whichever date comes first, no owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts coal, oil, gas, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain particulate matter emissions in excess of 13 ng/J (0.030 lb/MMBtu) heat input, except as provided in paragraphs (e)(2) and (e)(3) of this section. Affected facilities subject to this paragraph, are also subject to the requirements of paragraphs (c) and (d) of this section.

Sec. 60.45c Compliance and performance test methods and procedures for particulate matter.

(a) The owner or operator of an affected facility subject to the PM and/or opacity standards under Sec. 60.43c shall conduct an initial performance test as required under Sec. 60.8, and shall conduct subsequent performance tests as requested by the Administrator, to determine compliance with the standards using the following procedures and reference methods, except as specified in paragraph (c) and (d) of this section.

(c) Units that burn only oil containing no more than 0.5 weight percent sulfur or liquid or gaseous fuels with potential sulfur dioxide emission rates of 230 ng/J (0.54 lb/MMBtu) heat input or less are not required to conduct emissions monitoring if they maintain fuel supplier certifications of the sulfur content of the fuels burned.

Sec. 60.47c Emission monitoring for particulate matter.

(c) Units that burn only oil that contains no more than 0.5 weight percent sulfur or liquid or gaseous fuels with potential sulfur dioxide emission rates of 230 ng/J (0.54 lb/MMBtu) heat input or less are not required to conduct PM emissions monitoring if they maintain fuel supplier certifications of the sulfur content of the fuels burned.

§ 60.48c Reporting and recordkeeping requirements.

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

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

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

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

(4) Notification if an emerging technology will be used for controlling SO₂ emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of §60.42c(a) or (b)(1), unless and until this determination is made by the Administrator.

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

**Indiana Department of Environmental Management
Office of Air Quality
and
Indianapolis Office of Environmental Services**

**Technical Support Document (TSD) for a Minor Source Modification and
Significant Permit Modification to a Part 70 Operating Permit**

Source Description and Location

Source Name:	Allison Transmission Division of General Motors Corporation
Source Location:	4700 West 10 th Street, Indianapolis, Indiana 46222
County:	Marion
SIC Code:	3714
Operating Permit Renewal No.:	097-6898-00310
Operating Permit Issuance Date:	June 21, 2004
Minor Modification No.:	097-23010-00310
Significant Permit Modification No.:	097-23037-00310
Permit Reviewer:	M. Caraher

Existing Approvals

The source is operating under the following approvals:

- (a) Part 70 Operating Permit, 097-6898-00310, issued by IDEM, OAQ and the City of Indianapolis OES on June 21, 2004; and
- (b) First Significant Permit Modification to the Part 70 Operating Permit, 097-19373-00310, issued by the City of Indianapolis OES on March 7, 2006.

County Attainment Status

The source is located in Marion County.

Pollutant	Status
PM-2.5	nonattainment
PM-10	attainment
SO ₂	maintenance attainment
NO ₂	attainment
8-hour Ozone	basic nonattainment
1-hour Ozone	maintenance attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and nitrogen oxides (NO_x) 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 NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Marion 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) Marion County has been classified as nonattainment for PM_{2.5} in 70 FR 943 dated

January 5, 2005. Until U.S. EPA adopts specific New Source Review rules for PM_{2.5} emissions, it has directed states to regulate PM-10 emissions as a surrogate for PM_{2.5} emissions pursuant to the requirements of Emission Offset, 326 IAC 2-3.

- (c) Marion County has been classified as attainment or unclassifiable for PM-10, SO₂, CO and Lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (d) Since this source contains "fossil fuel boilers (or combinations thereof) totaling more than two hundred fifty (250) million Btu per hour heat input," it is considered one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).
- (e) Fugitive Emissions
 This type of operation is one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3 (specifically, fossil fuel boilers (or combinations thereof) totaling more than two hundred fifty (250) million Btu per hour heat input), and there are no applicable New Source Performance Standards that were in effect on August 7, 1980, fugitive emissions are counted toward the determination of PSD and Emission Offset applicability.

