ENHANCED NEW SOURCE REVIEW (ENSR)
OFFICE OF AIR MANAGEMENT

Dana Corporation, Spicer Axle Division
2100 West State Street
Fort Wayne, Indiana 46801

This permit is issued to the above mentioned company (herein known as the Permittee) under the provisions of 326 IAC 2-1 and 40 CFR 52.780, with conditions listed on the attached pages.

Enhanced New Source Review (ENSR) Permit No.: CP-003-10367-00003	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM), and presented in the permit application.

A.1 General Information

The Permittee owns and operates an axle assemblies for the automotive and large truck industry.

Responsible Official:	Robert Cole
Source Address:	2100 West State Street, Fort Wayne, Indiana 46801
Mailing Address:	P. O. Box 750, Fort Wayne, Indiana 46801
SIC Code:	3714
County Location:	Allen
County Status:	Attainment for all criteria pollutants
Source Status:	Major Part 70 Permit Program Minor Source, under PSD Rules

A.2 Emission Units and Pollution Control Equipment Summary

One (1) Peak Shaving Generator fired by diesel oil no. 2, with an output of 2,281 Kilo-Volt-Ampere (KVA), which is vented to stack #149.

A.3 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).

SECTION B GENERAL CONSTRUCTION AND OPERATION CONDITIONS

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

Construction Conditions [326 IAC 2-1-3.2]

B.1 General Construction Conditions

(a) The data and information supplied with the application shall be considered part of this permit. Prior to any proposed change in construction which may affect allowable emissions, the change must be approved by the Office of Air Management (OAM).

(b) This permit 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.

B.2 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

B.3 Revocation of Permits [326 IAC 2-1-9(b)]

Pursuant to 326 IAC 2-1-9(b)(Revocation of Permits), the Commissioner may revoke this permit 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.

B.4 Permit Review Rules [326 IAC 2]

Notwithstanding Construction Condition No. B.5, all requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

B.5 First Time Operation Permit [326 IAC 2-1-4]

This document shall also become a first-time operation permit pursuant to 326 IAC 2-1-4 (Operating Permits) when, prior to start of operation, the following requirements are met:

(a) The attached affidavit of construction shall be submitted to the Office of Air Management (OAM), Permit Administration & Development Section, verifying that the facilities were constructed as proposed in the application. The facilities covered in the Construction Permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.

(b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.

(c) Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.

(d) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-7-19 (Fees).

(e) The Permittee has submitted their Part 70 permit application (TV003-7741-00003) on December 16, 1996 for the existing source. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.

Operation Conditions

B.6 General Operation Conditions

(a) The data and information supplied in the application shall be considered part of this permit. Prior to any change in the operation which may result in an increase in allowable emissions exceeding those specified in 326 IAC 2-1-1 (Construction and Operating Permit Requirements), the change must be approved by the Office of Air Management (OAM).

(b) The Permittee shall 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 (IC13-17) and the rules promulgated thereunder.

B.7. Preventive Maintenance Plan [326 IAC 1-6-3]

Pursuant to 326 IAC 1-6-3 (Preventive Maintenance Plans), the Permittee shall prepare and maintain a preventive maintenance plan, including the following information:

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

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

(c) Identification of the replacement parts which will be maintained in inventory for quick replacement.

The preventive maintenance plan shall be submitted to IDEM, OAM upon request and shall be subject to review and approval.

B.8 Transfer of Permit [326 IAC 2-1-6]

Pursuant to 326 IAC 2-1-6 (Transfer of Permits):

(a) In the event that ownership of this large truck and automobile axle manufacturing plant is changed, the Permittee shall notify OAM, Permit Branch, within thirty (30) days of the change. Notification shall include the date or proposed date of said change.

(b) The written notification shall be sufficient to transfer the permit from the current owner to the new owner.

(c) The OAM shall reserve the right to issue a new permit.

B.9 Permit Revocation [326 IAC 2-1-9]

Pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:

(a) Violation of any conditions of this permit.

(b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.

(c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.

(d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.

(e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of 326 IAC 2-1 (Permit Review Rules).

B.10 Availability of Permit [326 IAC 2-1-3(l)]

Pursuant to 326 IAC 2-1-3(l), the Permittee shall maintain the applicable permit on the premises of the source and shall make this permit available for inspection by the IDEM, or other public official having jurisdiction.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitation and Standards

C.1 PSD Minor Source Status [326 IAC 2-2] [40 CFR 52.21]

The source is an existing minor source under 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21.

C.2 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.3 Operation of Equipment

All air pollution control equipment listed in this permit shall be in place or operated at all times that the emission units vented to the control equipment are in operation, as described in Section D of this permit.

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

C.4 Performance Testing [326 IAC 3-6]

(a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing methods approved by the IDEM, OAM.

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 Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

(b) All test reports must be received by IDEM, OAM within forty-five (45) days after the completion of the testing. An extension may be granted by the Commissioner, if the source submits to IDEM, OAM, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Compliance Monitoring Requirements

C.5 Compliance Monitoring

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment, no more than ninety (90) days after the date the equipment commences operation. If due to circumstances beyond its control, this schedule cannot be met, the Permittee shall notify:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

in writing, no more than ninety (90) days after the date the equipment commences operation, with full justification of the reasons for the inability to meet this date and a schedule which it expects to meet. If a denial of the request is not received before the monitoring is fully implemented, the schedule shall be deemed approved.

C.6 Maintenance of Monitoring Equipment

(a) In the event that a breakdown of the monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this permit until such time as the monitoring equipment is back in operation. In the case of continuous monitoring, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less than one (1) hour until such time as the continuous monitor is back in operation.

(b) The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.

C.7 Monitoring Methods [326 IAC 3]

Any monitoring or testing performed to meet the requirements of this permit shall be performed, according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

Record Keeping and Reporting Requirements

C.8 Monitoring Data Availability

(a) With the exception of performance tests conducted in accordance with Section C-Performance Testing. All observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.

