

**CONSTRUCTION PERMIT
OFFICE OF AIR MANAGEMENT**

**Subaru-Isuzu Automotive, Inc. - Indiana Plant
5500 State Road 38 East
Lafayette, Indiana 47903**

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.

Construction Permit No.: CP-157-9619-00050	
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 automotive and light-duty truck assembly plant.

Responsible Official: Thomas Easterday
Source Address: 5500 State Road 38 East, Lafayette, Indiana 47903
Mailing Address: P. O. Box 5689, Lafayette, Indiana 47903
SIC Code: 3711
County Location: Tippecanoe
County Status: Attainment for all criteria pollutants
Source Status: Major Part 70 Permit Program
Major Source, under PSD Rules

A.2 Emission Units and Pollution Control Equipment Summary

This application is for a modification to the existing stationary source which will enable the source to increase the annual vehicle production from 240,000 to 262,000. It will also include the construction of a new PVC undercoating booth in order to allow the physical separation between Isuzu and Subaru model lines. The undercoating booth which is rated at 1,463 pounds of coating per hour (lb/hr), is dedicated to undercoating of Isuzu models. It will also include the installation of one (1) air atomization spray coating system in the existing Plastic Bumper Coating Booth, which will replace the electrostatic spray applicator.

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source will be 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 2-1-3.4]

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 is subject to the requirement to obtain a Part 70 permit. The source has submitted their Part 70 application (T-157-5906-00050) on May 21, 1996. The facilities in this application shall be incorporated in the Part 70 permit 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 automotive and sport utility vehicle assembly 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 Major Source Status [326 IAC 2-2] [40 CFR 52.21]

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

C.2 Opacity Limitations [326 IAC 5-1-2]

Pursuant to 326 IAC 5-1-2 (Visible Emission Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), the visible emissions shall meet the following:

- (a) visible emissions shall not exceed an average of 40% opacity in 24 consecutive readings.
- (b) visible emissions shall not exceed 60% opacity for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period.

This Operation Condition C.2(a)(b) will supersede Operation Condition no. 37 of PSD (79) 1651, issued on July 30, 1987.

C.3 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.4 Operation of Equipment

All air pollution control equipment listed in this permit shall be in placed 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.5 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.6 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 receipt of this permit. 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 receipt of this permit, 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.7 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.8 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.9 Annual Emission Reporting [326 IAC 2-6]

That pursuant to 326 IAC 2-6 (Emission Reporting), the Permittee must annually submit an emission statement for the source. This 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 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

The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31.

C.10 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.11 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.12 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;
 - (4) 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 of permit issuance.

C.13 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.
- (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.
- (e) All instances of deviations as described in Section B- Deviations from Permit Requirements Conditions must be clearly identified in such reports.
- (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 of issuance of this permit and ending on the last day of the reporting period.

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).

SECTION D.1 FACILITY CONDITIONS

This application is for a modification to the existing stationary source which will enable the source to increase the annual vehicle production from 240,000 to 262,000. It will also include the construction of a new PVC undercoating booth in order to allow the physical separation between Isuzu and Subaru model lines. The undercoating booth which is rated at 1,463 pound of coating per hour (lb/hr), is dedicated to undercoating of Isuzu models. It will also include the installation of one (1) air atomization spray coating system in the existing Plastic Bumper Coating Booth, which will replace the electrostatic spray applicator.

Emissions Limitation and Standards

D.1.1 Volatile Organic Compounds 326 IAC 2-2, 40 CFR 52.21

- (1) The source's total production shall be limited to 262,000 vehicles per 12 consecutive month period, rolled on a monthly basis. Daily production at the source shall not exceed 1,200 vehicles.
- (2) The volatile organic compounds (VOC) emissions from the source shall be limited to:
 - (a) 1,421 tons per 12 month period, rolled on a monthly basis; and
 - (b) a maximum of 14,352 pounds for any calendar day.

Compliance with this Operation Condition will make 326 IAC 2-2 the Prevention of Significant Deterioration (PSD) and 40 CFR 52.21 not applicable.