Source Status

The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

Pollutant	Emissions (tons/year)
PM	203.9
PM-10	180.7
SO ₂	3,134.0
VOC	264.0
CO	2,690.9
NO _x	5,243.0

- (a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a regulated pollutant is emitted at a rate of 100 tons per year or more, and it is one of the twenty-eight (28) listed source categories (specifically, fossil fuel boilers (or combinations thereof) totaling more than two hundred fifty (250) million Btu per hour heat input), as specified in 326 IAC 2-2-1(gg)(1).
- (b) This existing source is a major stationary source under Emission Offset (326 IAC 2-3) because VOC and NO_x are each emitted at a rate of 100 tons per year or more. VOC and NO_x emissions are considered when evaluating the rule applicability relating to the 8-hour ozone standards.
- (c) These emissions are based upon the Part 70 Operating Permit, 097-6898-00310, issued by IDEM, OAQ and the City of Indianapolis OES on June 21, 2004.

The table below summarizes the potential to emit HAPs for the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

HAPs	Potential To Emit (tons/year)
Benzene	1.8
Propylene	4.3
Formaldehyde	0.5
Tetrachloroethylene (PCE)	7.7
Hydrogen Chloride	1.0

HAPs	Potential To Emit (tons/year)
Manganese Compounds	1.0
TOTAL	17.6

This existing source is not a major source of HAPs, as defined in 40 CFR 63.41, because HAPs emissions are less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2005 Office of Air Quality (OAQ) and Indianapolis Office of Environmental Services (OES) emission data.

Pollutant	Actual Emissions (tons/year)
PM	Not reported
PM-10	11.87
SO ₂	12.74
VOC	18.29
CO	148.83
NO _x	204.16
HAP (Tetrachloroethylene)	6.25

Description of Proposed Modification

IDEM, OAQ and OES have reviewed a Minor Source Modification application, submitted by Allison Transmission on April 21, 2006, relating to the installation of one (1) natural gas fired boiler at this existing Part 70 source. This new boiler is identified as Emission Unit ID BLR 6 and has maximum heat input capacity of 96.97 million Btu per hour. The new boiler will be subject to the provisions of 40 CFR 60.40c, Subpart Dc (New Source Performance Standards - Standards of Performance for Small Industrial - Commercial - Institutional Steam Generating Units) and 326 IAC 12 (New Source Performance Standards).

Allison Transmission is specifically requesting only pre-construction approval, pursuant to 326 IAC 2-7-10.5(e)(3), with the issuance of this Minor Source Modification, 097-23010-00310. Pursuant to 326 IAC 2-7-10.5(l) the emission unit constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

The modification will be incorporated into the existing Part 70 Operating Permit through the significant permit modification, 097-23037-00310, issued pursuant to 326 IAC 2-7-12(d), because the modification incorporates significant changes to existing monitoring, reporting, or record keeping requirements in the Part 70 Operating Permit due to the addition of Emission Unit BLR 6 that is a modification under the provisions of Title I of the Clean Air Act (incorporation of an NSPS).

The following is a description of the proposed emission unit and pollution control devices:

- (a) One (1) Nebraska natural gas fired rental boiler, model number NOX-2A-67, identified as Emission Unit ID BLR 6, to be installed in 2006, with a maximum heat input capacity of 96.97 million Btu per hour. Emission Unit ID BLR 6 is equipped with low-NO_x burners and flue gas recirculation.

Enforcement Issues

There are no pending enforcement actions.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
3113	BLR 6 stack exhaust	TBD	TBD	39,796	575

Emission Calculations

See Appendix A page 1 and 2 of this document for detailed emission calculations.

Permit Level Determination – Part 70

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emission 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, IDEM, or the appropriate local air pollution control agency.”

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	0.8
PM-10	3.2
SO ₂	0.3
VOC	2.3
CO	35.7
NO _x	13.6

HAPs	Potential To Emit (tons/year)
Hexane	0.76
TOTAL	0.80

This proposed modification qualifies as a minor source modification under 326 IAC 2-7-10.5(d)(3)(B) & (D), whereby, modifications that have the potential to emit of less than twenty-five (25) tons per year and equal to or greater than ten (10) tons per of NO_x and modifications that have the potential to emit of less than one-hundred (100) tons per year and equal to or greater than twenty-five (25) tons per year of CO shall be processed as a minor source modification under the provisions of 326 IAC 2-7-10.5(e).