(b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.

(c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.

(d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.

(e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.

(f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.9 Actions Related to Noncompliance Demonstrated by a Stack Test

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAM, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected facility while the corrective actions are being implemented. IDEM, OAM shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAM within thirty (30) days of receipt of the notice of deficiency. IDEM, OAM reserves the authority to use enforcement activities to resolve noncompliant stack tests.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAM that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAM may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate permit conditions may be grounds for immediate revocation of the permit to operate the affected facility.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

C.10 General Record Keeping Requirements

(a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location and available within one (1) hour upon verbal request of an IDEM, OAM, representative, for a minimum of three (3) years. They may be stored elsewhere for the remaining two (2) years providing they are made available within thirty (30) days after written request.

(b) Records of required monitoring information shall include, where applicable:

(1) The date, place, and time of sampling or measurements;

(2) The dates analyses were performed;

(3) The company or entity performing the analyses;

(4) The analytic techniques or methods used;

(5) The results of such analyses; and

(6) The operating conditions existing at the time of sampling or measurement.

(c) Support information shall include, where applicable:

(1) Copies of all reports required by this permit;

(2) All original strip chart recordings for continuous monitoring instrumentation;

(3) All calibration and maintenance records;

(4) Records of preventive maintenance shall be sufficient to demonstrate that improper maintenance did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures.

(d) All record keeping requirements not already legally required shall be implemented within ninety (90) days after the date the equipment commences operation.

C.11 Emission Statement [326 IAC 2-6]

(a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that meets the requirements of 326 IAC 2-6 (Emission Reporting). This annual statement must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4.

The submittal should cover the period defined in 326 IAC 2-6-2(8) (Emission Statement Operating Year). The annual statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

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

C.12 General Reporting Requirements

(a) To affirm that the source has met all the compliance monitoring requirements stated in this permit the source shall submit a Quarterly Compliance Monitoring Report. Any deviation from the requirements and the date(s) of each deviation must be reported. The Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC2-1.1-1(1).

(b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

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

(d) Unless otherwise specified in this permit, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period. The report does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(e) All instances of deviations as described in Section B- Deviations from Permit Requirements Conditions must be clearly identified in such reports. The Emergency/Deviation Occurrence Report does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(f) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.

(g) The first report shall cover the period commencing on the date the equipment commences operation and ending on the last day of the reporting period.

SECTION D.1 FACILITY CONDITIONS

One (1) Peak Shaving Generator fired by diesel oil no. 2, with an output of 2,281 Kilo-Volt-Ampere (KVA), which is vented to stack #149.

Emissions Limitation and Standards

D.1.1 Prevention of Significant Deterioration (PSD)[326 IAC 2-2)

(a) The fuel oil no. 2 usages from the proposed Peak Shaving Generator, and the existing boilers 3, 4, 8, and 9 shall be limited as follows:

Facility ID	Fuel Oil # 2 Usage Limit (kgal/yr)
Boilers 3 & 4 (@ 50 mmBtu/hr)	6,257
Boilers 8 & 9 (@ 40.2 mmBtu/hr)	5,030
Proposed Peak Shaving Generator (6.7 mmBtu/hr)	229.5
TOTAL	11,516.5

The fuel oil no. 2 usage limit shall be based on a twelve- month rolling period.

During the first twelve months of operation of the peak shaving generator, shall be limited such that the total usage (229.5 kgal/yr) divided by the accumulated months of operation (12 months) shall not exceed 19.125 kgal rolled on a monthly basis.

(b) For every million cubic feet of natural gas combusted is equivalent to 4,160 gallons of fuel oil no. 2.

(c) For every thousand gallons of LPG combusted is equivalent to 790 gallons of fuel oil no.2.

Compliance with this condition D.1.1 (a) through (c) will make the sourcewide emissions below 250 tons per twelve-month, thus keeping the source a minor source for the Prevention of Significant Deterioration (PSD).

D.1.2 Opacity Limitations [326 IAC 5-1-2]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), the opacity from the Peak Shaving Generator stack exhaust #149 shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) opacity in twenty-four (24) consecutive readings, as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) opacity 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.

D.1.3 Preventive Maintenance Plan

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the Peak Shaving Generator.

Compliance Determination Requirements

D.1.4 Testing Requirements

Pursuant to 326 IAC 2-1-3 (Construction and Operating Permit Requirements) a one time compliance stack tests shall be performed for the Peak Shaving Generator within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up. Compliance stack tests shall be performed, to validate the Alternative Emission Factors (AEF) for NOx used in the calculation. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

Compliance Monitoring Requirements

D.1.5 Visible Emissions Notations

(a) Daily visible emission notations of the Peak Shaving Generator stack exhaust #149 shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

Record Keeping and Reporting Requirements

D.1.6 Record Keeping Requirements

(a) To document compliance with Condition D.1.1, D.1.2 the Permittee shall maintain records in accordance below.

(1) Fuel oil usage and equivalent Nitrogen oxide (NOx) emissions;

The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years, or longer if specified elsewhere in this permit, from the date of the monitoring sample, measurement, or report. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

(b) To document compliance with Condition D.1.2 the Permittee shall maintain records of daily visible emission notations of the Peak Shaving Generator stack exhaust #149.

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

D1.7 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

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

Quarterly Report

Source Name: Dana Corporation, Spicer Axle Division
Source Address: 2100 West State Blvd., Fort Wayne, Indiana 46801
Mailing Address: P.O Box 750, Fort Wayne, Indiana 46801
CP No.: 003-10367-00003
Facility: Peak Shaving Generator, Stack #149, Boilers 3, 4, 8, and 9
Limit: Peak Shaving Generator - 229.5 kgal per twelve-month period, rolled on a monthly basis.
Boilers 3 & 4 - 6,257 kgal per twelve-month period, rolled on a monthly basis.
Boilers 8 & 9 - 5,030 kgal per twelve-month period, rolled on a monthly basis.
For every million cubic feet of natural gas combusted is equivalent to 4,160 gallons of fuel oil no. 2.
For every thousand gallons of LPG combusted is equivalent to 790 gallons of fuel oil no.2.