D.1.2 Supersession of Previous Permit Conditions

This modification will supersede the following Conditions:

- (a) Operation Condition no. 3 of PSD (79) 1651, issued on July 30, 1987,
- (b) Operation Condition no. 4 of PSD (79) 1651, issued on July 30, 1987,
- (c) Operation Condition no. 26 of PSD (79) 1651, issued on July 30, 1987,
- (d) Operation Condition no. 30 of PSD (79) 1651 Revision, issued on July 30, 1987,
- (e) Operation Condition no. 33 of PSD (79) 1651, issued on July 30, 1987,
- (f) Operation Condition no. 45 of PSD (79) 1651, issued on July 30, 1987,
- (g) Operation Condition no. 3 of PSD (79) 1651 Revision, issued on July 26, 1989,
- (h) Operation Condition no. 26 of PSD (79) 1651 Revision, issued on July 26, 1989,
- (i) Operation Condition no. 44 of PSD (79) 1651 Revision, issued on July 26, 1989,
- (j) Operation Condition no. 47 of PSD (79) 1651 Revision, issued on July 26, 1989,
- (k) All Construction and Operation Conditions of CP157-4485-00050, issued on September 13, 1995.

All other Operation Conditions in construction permits PSD (79) 1651, issued on July 30, 1987; and PSD (79) 1651 Revision, issued on July 26, 1989, which are not superseded by any of the Operation Conditions in this permit shall remain unchanged and in effect.

D.1.3 Volatile Organic Compound (VOC) Limitations 326 IAC 8-2-9

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volume weighted average volatile organic compound (VOC) content of coating applied in the PVC Undercoating Operations shall be limited to 3.5 pounds of VOCs per gallon of coating less water, as delivered to the applicator for any calendar day, for extreme performance coatings.

The above limit for the PVC Undercoating Operation shall supersede the limit established for this operation in Operation Condition No. 1 of the PSD (79) 1651 issued on July 30, 1987, and Operation Condition No. 1 of the PSD (79) 1651 Revision, issued on July 26, 1989.

D.1.4 PM Process Operation (326 IAC 6-3):

Pursuant to 326 IAC 6-3 (Process Operations), the PM emissions from the vehicle production shall be limited to 11.91 pounds per hour. This limit shall be determined using the following equation:

For process weight rates up to sixty thousand (60,000) pounds/hour

$$E = 4.10 P^{0.67}$$

For process weight rates in excess of sixty thousand (60,000) pounds/hour

$$E = 55.0 P^{0.11} - 40$$

Where: E = Allowable PM emissions in pounds per hour

P = Process weight rate in tons/hr

D.1.5 Preventive Maintenance Plan

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and any control devices

Compliance Determination Requirements

D.1.6 Volatile Organic Compounds

Compliance with the VOC content and usage limitations contained in Conditions D.1.1 and D.1.3 shall be determined pursuant to 326 IAC 8-1-4(a)(3)(A) using formulation data supplied by the coating manufacturer. However, IDEM, OAM, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.1.7 Volatile Organic Compounds

Compliance with the limit in Condition D.1.3 shall be determined using the following equation to calculate the volume-weighted average mass of VOC's in coatings consumed in a calendar day per unit volume of coatings applied:

$$\text{Vol Weighted Ave.} = \frac{3 \text{ coats} [\text{density, lb/gal} * \text{wt. \% organics} * \text{gal of mat'l., gal/unit} / [1 - \% \text{ vol water} * \frac{\text{density coat, lb/gal}}{\text{density water, lb/gal}}]}{[3 \text{ coats, gal/unit}]}$$

[3 coats, gal/unit]

D.1.8 Particulate Matter (PM)

The water curtains for particulate matter overspray control shall be operated at all times when the surface coating facilities are in operation.