In addition, this proposed modification qualifies as a minor source modification under 326 IAC 2-7-10.5(d)(5), whereby, a modification that is subject to a new source performance standard (NSPS) and the NSPS is the most stringent applicable requirement (see State Rule Applicability Determination section) shall be processed as a minor source modification under the provisions of 326 IAC 2-7-10.5(e).

Additionally, the modification will be incorporated into the existing Part 70 Operating Permit through a significant permit modification issued pursuant to 326 IAC 2-7-12(d), because the modification incorporates significant changes to existing monitoring, reporting, or record keeping requirements in the Part 70 Operating Permit due to the addition of Emission Unit BLR 6 that is a modification under

the provisions of Title I of the Clean Air Act (incorporation of an NSPS).

Permit Level Determination – PSD or Emission Offset

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this Part 70 minor source modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process/Emission Unit	PM	PM-10	SO ₂	VOC	CO	NO _x
Emission Unit ID BLR 6	0.8	3.2	0.3	2.3	35.7	13.6
Total for Modification	0.8	3.2	0.3	2.3	35.7	13.6
Significant PSD & Emission Offset Level	25	15	40	40	100	40

- (a) This modification to an existing major stationary source is not major because the emissions increase for PM, PM-10, SO₂, and CO are each less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.
- (b) This modification to an existing major stationary source is not major because the emissions increase for VOC and NO_x are each less than the Emission Offset significant levels. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.
- (c) Marion County has been designated as nonattainment for PM_{2.5} in 70 FR 943 dated January 5, 2005. According to the April 5, 2005 EPA memo titled "Implementation of New Source Review Requirements in PM_{2.5} Nonattainment Areas" authored by Steve Page, Director of OAQPS, until EPA promulgates the PM_{2.5} major NSR regulations, states should assume that a major stationary source's PM-10 emissions represent PM_{2.5} emissions. IDEM will use the PM-10 nonattainment major NSR program as a surrogate to address the requirements of nonattainment major NSR for the PM_{2.5} NAAQS. A significant emissions increase would be a net emissions increase or the potential of fifteen (15) tons per year or greater of PM-10. The addition of Emission Unit ID BLR 6 to this existing major source for PM-10 emissions does not have the potential to emit PM-10 of equal to or greater than fifteen (15) tons per year. Therefore, assuming that PM-10 emissions represent PM_{2.5} emissions, 326 IAC 2-3 does not apply for PM_{2.5}.

Federal Rule Applicability Determination

The following federal rules are applicable to the source due to this minor source modification:

- (a) Emission Unit ID BLR 6, the one (1) Nebraska natural gas fired rental boiler, is subject to 40 CFR 60.40c Subpart Dc (New Source Performance Standards - Standards of Performance for Small Industrial - Commercial - Institutional Steam Generating Units) which is incorporated by reference as 326 IAC 12. Subpart Dc is applicable to each affected facility steam generating unit for which construction, modification or reconstruction is commenced after June 9, 1989 and has a maximum design heat input capacity of 100 million Btu per hour or less but greater than or equal to 10 million Btu per hour. Emission Unit ID BLR 6 commenced construction after June 9, 1989 and has a design heat input capacity of 100 million Btu per hour or less but greater than or equal to 10 million Btu per hour. Emission Unit ID BLR 6 is in compliance with the applicable particulate matter limit in 40 CFR 60.43c(e)(1) of 0.030 lb/MMBtu (see TSD Appendix A page 1).

Nonapplicable portions of the NSPS will not be included in the permit. Emission Unit ID

BLR 6 is subject to the following portions of Subpart Dc:

- (1) 40 CFR 60.40c
- (2) 40 CFR 60.41c
- (3) 40 CFR 60.43c(e)(1)
- (4) 40 CFR 60.45c(a)
- (5) 40 CFR 60.45c(c)
- (6) 40 CFR 60.47c(c)
- (7) 40 CFR 60.48c(a)
- (8) 40 CFR 60.48c(g)

The provisions of 40 CFR 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12, apply to Emission Unit ID BLR 6 except when otherwise specified in 40 CFR 60, Subpart Dc.