YEAR: _____

Month	Column 1			Column 2			
	Peak shaving Fuel Oil No. 2 Usage This Month	Boilers 3 & 4 Fuel Oil No. 2 Usage This Month	Boilers 8 & 9 Fuel Oil No. 2 Usage This Month	Peak shaving Fuel Oil No. 2 Usage for Past 11 Months	Boilers 3 & 4 Fuel Oil No. 2 Usage for Past 11 Months	Boilers 8 & 9 Fuel Oil No. 2 Usage for Past 11 Months	Peak shaving Oil No. 2 Us 12 Month To
Month 1							
Month 2							
Month 3							

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

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

Quarterly Report

Source Name: Dana Corporation, Spicer Axle Division
Source Address: 2100 West State Blvd., Fort Wayne, Indiana 46801
Mailing Address: P.O Box 750, Fort Wayne, Indiana 46801
CP No.: 003-10367-00003
Facility: Peak Shaving Generator, Stack #149, Boilers 3, 4, 8, and 9
Limit: Peak Shaving Generator - 229.5 kgal per twelve-month period, rolled on a monthly basis.
Boilers 3 & 4 - 6,257 kgal per twelve-month period, rolled on a monthly basis.
Boilers 8 & 9 - 5,030 kgal per twelve-month period, rolled on a monthly basis.
For every million cubic feet of natural gas combusted is equivalent to 4,160 gallons of fuel oil no. 2.
For every thousand gallons of LPG combusted is equivalent to 790 gallons of fuel oil no.2.

YEAR: _____

Month	Fuel Oil No. 2 Usage (Kgal/mo)	Natural Gas Usage (MMCF/mo)	LPG Usage (Kgal/mo)	Fuel Oil No. 2 Equivalent (MMCF/mo)	Total Fuel Oil No. 2 Usage (Kgal/mo)
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					

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

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

NEW CONSTRUCTION AND OPERATION
QUARTERLY COMPLIANCE MONITORING REPORT

Source Name: Dana Corporation, Spicer Axle Division
Source Address: 2100 West State Blvd., Fort Wayne, Indiana 46801
Mailing Address: P.O. Box 750, Fort Wayne, Indiana 46801
CP No.: 003-10367-00003

Months: _____ **to** _____ **Year:** _____

This report is an affirmation that the source has met all the compliance monitoring requirements stated in this permit. This report shall be submitted quarterly**.** Any deviation from the compliance monitoring requirements and the date(s) of each deviation must be reported. Additional pages may be attached if necessary. This form can be supplemented by attaching the Emergency/Deviation Occurrence Report. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD

9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD.

Compliance Monitoring Requirement (eg. Permit Condition D.1.1)	**Number of Deviations**	**Date of each Deviation**

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

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Management

Technical Support Document (TSD) for Enhanced New Source Review (ENSR)

Source Background and Description

Source Name:	Dana Corporation, Spicer Axle Division
Source Location:	2100 West State Street, Fort Wayne, Indiana 46801
County:	Allen
ENSR Permit No.:	CP 003-10367-00003
SIC Code:	3714
Permit Reviewer:	Aida De Guzman

The Office of Air Management (OAM) has reviewed an application from Dana Corporation relating to the construction and operation of the following equipment:

One (1) Peak Shaving Generator fired by diesel oil no. 2, with an output of 2,281 Kilo-Volt-Ampere (KVA), which is vented to stack #149.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
Stack #149	2,281 KVA Peak Shaving Generator	10	1	15,664	886

Recommendation

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

Information, unless otherwise stated, 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 November 6, 1998, with additional information received on December 21, 1998, and January 5, 1999.

Emissions Calculations

Combustion Emissions:

2281 KVA peak shaving generator fired by diesel #2, with a maximum sulfur content of 0.2%

2281 KV * 1.34 hp/KW = 3,056 hp (output)

Maximum distillate # 2 fuel usage = 607 lb/hr

Heat Input = 607 lb/hr * 1gal/7.05 lb * 138,000 Btu/gal * 1mm/1,000,000
= 17.75 mmBtu/gal

Pollutant	Heat Input (mmBtu/hr)	Emissions Factor (SCC 2-02-004-01) (lb/mmBtu)	Emissions (ton/yr)
NOx	17.75	3.2	248.7
CO	17.75	0.85	66.0
SO_2	17.75	1.01S	15.7
PM	17.75	0.1	7.8
VOC	17.75	0.09	7.0

Methodology:
Heat input = Max. fuel usage, lb/hr * density of fuel oil , gal/lb * heating value of distillate oil, Btu/gal
Emissions = Heat input, mmBtu/hr * Ef, lb/mmBtu * ton/2000 lb * 8760 hr/yr

Total Potential and Allowable Emissions

Indiana Permit Allowable Emissions Definition (after compliance with applicable rules, based on 8,760 hours of operation per year at rated capacity):

Pollutant	Allowable Emissions (tons/year)	Potential Emissions (tons/year)
Particulate Matter (PM)	7.8	7.8
Particulate Matter (PM10)	7.8	7.8
Sulfur Dioxide (SO_2)	15.7	15.7
Volatile Organic Compounds (VOC)	7.0	7.0
Carbon Monoxide (CO)	66.0	66.0
Nitrogen Oxides (NO_x)	248.7	248.7
Single Hazardous Air Pollutant (HAP)	0	0
Combination of HAPs	0	0

(a) The potential emissions before control are equivalent with the allowable emissions, therefore, either the potential or allowable emissions before control are used for the permitting determination.