Compliance Monitoring Requirements

D.1.9 Monitoring

- (a) Daily visual inspections shall be made of all surface coating booths used in the vehicle production to verify that (i) the continuous underflow water curtain is operating properly to provide full coverage of the flood pan and (ii) the downdraft air system is providing sufficient air flow for normal booth operation. To monitor the performance of the water curtain systems, weekly observations shall be made during the operation of each surface coating booth to determine whether any visible overspray is leaving the booths. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (b) Monthly inspections shall be performed of the coating emissions from the surface coating booths' stacks and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when an overspray emission, evidence of overspray emission, or other abnormal emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

Record Keeping and Reporting Requirements

D.1.10 Record Keeping Requirements

Records of daily vehicle production rates by model and body color to comply with Condition D.1.1 shall be maintained and made available upon request. To document compliance with Condition D.1.3, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken daily and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Condition D.1.3.

- (1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
- (2) A log of the dates of use;
- (3) The volume weighted VOC content of the coatings used for each day;
- (4) The cleanup solvent usage for each day;
- (5) The total VOC usage for each day; and

(6) The weight of VOC emitted for each compliance period.

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

D.1.11 Reporting Requirements

Report of monthly production totals by vehicle model and color shall be submitted to the OAM on a quarterly basis, to comply with Condition D.1.1. This report 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: Subaru Isuzu Automotive, Inc.
 Source Address: 5500 State Road 38 East, Lafayette, Indiana 47903
 Mailing Address: P. O. Box 5689, Lafayette, Indiana 47903
 Construction Permit No.: CP157-9619-00050
 Facility: Vehicle production
 Parameter: VOC
 Limits: 262,000 vehicles per 12 month period, rolled on a monthly basis;
 VOC emission limit of 1,421 tons per 12 month period, rolled on a monthly
 basis; and a maximum of 14,352 pounds for any calendar day.

Month _____ Year _____

Day	Vehicle Produced This Day	VOC Emissions (lb/day)	Day	Vehicle Produced This Day	VOC Emissions (lb/day)
1			17		
2			18		
3			19		
4			20		
5			21		
6			22		
7			23		
8			24		
9			25		
10			26		
11			27		
12			28		
13			29		
14			30		
15			31		
16					

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

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

Quarterly Report

Source Name: Subaru Isuzu Automotive, Inc.
 Source Address: 5500 State Road 38 East, Lafayette, Indiana 47903
 Mailing Address: P. O. Box 5689, Lafayette, Indiana 47903
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 Facility: Vehicle production
 Parameter: VOC
 Limits: 262,000 vehicles per 12 month period, rolled on a monthly basis;
 VOC emission limit of 1,421 tons per 12 month period, rolled on a monthly
 basis; and a maximum of 14,352 pounds for any calendar day.

Year: _____

Month	Column 1		Column 2		Column 1 + 2	
	This Month Vehicle Production	This Month VOC Emissions in Tons	Previous 11 Months Vehicle Production	Previous 11 Months VOC Emissions in Tons	12 Month Total Vehicle Production	12 Month Total VOC Emissions in Tons

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

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

**CONSTRUCTION PERMIT
 QUARTERLY COMPLIANCE MONITORING REPORT**

Source Name: Subaru Isuzu Automotive, Inc.
 Source Address: 5500 State Road 38 East, Lafayette, Indiana 47903
 Mailing Address: P. O. Box 5689, Lafayette, Indiana 47903
 Construction Permit No.: CP157-9619-00050

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

<p>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. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".</p>		
<p>9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD</p>		
<p>9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD.</p>		
Compliance Monitoring Requirement (eg. Permit Condition D.1.1, D.1.3, D1.4)	Number of Deviations	Date of each Deviation

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

Indiana Department of Environmental Management Office of Air Management

Technical Support Document (TSD) for New Construction and Operation

Source Background and Description

Source Name: Subaru-Isuzu Automotive, Inc.
Source Location: 5500 State Road 38 East, Lafayette, Indiana 47903
County: Tippecanoe
Construction Permit No.: CP-157-9619-00050
SIC Code: 3711
Permit Reviewer: Aida P. De Guzman

The Office of Air Management (OAM) has reviewed an application from Subaru-Isuzu Automotive, Inc. relating to the construction and operation of a modification to the existing permitted automotive and light-duty truck assembly plant. The modification will enable the source to increase the annual vehicle production from 240,000 to 262,000. The modification will include the construction of a new PVC Undercoating Booth in order to allow the physical separation between Isuzu and Subaru model lines. It will also include the installation of one (1) air atomization spray coating system in the existing Plastic Bumper Coating Booth, which will replace the electrostatic spray applicator.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
002	PVC Oven Burners (2)	109	2.4	123	318

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.