- (b) Neither the source or nor this modification is subject to 40 CFR 63, Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters because this source is not a major HAP source.

There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in this proposed minor source modification.

- (c) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to new or modified emission units that involve a pollutant-specific emission unit and meet the following criteria:

- (1) has a potential to emit before controls equal to or greater than the major source threshold for the pollutant involved;
- (2) is subject to an emission limitation or standard for that pollutant; and
- (3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

The following table is used to identify the applicability of each of the criteria, under 40 CFR 64.1, to each new or modified emission unit involved:

Emission Unit	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PM PTE (tons/year)	Controlled PM PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
BLR 6	None	Y *	0.8	0.8	100	N	N

* Pursuant to 40 CFR 60.43c(e)(1)

Emission Unit ID BLR 6 does not use a control device to comply with an emission limitation or standard. Therefore, based on this evaluation, the requirements of 40 CFR Part 64, CAM are not applicable to Emission Unit ID BLR 6.

State Rule Applicability Determination

The following state rules are applicable to the source due to the addition of Emission Unit ID BLR 6:

326 IAC 2-2 and 2-3 (PSD and Emission Offset)

PSD and Emission Offset applicability is discussed under the Permit Level Determination - PSD and Emission Offset section.

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

The operation of Emission Unit ID BLR 6 will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

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 thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6.5 (Particulate Matter Limitations Except Lake County)

Pursuant to 326 IAC 6.5-1-1(b), particulate limitations shall not be established for combustion units that burn only natural gas at sources or facilities identified in 326 IAC 6.5-2 through 326 IAC 6.5-10, as long as the unit(s) continue to burn only natural gas. Allison Transmission is specifically identified in 326 IAC 6.5-6-2 and Emission Unit ID BLR 6 burns only natural gas. Therefore, 326 IAC 6.5 (Particulate Matter Limitations Except Lake County) does not apply to Emission Unit ID BLR 6.

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

Emission Unit ID BLR 6 is subject to 40 CFR 60.40c, Subpart Dc (New Source Performance Standards - Standards of Performance for Small Industrial - Commercial - Institutional Steam Generating Units) and 326 IAC 12 (New Source Performance Standards). Emission Unit BLR 6 is to be constructed after February 28, 2005. Therefore, pursuant to 40 CFR 60.43c(e)(1) and 326 IAC 12, Allison Transmission shall not cause to be discharged into the atmosphere any gases that contain particulate matter emissions in excess of 0.03 pounds per million Btu heat input from Emission Unit ID BLR 6.

Pursuant to 326 IAC 6-2-1(f), if any limitation established by this rule is inconsistent with applicable limitations contained in 326 IAC 12 concerning new source performance standards, then the limitations contained in 326 IAC 12 prevail. Since Emission Unit ID BLR 6 is located in Marion County and commenced construction after September 21, 1983, the limitation otherwise established in 326 IAC 6-2-4 is inconsistent with 326 IAC 12 as shown below. Therefore, 326 IAC 6-2 does not apply to Emission Unit ID BLR 6.

Emission Unit ID	Heat Input (million Btu per hour)	Installation Date
BLR 1	36	1940
BLR 2	36	1940
BLR 3	48	1942
BLR 4	72	1953
BLR 5	96	1969
BLR 6	96.97	2006
Q (total source heat input)	384.97	

$$\text{Pt (pounds per million Btu heat input)} = 1.09 / 384.97^{0.26}$$
$$\text{Pt} = 0.23 \text{ pounds per million Btu heat input}$$

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

Pursuant to 326 IAC 6-3-1(b), combustion units for indirect heating are exempt from the requirements of 326 IAC 6-3. Therefore, 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) does not apply to Emission Unit ID BLR 6.