(b) Allowable emissions (as defined in the Indiana Rule) of nitrogen oxides (NOx) or carbon monoxide (CO) are greater than 25 tons per year. Therefore, pursuant to

326 IAC 2-1, Sections 1 and 3, a construction permit is required.

County Attainment Status

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Allen County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Allen County has been classified as attainment or unclassifiable for all the other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

Existing Source PSD, Part 70 or FESOP Definition (emissions based on all the air approvals issued to the source):

Approval/Issued Date	Emissions (ton/yr)
CP003-9398 February 5, 1998	NOx = 21.9 PM = 0.5 SO2 = 1.4 VOC = 0.7 CO = 5.7
CP003-4377 May 22, 1995	PM = 5 PM10 = 2 SO2 = 67 NOx = 49 VOC = 1 CO = 12
Exemption 003-5025 December 28, 1995	No pollutant is emitted
Exemption 003-4212 December 22, 1994	No pollutant is emitted
CP003-2818 January 12, 1993	VOC = 10.94

Approval Issued on June 2, 1989	VOC = 34.9
CP02-03-86-0600 June 7, 1982	PM = 6.44 SO2 = 79.4 NOx = 32 VOC = 0.5 CO = 2.4
Total	NOx = 102.9 PM = 11.94 SO2 = 147.8 VOC = 48.04 CO = 20.1

(a) This existing source is **not** a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.

Proposed Modification

PTE from the proposed modification (based on 8,760 hours of operation per year at rated capacity including enforceable emission control and production limit, where applicable):

Pollutant	PM (ton/yr)	PM10 (ton/yr)	SO_2 (ton/yr)	VOC (ton/yr)	CO (ton/yr)	NO_x (ton/yr)
Proposed Modification	7.8	7.8	15.7	7.0	66.0	248.7
PSD Threshold Level	250	250	250	250	250	250

This modification to an existing minor stationary source is not major because the emission increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)
This existing source has submitted their Part 70 (T-003-7741-00003) application on December 16, 1996. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.

Federal Rule Applicability

(a) New Source Performance Standards (326 IAC 12) and 40 CFR Part 63 applicable to this facility.

(1) 40 CFR Part 60.330- Standards of Performance for Stationary Gas Turbines. This NSPS applies to all stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules per hour (10 mmBtu/hr), based on the lower heating value of the fuel fired, which commences construction, modification, or reconstruction after October 3, 1977.

This NSPS does not apply to generators. Therefore, the 2,281 KVA output Peak Shaving Generator in this application is not subject to this NSPS.

Note: Turbine is an engine that converts kinetic energy of a moving fluid into a mechanical power.

A generator converts the mechanical energy, which is extracted by the turbine into electrical energy.

(b) There are National Emission Standards for Hazardous Air Pollutant (NESHAP), 40 CFR Part 63, that would apply to this 2,281 KVA output Peak Shaving Generator.

State Rule Applicability

(a) 326 IAC 2-6 (Emission Reporting)
This facility is subject to 326 IAC 2-6 (Emission Reporting), it emits greater than 100 tons/yr of NOx. Pursuant to this rule, the owner/operator of this facility must annually submit an emission statement of the facility. The annual statement must be received by July 1 of each year and must contain the minimum requirements as specified in 326 IAC 2-6-4.

(b) 326 IAC 6-2 (Particulate Emissions Limitations for Sources of Indirect Heating)
The 2,281 KVA output Peak Shaving Generator is not subject to this rule because it is not a source of indirect heating.

(c) 326 IAC 7-1 (Sulfur Dioxide Emission Limitation)
The 2,281 KVA output Peak Shaving Generator is not subject to this rule, because its SO_2 emissions are less than 25 tons per year or 10 pounds per hour.

(d) 326 IAC 8 (Volatile Organic Sources)
No provisions under Article 326 IAC 8 applies to the 2,281 KVA output Peak Shaving Generator, because it does not fit to any of the source criteria in the rules.

(e) 326 IAC 10 (Nitrogen Oxides (NOx) Rules)
This rule only applies to sources located in Clark and Floyd Counties. This does not apply to the source, because it is located in Allen County.

(f) 326 IAC 2-1-3.4 (New Air Toxics Control Rule)
This rule does not apply to the 2,281 KVA output Peak Shaving Generator, because it does not emit any HAP.

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 187 hazardous air pollutants set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

(a) None of these listed air toxics will be emitted from this proposed construction.

Conclusion

The construction of this 2,281 KVA output Peak Shaving Generator will be subject to the conditions of the attached proposed **Enhanced New Source Review Permit No. CP003-10367-00003.**

Indiana Department of Environmental Management
Office of Air Management

Addendum to the
Technical Support Document for New Construction and Operation

Source Name:	Dana Corporation, Spicer Axle Division
Source Location:	2100 West State Blvd., Fort Wayne, Indiana 46801
County:	Allen
Construction Permit No.:	CP-003-10367-00003
SIC Code:	3714
Permit Reviewer:	Aida De Guzman

On January 18, 1999 the Office of Air Management (OAM) had a notice published in the Fort Wayne Journal Gazette, Fort Wayne, Indiana, stating that Dana Corporation, Spicer Axle Division had applied for a construction permit to construct and operate one (1) Peak Shaving Generator fired by diesel oil no. 2, with an output of 2,281 Kilo-Volt-Ampere (KVA). The notice also stated that OAM proposed to issue a permit for this installation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On February 17, 1999, Dana Corporation, Spicer Axle Division submitted comments on the proposed construction permit. The summary of the comments and corresponding responses is as follows (changes are bolded and deletion are struck-through for emphasis):

Comment 1: In Section C.3, Page 8 of 14, of the proposed permit, the word “place” should be substituted for the word “placed”.