An application for the purposes of this review was received on March 30, 1998, with series of additional information received on May 20, 1998, July 2, 1998, October 14, 1998, November 18, 1998, and November 25, 1998.

Emissions Calculations

(a) VOC Emissions From the Vehicle Production:

Federal Potential Emissions / Increase fr. the Modification = Future Potential Emissions - Past Actual Emissions

Future Potential Emissions - Emissions from the existing source plus the modification or changes made after control at 8760 hr/yr

Past Actual - Emissions generated prior to the modification after control (average for the last 2 years before construction from the modification is expected to commence, that is representative of normal source operation).

The source has submitted 10.85 lb VOC/veh as their average actual VOC emissions for the last two years which is representative of normal source operation.

(1) Future Pot'l. VOC Emissions = 262,000 veh/yr * 10.85 lb/veh * ton/2000 lb
= 1,421 ton/yr

(2) Past Actual Emissions:
1997 - 10.58 lb/veh. - 186,892 veh/yr
1998 - 10.85 lb/veh. - 225,000 veh./yr * data from 10/97 thru 3/98

$$\begin{aligned} \text{Weighted Average} &= (10.58 \text{ lb/veh} * 186,892 \text{ veh/yr}) + 10.85 \text{ lb/veh} \\ &\quad (225,000 \text{ veh/yr} - 186,892 \text{ veh/yr}) \\ &= \frac{1,977,317 \text{ lb/yr} + 413,471.8 \text{ lb/yr}}{2000 \text{ lb/ton}} \\ &= 1,195 \text{ ton/yr} \end{aligned}$$

(3) Emissions from the Modification = 1,421 ton/yr - 1,195 ton/yr
= 226 ton/yr > 40 tons/yr

The increase from the modification at 226 tons/yr is greater than the significant level of 40 tons per year. All contemporaneous changes are accounted for in order to determine the net emission change at the source, if indeed the source is able to net out of PSD review.

Anticipated commencement of construction - mid 1998
Contemporaneous period - mid 1993

(4) Emissions Reduction From 1994 to 1998:

(a) 1994 = 13.35 lb/veh - 153,875 veh/yr
1998 = 10.85 lb/veh - 180,174 veh/yr
- 2.5 lb/veh (reduction)

$$2.5 \text{ lb/veh} * 153,875 \text{ veh/yr} * \text{ton}/2000 \text{ lb} = 192 \text{ ton/yr (reduction)}$$

(b) Net Emission Increase From the Modification:
= 1,421 ton/yr - 1,195 ton/yr - 192 ton/yr
= 34.0 ton/yr < 40 tons/yr Therefore, it is not major for PSD.

(5) Based on the above VOC emissions calculation, the source will be limited as follows:

(a) The source's production will be limited to 262,000 vehicles per 12 consecutive month period. The source requested a maximum limit of 1,200 vehicles produce per day and this daily limit should not be exceeded at any given day.

- (b) The volatile organic compounds (VOC) emitted per vehicle will be limited to an average of 10.85 pounds per vehicle (lb/veh), calculated per 12 consecutive month period. The source requested a maximum emission limit per vehicle to 11.96 lbs for any model, and this limit should not be exceeded at any given time.

Limits (1) and (2) will limit the sourcewide VOC emissions to 1,421 tons per 12 month period. This emission limit should not exceed a maximum of 14,352 pounds at any given day.

- (b) HAPs Emissions From the Vehicle Production :
The source has submitted 388 ton/yr as their average actual emissions for the last two years which is representative of normal source operation.

The source projected a total increase in actual HAP emissions of 124,960 lb/yr for the 22,000 increase in vehicle production from 240,000 veh/yr to 262,000 veh/yr.