326 IAC 7 (Sulfur Dioxide Rules)

Emission Unit ID BLR 6 does not have the potential to emit twenty-five (25) tons per year or have actual emissions of ten (10) pounds per hour of sulfur dioxide or more (see TSD Appendix A page 1 of 2). Therefore, 326 IAC 7 (Sulfur Dioxide Rules) does not apply to Emission Unit ID BLR 6.

326 IAC 12 (New Source Performance Standards)

See discussion under Federal Rule Applicability Determination section.

326 IAC 20 (Hazardous Air Pollutants)

This source is not a major source of hazardous air pollutants (HAP) and does not perform operations specifically identified in 326 IAC 20. Therefore, this source is not subject to 326 IAC 20 (Hazardous Air Pollutants) and 40 CFR Part 63 (National Emission Standards for Hazardous Air Pollutants).

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs IDEM, OAQ and OES, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements 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.

Apart from the provisions of 40 CFR 60.40c Subpart Dc (New Source Performance Standards - Standards of Performance for Small Industrial - Commercial - Institutional Steam Generating Units) and 326 IAC 12, there are no Compliance Determination Requirements applicable to this source modification.

There are no compliance monitoring requirements applicable to this modification.

Proposed Changes

The following changes have been made to the Part 70 Operating Permit No. 097-6898-00310. Deleted language appears as ~~strikeout~~ and new language appears in **bold**.

Change 1:

Allison Transmission requested that the Standard Industrial Classification (SIC) Code of 3568 referenced in Condition A.1 (General Information) be changed to 3714 to ensure consistency in

the manner that its operations are described. The SIC Code of 3568 describes establishments engaged in manufacturing mechanical power transmission equipment and parts for industrial machinery. This establishment primarily manufactures motor vehicle power transmission equipment which is described in the SIC Code 3714. In addition, this source is in one of the twenty-eight (28) listed source categories (specifically, fossil fuel boilers (or combinations thereof) totaling more than two hundred fifty (250) million Btu per hour heat input), as specified in 326 IAC 2-2-1(gg)(1). This descriptive information was not previously included in Condition A.1 but it is now added to the Source Status portion of Condition A.1. These descriptive changes to Condition A.1 (General Information) are as follows:

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a transmission manufacturing and testing plant under a Standard Industrial Classification Code (SIC) of **3714** ~~3568~~ (establishments primarily engaged in manufacturing **motor vehicle mechanical** power transmission equipment and parts).

Responsible Official:	General Director of Operations
Source Address:	4700 West 10 th Street, Indianapolis, Indiana 46222
Mailing Address:	4700 West 10 th Street (M-29), Indianapolis, Indiana 46222
SIC Code:	3714 3568
County Location:	Marion
Source Location Status:	Nonattainment for ozone under the 8-hour standard Nonattainment for PM2.5 Attainment for all other criteria pollutants.
Source Status:	Part 70 Permit Program Major Source, under PSD and Emission Offset Rules Major Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

Change 2:

The addition of Emission Unit ID BLR 6, the one (1) Nebraska natural gas fired rental boiler, is being added as item (I) in Condition A.3 (Emission Units and Pollution Control Equipment Summary) and in a new Section D.10 for the existing Part 70 Operating Permit, T097-6898-00310, as follows:

A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)][326 IAC 2-7-5(15)]

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

- (I) **One (1) Nebraska natural gas fired rental boiler, model number NOX-2A-67, identified as Emission Unit ID BLR 6, to be installed in 2006, with a maximum heat input of 96.97 million Btu per hour. Emission Unit ID BLR 6 is equipped with low-NO_x burners and flue gas recirculation.**

SECTION D.10

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (I) **One (1) Nebraska natural gas fired rental boiler, model number NOX-2A-67, identified as Emission Unit ID BLR 6, to be installed in 2006, with a maximum heat input capacity of 96.97million Btu per hour. Emission Unit ID BLR 6 is equipped with low- NO_x burners and flue gas recirculation.**

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

Change 3:

Emission Unit ID BLR 6, the one (1) Nebraska natural gas fired rental boiler, is subject to the provisions of 40 CFR 60.40c, Subpart Dc (New Source Performance Standards - Standards of Performance for Small Industrial - Commercial - Institutional Steam Generating Units) and 326 IAC 12. Therefore, Emission Unit ID BLR 6 is incorporated into the new Section D.10 of the existing Part 70 Operating Permit, T097-6898-00310, as follows:

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.10.1 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for Emission Unit ID BLR 6 and any control devices.