Response 1: The word “placed” in Section C.3, Page 8 of 14, of the proposed permit is changed to “place”.

Comment 2: Sections C.5, C.10(d) and C.11(g) on Pages 9, 11 and 12 of 14 respectively of the proposed permit refer to compliance monitoring, general record keeping, and general reporting requirements which if applicable only require an action by the source at such time as the proposed equipment is constructed and commences operation. Because neither issuance nor receipt of this permit is indicative of the date upon which the proposed equipment will commence operation, these sections require revision to appropriately connect the permit conditions and compliance requirements to become activated upon “the date the equipment commences operation”. Accordingly, the phrase “receipt of this permit” which appears twice in Section C.5 should be replaced with the phrase “the date the equipment commences operation”; the phrase “of permit issuance” in Section C.10(d) should be replaced with the phrase “after the date the equipment commences operation”. The phrase “of issuance of this permit” in Section C.11(g) should be replaced with the phrase “the date the equipment commences operation”.

Response 2: The Office of Air Management (OAM) agrees that Sections C.5, C.10(d) and C.11(g) on Pages 9, 11 and 12 of 14 respectively of the proposed permit are operation conditions, and were revised to apply only after operation commences.

Comment 3: Section C.11 Reporting Requirements, Page 11 of 14 of the proposed permit concerns the reporting requirement applicable to Quarterly Compliance Monitoring Reports and Deviation Reporting, neither of which is a condition or requirement applicable to this equipment or to this permit. Dana Corp. requests that this condition be deleted in its entirety.

Response 3: No Reporting was specifically required in the proposed permit for the Peak Shaving Generator, however, since the source requested that its fuel usage be limited in order to restrict its NOx emissions, Condition C.11, now C.12 Reporting Requirements was not deleted in the permit.

Comment 4: This permit does not require nor does the proposed facility warrant a Compliance Response Plan which is referenced in Section D.1.3(e). Dana requests that this paragraph be deleted in its entirety.

Response 4: Since Compliance Monitoring Plan is not required for the proposed equipment, Section D.1.3(e) was deleted in the permit.

Comment 5: In the Technical Support Document (TSD), Page 2 and 4 of 6, the emission calculations for the Peak Shaving Generator were based upon SCC 2-02-004-001 emission factors. Dana Corporations believes that the most appropriate emissions factors for this generator are those which have been provided by the manufacturer, and which were based from stack testing results for a prototype of this same engine. Therefore, it is requested that the emission calculation made for this proposed generator should be revised using the emission factors developed by the manufacturer.

Response 5: All calculations for permitting purposes are made using the emission factors from AP-42, Compilation of Air Pollutant Emission Factors, which has been produced by the U.S. EPA Office of Air Quality Planning and Standards. The EPA has compiled and rated emission factors in this document based upon available information, including stack tests and engineering estimates. The EPA also maintains other sources of emission factors which are considered equivalent to AP-42. An alternative emission factor (AEF) is defined as one which is not found in the AP-42 or other equivalent source (an NSPS/NESHAP or other EPA database of emission factors); as well, an AEF may be developed if the source believes that the published factor does not appropriately represent their specific process, operation or pollution control equipment efficiency.

The OAM will allow the source to use an AEF, provided the construction permit contains a requirement to conduct testing to validate the AEF. (see Indiana Register, ID No. AIR-014-NPD; Approval of Alternative Emission Factors, approved on October 6, 1997).

Comment 6: Pages 3 and 4 of 6 of the TSD, the Source Status Section should be corrected to include CP02-03-86-0601, which was issued on June 7, 1982 for five spray paint booths and a paint dip operation. The source however, no longer owns and operates the paint dip and two of the booths operations. The existing Title V reflects these changes.

In addition, the Source Status section of the TSD should be corrected with regard to an “Approval” issued on June 2, 1989 and a related permit CP003-2818, issued on January 12, 1993. The “Approval” authorized the potential emissions of 34.9 tons per year of VOC from a paint booth. A CP was then issued several years later to reflect the reduction of VOC emissions to 10.94 for the paint system which was converting to water-based paints. Consequently, the potential VOC emissions of 34.9 and 10.94 are not additive, but rather 34.9 tons/yr should be deleted from the Source Status Totals.

Response 6: The Source Status Table was revised as follows:

Source Status

Approval/Issued Date	Emissions (ton/yr)
CP003-9398 February 5, 1998	NOx = 21.9 PM = 0.5 SO2 = 1.4 VOC = 0.7 CO = 5.7
CP003-4377 May 22, 1995	PM = 5 PM10 = 2 SO2 = 67 NOx = 49 VOC = 1 CO = 12
Exemption 003-5025 December 28, 1995	NOx = 2.7
Exemption 003-4212 December 22, 1994	No pollutant is emitted
CP003-2818 January 12, 1993	VOC = 10.94
~~Approval Issued on June 2, 1989~~	~~VOC = 34.9~~
CP02-03-86-0600 June 7, 1982	PM = 6.44 SO2 = 79.4 NOx = 32 VOC = 0.5 CO = 2.4
CP02-03-86-0601 June 7, 1986	VOC = 27.45
Total	NOx = 102.9 PM = 11.94 SO2 = 147.8 VOC = ~~48.04~~ **13.14** CO = 20.1

Note: The level of VOC emissions in the Table above under CP02-03-86-0601, issued on June 7, 1986, reflects only the remaining three (3) paint booths, since two (2) paint booths, and the dip coat were removed from the original permitted facilities.

Comment 7: Page 5 of 6, Paragraph (b) of the Federal Rule Applicability section of the TSD erroneously states that there is an applicable NESHAP to this proposed engine. Dana Corporation requests that this error be corrected as this generator does not emit any HAPs.

Response 7: Page 5 of 6, Paragraph (b) for the NESHAP applicability has a typographical error. The word “no” has been inadvertently overlooked. If this rule would have been applied, a detail of the standards that would apply to the generator would be stated.

This paragraph was revised to insert the word “no” as follows:

(b) There are **no** National Emission Standards for Hazardous Air Pollutant (NESHAP), 40 CFR Part 63, that would apply to this 2,281 KVA output Peak Shaving Generator.

Upon further review, the Office of Air Management (OAM) has made the following changes to the proposed permit:

1. The original TSD stated that 326 IAC 2-6 (Emission reporting) applies to the generator, because its NOx potential to emit are greater that 100 tons per year. However, the proposed permit did not include a condition requiring an annual emissions report. The permit was revised to add the following condition and be numbered C.11. All subsequent conditions were re-numbered accordingly:

C.11 Emission Statement [326 IAC 2-6]

(a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that meets the requirements of 326 IAC 2-6 (Emission Reporting). This annual statement must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8) (Emission Statement Operating Year). The annual statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

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

On February 25, 1999, a copy of the Addendum to the Technical Support Document, containing OAM's responses to the initial comments sent by the source was sent to Ms. Mary Ann Saggese who is representing Dana Corporation, Spicer Axle Division. On March 9, 1999 comments to this TSD Addendum were submitted by Ms. Saggese. The summary of the comments and corresponding responses is as follows (changes are bolded and deletion are struck-through for emphasis):

Comment 1: As a comment to OAM's Response 5 of this Addendum, Dana Corporation does select the application of the Caterpillar stack testing emissions to the peak shaving generator as an Alternative Emission Factor (AEF) or emission levels, instead of the AP-42 emission factors used in the initial calculations. We understand that it will be a permit requirement to conduct a stack test to validate the AEF.

Dana Corporation also requests that OAM impose a NOx limit of 90 tons per year for the Peak Shaving Generator, in order for the sourcewide emissions to stay below the PSD threshold of 250 tons per year.

Response 1: (a) A re-calculation of the pollutants' emissions will be made using the following AEF or the emission levels determined by Caterpillar for the generator.

Combustion Emissions:

~~2281 KVA peak shaving generator fired by diesel #2, with a maximum sulfur content of 0.2%~~

~~2281 KV * 1.34 hp/KW = 3,056 hp (output)~~

~~Maximum distillate # 2 fuel usage = 607 lb/hr~~

~~Heat Input = 607 lb/hr * 1gal/7.05 lb * 138,000 Btu/gal * 1mm/1,000,000~~

~~= 17.75 mmBtu/hr~~

Pollutant	~~Heat Input (mmBtu/hr)~~	Emission levels (lb/hr)	Emissions (ton/yr)
NOx	~~17.75~~	38.08	~~248.7~~ **166.8**
CO	~~17.75~~	3.13	~~66.0~~ **13.7**
SO_2	~~17.75~~	1.01S lb/mmBtu AP-42	~~15.7~~ **5.9**
PM	~~17.75~~	.880	~~7.8~~ **3.85**
VOC	~~17.75~~	1.15	~~7.0~~ **5.04**

~~Methodology:~~
~~Heat input = Max. fuel usage, lb/hr * density of fuel oil , gal/lb * heating value of distillate oil, Btu/gal~~

Emission results from the Caterpillar stack testing at the following parameters:

Generator Output - 2636.4 BHP

Heat input equivalent = 2636.4 BHP * 2442.5 Btu/HP-hr * MM/1,000,000
= 6.702 mmBtu/hr * 1,000,000/MM

Equivalent Fuel Oil Usage = 6,702,030 Btu/hr * gal/138,000 Btu * 8760 hr/yr
= 425,433 gal/yr

Pollutant	Emission levels (lb/hr)	Emissions (ton/yr)
NOx	38.08	166.8
CO	3.13	13.7
SO_2	1.01S lb/mmBtu AP-42	5.9
PM	.880	3.85
VOC	1.15	5.04

Emissions Limit:
The source has requested that the NOx emissions from the Peak Shaving Generator be limited to 90 tons per year, even though its NOx emissions of 166.8 tons per year are less than 250 tons per year and there are no rules that motivates it.

In order this limit be federally enforceable for the purposes of Prevention of Significant Deterioration (PSD), the whole source has to be limited. The source has requested that the whole source NOx emissions be limited to 225.4 tons per year, instead of 249 tons per year, to give an allowance for future expansion, and at the same time remain as a minor source.

The main source of NOx and SO2 emissions that the source has, are the following **permitted boilers and internal combustion engines** (see attached Spreadsheets Pages 1 through 8 TSD Appendix A, for emissions calculation):

(a) 2 boilers, each has 50 mmBtu/hr, combusting natural gas as the main fuel, fuel oil # 2 as the secondary fuel and LPG as the back-up fuel.

(b) 2 boilers, each has 40.2 mmBtu/hr, combusting natural gas as the main fuel, fuel oil # 2 as the secondary fuel and LPG as the back-up fuel.

(c) 1 peak shaving generator, rated at 2.8 mmBtu/hr, combusting fuel oil # 2.

(d) 1 generator, rated at 0.139 mmBtu/hr, combusting fuel oil # 2.

The source has requested that the 2.8 mmBtu/hr peak shaving generator and the 0.139 mmBtu/hr generator be deleted from the allotted limit of 225.4 tons/yr , since the 2.8 mmBtu/hr peak shaving generator was not constructed and the 0.139 will be removed.