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

D.10.2 General Provisions Relating to NSPS [40 CFR Part 60, Subpart A][326 IAC 12-1]

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- (a) The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to Emission Unit ID BLR 6 as described in this section except when otherwise specified in 40 CFR Part 60, Subpart GG, or 40 CFR Part 60, Subpart Dc.
- (b) Pursuant to 40 CFR 60.7, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, IN 46204-2251

and

City of Indianapolis
Office of Environmental Services
Air Quality Management Section
2700 South Belmont Avenue
Indianapolis Indiana 46221-2097

D.10.3 Standards of Performance for Small Industrial-Commercial-Intstitutional Steam Generating Units [40 CFR 60.40c, Subpart Dc] [326 IAC 12] [40 CFR 60.24(f)(3)]

Pursuant 40 CFR 60.40c, Subpart Dc (Standards of Performance for Small Industrial-Commercial-Intstitutional Steam Generating Units), the one (1) Nebraska natural gas fired rental boiler, identified as Emission Unit BLR 6, shall comply with the following:

§ 60.40c Applicability and delegation of authority.

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

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

(c) Steam generating units which meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide (SO₂) or particulate matter (PM) emission limits, performance testing requirements, or monitoring requirements under this subpart (§§60.42c, 60.43c, 60.44c, 60.45c, 60.46c, or 60.47c) during periods of combustion research, as defined in §60.41c.

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

(e) Heat recovery steam generators that are associated with combined cycle gas turbines and meet the applicability requirements of subpart KKKK of this part are not subject to this subpart. This subpart will continue to apply to all other heat recovery steam generators that are capable of combusting more than or equal to 2.9 MW (10 MMBtu/h) heat input of fossil fuel but less than or equal to 29 MW (100 MMBtu/h) heat input of fossil fuel. If the heat recovery steam generator is subject to this subpart, only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The gas turbine emissions are subject to subpart GG or KKKK, as applicable, of this part).

(f) Any facility covered by subpart AAAA of this part is not covered by this subpart.

(g) Any facility covered by an EPA approved State or Federal section 111(d)/129 plan implementing subpart BBBB of this part is not covered by this subpart.

§ 60.41c Definitions.

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

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

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

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

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

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

Combustion research means the experimental firing of any fuel or combination of fuels in a steam generating unit for the purpose of conducting research and development of more efficient combustion or more effective prevention or control of air pollutant emissions from combustion,

provided that, during these periods of research and development, the heat generated is not used for any purpose other than preheating combustion air for use by that steam generating unit (i.e., the heat generated is released to the atmosphere without being used for space heating, process heating, driving pumps, preheating combustion air for other units, generating electricity, or any other purpose).

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

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

Dry flue gas desulfurization technology means a sulfur dioxide (SO₂) control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline reagents used in dry flue gas desulfurization systems include, but are not limited to, lime and sodium compounds.

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

Emerging technology means any SO₂ control system that is not defined as a conventional technology under this section, and for which the owner or operator of the affected facility has received approval from the Administrator to operate as an emerging technology under §60.48c(a)(4).

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

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

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

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

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

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

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

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

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

Potential sulfur dioxide emission rate means the theoretical SO₂ emissions (nanograms per joule [ng/J], or pounds per million Btu [lb/million Btu] heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems.

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

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

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

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

Wet flue gas desulfurization technology means an SO₂ control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a liquid material. This definition includes devices where the liquid material is subsequently converted to another form. Alkaline reagents used in wet flue gas desulfurization systems include, but are not limited to, lime, limestone, and sodium compounds.

Wet scrubber system means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of particulate matter (PM) or SO₂.

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

Sec. 60.43c Standard for particulate matter.