Sourcewide Unrestricted Potential Emissions				
Facility ID	Fuel Oil # 2 Usage (kgal/yr)	Natural Gas Emissions (ton/yr)	Fuel Oil # 2 Emissions (ton/yr)	LPG Emissions (ton/yr)
Boilers 3 & 4 (@ 50 mmBtu/hr)	6,257	Nox = 43.8 SO2 = 0.2 CO = 36.8	Nox = 75 SO2 = 133.2 CO = 15.6	Nox = 91.0 CO = 15.4
Boilers 8 & 9 (@ 40.2 mmBtu/hr)	5,030	Nox = 35.2 SO2 = 0.2 CO = 29.6	Nox = 60.4 SO2 = 107.2 CO = 12.6	Nox = 73.2 CO = 12.4
Proposed Peak Shaving Generator (6.7 mmBtu/hr)	425.4		Nox = 166.8 SO2 = 5.6 CO = 13.7	
TOTAL	11,712	Nox = 79 SO2 = 0.4	Nox = 302.2 SO2 = 246	Nox = 164.2 CO = 27.8

Limitation:

The natural gas fuel is the main pollutant of the four (4) boilers, fuel oil # 2 is the secondary and the LPG is their back-up fuel.

The proposed peak shaving generator will combust only fuel oil #2.

The combustion of fuel oil #2 emits the most Nox and SO2. Although the natural gas is the main fuel for the boilers, their emissions are well below the PSD threshold of 250 tons per year. Therefore, the NOx emissions from the fuel oil #2 are limited to 225.4 tons per year as **requested** by the source.

Sourcewide Limit		
Facility ID	Fuel Oil # 2 Usage Limit (kgal/yr)	Fuel Oil # 2 Emissions Limit (ton/yr)
Boilers 3 & 4 (@ 50 mmBtu/hr)	6,257	Nox = 75 SO2 = 133.2 CO = 15.6
Boilers 8 & 9 (@ 40.2 mmBtu/hr)	5,030	Nox = 60.4 SO2 = 107.2 CO = 12.6
Proposed Peak Shaving Generator (6.7 mmBtu/hr)	229.5	Nox = 90 SO2 = 3.02 CO = 7.4
TOTAL	11,516.5	Nox = 225.4 SO2 = 243.4

(a) Proposed Peak Shaving Generator:
The source requested a limit of 90 tons of NOx per year on this generator.

Using Ratio and Proportion:
425,433 gal/yr of fuel will emit 166.8 tons of NOx per year (based on the stack test)

$$\text{Fuel Usage Limit : } \frac{425{,}433 \text{ gal/yr}}{166.8 \text{ ton/yr}} = \frac{X, \text{ fuel limit}}{90 \text{ ton/yr, NOx limit}}$$

$$X = 229{,}550 \text{ gal/yr}$$

(b) Boilers 3, 4, 8, & 9 NOx Limit, will stay at their full potential:

Determining how the natural gas and LPG affect the fuel oil no.2 NOx limit. The NOx emissions from the natural gas and LPG are substantial at 79 tons/yr, and 164.2 tons/yr respectively. To account for the natural gas and LPG influence on the fuel oil no. 2 NOx limit, the NOx emission factors for the three (3) will be compared as follows:

The equivalency ratio for Natural Gas Influence on the Fuel Oil no. 2:

Natural Gas - Ef, 100 lb/MMCF
Fuel Oil No. 2 - Ef, 24 lb/kgal

100 lb/MMCF * kgal/24 lb = 4.16 kgal fuel oil /MMCF of natural gas
For every million cubic feet of natural gas combusted is equivalent to 4.16 kgal of fuel oil no. 2

The equivalency ratio for LPG on Fuel oil no. 2:

LPG - Ef, 19 lb/kgal
Fuel Oil No. 2 - Ef, 24 lb/kgal

19 lb/kgal * kgal/24 lb fuel oil no. 2 = 0.79 kgal of fuel oil no.2/kgal of LPG
For every kgal of LPG combusted is equivalent to 0.79 kgal of fuel oil no.2.

Although the NOx emissions from natural gas is substantial, its effect on the LPG fuel is not substantial that will exceed the PSD level.

With the above changes the following conditions are added in the permit:

Condition D.1.1 on page 13 of 14 of the proposed permit is revised to limit the fuel usage from this generator. Two (2) Quarterly Reporting Forms to report the fuel usages and a Quarterly Compliance Monitoring Report are added in the permit and paged 15, 16 & 17, respectively: Condition D.1.1 revision is as follows:

D.1.1 Prevention of Significant Deterioration (PSD)[326 IAC 2-2)

~~Any change or modification that may increase the potential Nitrogen Oxide (NOx) emissions to 250 tons per year or more from this generator must be approved by the Office of Air Management (OAM) and be subject to 326 IAC 2-2 Prevention of Significant Deterioration (PSD) before such change may occur.~~

(a) **The fuel oil no. 2 usages from the proposed Peak Shaving Generator, and the existing boilers 3, 4, 8, and 9 shall be limited as follows:**

Facility ID	Fuel Oil # 2 Usage Limit (kgal/yr)
Boilers 3 & 4 (@ 50 mmBtu/hr)	6,257
Boilers 8 & 9 (@ 40.2 mmBtu/hr)	5,030
Proposed Peak Shaving Generator (6.7 mmBtu/hr)	229.5
TOTAL	11,516.5

The fuel oil no. 2 usage limit shall be based on a twelve- month rolling period.

During the first twelve months of operation of the peak shaving generator, shall be limited such that the total usage (229.5 kgal/yr) divided by the accumulated months of operation (12 months) shall not exceed 19.125 kgal rolled on a monthly basis.

(b) For every million cubic feet of natural gas combusted is equivalent to 4,160 gallons of fuel oil no. 2.

(c) For every thousand gallons of LPG combusted is equivalent to 790 gallons of fuel oil no.2.

Compliance with this this condition D.1.1(a) through (c) will make the sourcewide emissions below 250 tons per twelve-month period, thus keeping the source a minor source for the Prevention of Significant Deterioration (PSD).

Condition D.1.3 Stack Testing Requirements to validate the Alternative Emission factor is added in the permit as follows:

D.1.3 Testing Requirements

Pursuant to 326 IAC 2-1-3 (Construction and Operating Permit Requirements) a one time compliance stack tests shall be performed for the Peak Shaving Generator within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up. Compliance stack tests shall be performed, to validate the Alternative Emission Factors (AEF) used in the calculation. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

Subsequent conditions in the permit are renumbered accordingly.

Appendix A: Emission Calculations
LPG-Propane - Industrial Boilers
(Heat input capacity: > 10 MMBtu/hr and < 100 MMBtu/hr)

Company Name: Dana Corporation, Spicer Axle Division
Address City IN Zip: 2100 West State St., Fort Wayne, IN 46801
CP: 003-10367
Plt ID: 003-00003
Reviewer: Aida De Guzman
Date: April 16, 1999

2 @ 50 mmBtu/hr boilers

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year	SO2 Emission factor = 0.10 x S S = Sulfur Content =
50.00	4786.89	0.30 grains/100ft^3

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	0.6	0.6	0.0 *(0.10S)*	19.0	0.5 *TOC value	3.2
Potential Emission in tons/yr	1.4	1.4	0.1	45.5	1.2	7.7

*The VOC value given is TOC. The methane emission factor is 0.2 lb/kgal.

Methodology

1 gallon of LPG has a heating value of 94,000 Btu
1 gallon of propane has a heating value of 91,500 Btu (use this to convert emission factors to an energy basis for propane)
(Source - AP-42 (Supplement B 10/96) page 1.5-1)
Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.0915 MM

Emission Factors are from AP42 (Supplement B 10/96), Table 1.5-1 (SCC #1-02-010-02)

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

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler

Company Name: Dana Corporation, Spicer Axle Division
Address City IN Zip: 2100 West State St., Fort Wayne, IN 46801
CP: 003-10367
Plt ID: 003-00003
Reviewer: Aida De Guzman
Date: April 16, 1999

2 @ 50 mmBtu/hr

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
50.0	438.0

Pollutant

	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 *see below	5.5	84.0
Potential Emission in tons/yr	1.7	1.7	0.1	21.9	1.2	18.4

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32
PM emission factors are condensable and filterable.

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
See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Industrial Boilers (> 100 mmBtu/hr)
#1 and #2 Fuel Oil

Company Name: Dana Corporation, Spicer Axle Division
Address, City IN Zip: 2100 West St., Fort Wayne, Indiana 46801
CP: 003-10367
Plt ID: 003-00003
Reviewer: Aida De Guzman
Date: April 16, 1999

2 @ 50 mmBtu/hr

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year	S = Weight % Sulfur
		0.3
50	3128.57143	

	Pollutant				
	PM	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	3.3	42.6 *(142.0S)*	24.0	0.20	5.0
Potential Emission in tons/yr	5.2	66.6	37.5	0.3	7.8

Methodology

1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.140 MM Btu

Emission Factors are from AP 42, Tables 1.3-1, 1.3-2, and 1.3-3 (SCC 1-02-005-01/02/03) Supplement E 9/98
PM Emissions are Condensible and Filterable PM
Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/2,000 lb/ton

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler

Company Name: **Dana Corporation, Spicer Axle Division**
Address City IN Zip: **2100 West State St., Fort Wayne, IN 46801**
CP: **003-10367**
Plt ID: **003-00003**
Reviewer: **Aida De Guzman**
Date: **April 16, 1999**

2 @ 40.2 mmBtu/hr

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
40.2	352.2

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 *see below	5.5	84.0
Potential Emission in tons/yr	1.3	1.3	0.1	17.6	1.0	14.8

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32
PM emission factors are condensable and filterable.

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
See page 2 for HAPs emissions calculations.

Appendix A: Emission Calculations
LPG-Propane - Industrial Boilers
(Heat input capacity: > 10 MMBtu/hr and < 100 MMBtu/hr)

Company Name: Dana Corporation, Spicer Axle Division
Address City IN Zip: 2100 West State St., Fort Wayne, IN 46801
CP: 003-10367
Plt ID: 003-00003
Reviewer: Aida De Guzman
Date: April 16, 1999

2 @ 40.2 mmBtu/hr

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year	SO2 Emission factor = 0.10 x S S = Sulfur Content =
40.20	3848.66	0.30 grains/100ft^3

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	0.6	0.6	0.0 *(0.10S)*	19.0	0.5 *TOC value	3.2
Potential Emission in tons/yr	1.2	1.2	0.1	36.6	1.0	6.2

*The VOC value given is TOC. The methane emission factor is 0.2 lb/kgal.

Methodology

1 gallon of LPG has a heating value of 94,000 Btu
1 gallon of propane has a heating value of 91,500 Btu (use this to convert emission factors to an energy basis for propane)
(Source - AP-42 (Supplement B 10/96) page 1.5-1)
Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.0915 MM

Emission Factors are from AP42 (Supplement B 10/96), Table 1.5-1 (SCC #1-02-010-02)

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

Appendix A: Emissions Calculations
Industrial Boilers (> 100 mmBtu/hr)
#1 and #2 Fuel Oil

Company Name: Dana Corporation, Spicer Axle Division
Address, City IN Zip: 2100 West State Street, Fort Wayne, Indiana 46801
CP: 003-10367
Plt ID: 003-00003
Reviewer: Aida De Guzman
Date: April 16, 1999

2 @ 40.2 mmBtu/hr

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year	S = Weight % Sulfur
		0.3
40.2	2515.37143	

	Pollutant				
	PM	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	3.3	42.6 *(142.0S)*	24.0	0.20	5.0
Potential Emission in tons/yr	4.2	53.6	30.2	0.3	6.3

Methodology

1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.140 MM Btu

Emission Factors are from AP 42, Tables 1.3-1, 1.3-2, and 1.3-3 (SCC 1-02-005-01/02/03) Supplement E 9/98
PM Emissions are Condensible and Filterable PM
Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/2,000 lb/ton