(e)(1) On or after the date on which the initial performance test is completed or is required to be completed under Sec. 60.8, whichever date comes first, no owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts coal, oil, gas, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain particulate matter emissions in excess of 13 ng/J (0.030 lb/MMBtu) heat input, except as provided in paragraphs (e)(2) and (e)(3)

of this section. Affected facilities subject to this paragraph, are also subject to the requirements of paragraphs (c) and (d) of this section.

Sec. 60.45c Compliance and performance test methods and procedures for particulate matter.

(a) The owner or operator of an affected facility subject to the PM and/or opacity standards under Sec. 60.43c shall conduct an initial performance test as required under Sec. 60.8, and shall conduct subsequent performance tests as requested by the Administrator, to determine compliance with the standards using the following procedures and reference methods, except as specified in paragraph (c) and (d) of this section.

(c) Units that burn only oil containing no more than 0.5 weight percent sulfur or liquid or gaseous fuels with potential sulfur dioxide emission rates of 230 ng/J (0.54 lb/MMBtu) heat input or less are not required to conduct emissions monitoring if they maintain fuel supplier certifications of the sulfur content of the fuels burned.

Sec. 60.47c Emission monitoring for particulate matter.

(c) Units that burn only oil that contains no more than 0.5 weight percent sulfur or liquid or gaseous fuels with potential sulfur dioxide emission rates of 230 ng/J (0.54 lb/MMBtu) heat input or less are not required to conduct PM emissions monitoring if they maintain fuel supplier certifications of the sulfur content of the fuels burned.

§ 60.48c Reporting and recordkeeping requirements.

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

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

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

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

(4) Notification if an emerging technology will be used for controlling SO₂ emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of §60.42c(a) or (b)(1), unless and until this determination is made by the Administrator.

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

Conclusion and Recommendation

The construction of this proposed modification shall be subject to the conditions of the attached Part 70 Minor Source Modification No. 097-23010-00310 and the Significant Permit Modification No. 097-23037-00310. The staff recommends to the Commissioner that this Part 70 Minor Source Modification and Significant Permit Modification be approved.

Appendix A: Emissions Calculations

Natural Gas Combustion Only

MM BTU/HR <100

Small Industrial Boiler

Company Name: Allison Transmission Division of General Motors Corporation

Address City IN Zip: 4700 West 10th Street, Indianapolis, IN 46222

Minor Source Modification Number: 097-23010-00310

Plt ID: 097-00310

Reviewer: M. Caraher

Date: May 1, 2006

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

97.0

849.5

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	32.0	5.5	84.0
Emission Factor in lb/MMBtu	0.0019	0.0076	0.0006	**see below	0.0055	0.084
Potential Emission in lbs/hr	0.2	0.7	0.1	3.1	0.5	8.1
Potential Emission in tons/yr	0.8	3.2	0.3	13.6	2.3	35.7

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

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Emission Factor in lb/MMBtu = Emission factor in lb/MMCF / 1000 Btu per cubic foot

SO2 lb/MMBtu emission rate less than 0.32 lb/MMBtu which would allow monthly fuel use record keeping; no emissions monitoring under 40 CFR 60.40c.

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

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 3/98)

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

Appendix A: Emissions Calculations

Natural Gas Combustion Only

MM BTU/HR <100

Small Industrial Boiler

HAPs Emissions

Company Name: Allison Transmission Division of General Motors Corporation

Address City IN Zip: 4700 West 10th Street, Indianapolis, IN 46222

Minor Source Modification Number: 097-23010-00310

Plt ID: 097-00310

Reviewer: M. Caraher

Date: May 1, 2006

HAPs - Organics							
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03		
Potential Emission in tons/yr	8.919E-04	5.097E-04	3.185E-02	7.645E-01	1.444E-03		
HAPs - Metals						Highest Single HAP	Combination HAP
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03	Hexane	
Potential Emission in tons/yr	2.124E-04	4.672E-04	5.946E-04	1.614E-04	8.919E-04	7.645E-01	8.015E-01

Methodology is the same as page 1.

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