- (1) Future Pot'l HAPs Emissions:
= 262,000 veh/yr * 4.26 lb/veh * ton/2000 lb
= 558 ton^{HAP}/yr

- (2) 1997-1998 VOC Past Actual Weighted Ave. Emissions:

1997 Actual HAP Emissions
= 388 ton^{HAP}/yr * yr/186,892 veh * 2000 lb/ton
= 4.15 lb/veh

1998 HAP Emissions = $\frac{10.85 \text{ lb VOC/veh}}{10.58 \text{ lb VOC/veh}} * 4.15 \text{ lb/veh}$
= 4.26 lb^{HAP}/veh

Past Actual For the Last 2 Years:

1997 - 4.15 lb^{HAP}/veh - 186,892 veh/yr
1998 - 4.26 lb^{HAP}/veh - 225,000 veh/yr
Weighted Average = $[(4.15 \text{ lb HAP/veh} * 186,892 \text{ veh/yr}) +$
 $[4.26 \text{ lb/veh} * (225,000 \text{ veh/yr} - 186,892 \text{ veh/yr})] *$
ton/2000 lb
= 469 ton/yr

- (3) Emissions From The Modification:
= 558 ton/yr - 469 ton/yr
= 90 ton^{HAPs}/yr

- (4) Reduction From 1994 - 1998:
Since VOC emissions has been reduced, HAPs will also follow.

1994 - 13.35 lb^{VOC}/veh - 5.24 lb^{HAP}/veh - 153,875 veh/yr
1998 - 10.8 lb^{VOC}/veh - 4.26 lb^{HAP}/veh - 180,174 veh/yr

$$\begin{aligned}
 \text{1994 HAP Emissions} &= \frac{13.35 \text{ lb VOC/veh}}{10.8 \text{ lb VOC/veh}} * 4.26 \text{ lb HAP/veh} \\
 &= 5.24 \text{ lb HAP/veh}
 \end{aligned}$$

HAP Emissions Reduction From 1994 - 1998:

$$\begin{aligned}
 &= \frac{13.35 \text{ lb VOC/veh}}{10.8 \text{ lb VOC/veh}} * (5.24 \text{ lb HAP/veh} - 4.26 \text{ lb HAP/veh}) * 153,875 \text{ veh/yr} \\
 &= 75.4 \text{ ton HAPs/yr}
 \end{aligned}$$

(5) Net Emissions From the Modification:

$$\begin{aligned}
 &= 558 \text{ ton/yr} - 469 \text{ ton/yr} - 75.4 \text{ ton/yr} \\
 &= 13.6 \text{ tons HAPs/yr}
 \end{aligned}$$

(c) PM or PM10 Emissions From the Vehicle Production:
 The source has submitted that 222,000 veh/yr will emit 0.131 lb of PM/veh as their average actual emissions for the last two years which is representative of normal source operation

(1) Future Pot'l PM Emissions = $\frac{262,000 \text{ veh/yr}}{222,000 \text{ veh/yr}} * 0.131 \text{ lb/veh}$

$$\begin{aligned}
 &= 0.153 \text{ lb/veh} * 262,000 \text{ veh/yr} * \text{ton}/2000 \text{ lb} \\
 &= 20 \text{ ton/yr}
 \end{aligned}$$

(2) Actual PM/PM10 Emissions for the Last 2 Years:
 By ratio and proportion:

$$\begin{aligned}
 \frac{1421 \text{ tons VOC/yr}}{20 \text{ tons PM/PM10/yr}} &= \frac{1196 \text{ tons VOC/yr, weighted ave.}}{X, \text{ actual P/PM10}} \\
 X &= 16.8 \text{ tons PM/PM10/yr}
 \end{aligned}$$

(3) PM or PM10 Emission from the Modification:
 $20 \text{ ton PM/PM10/yr} - 16.8 \text{ ton PM/PM10/yr} = 3.2 \text{ ton PM/PM10/yr} < 25 \text{ tons PM/yr, and } < 15 \text{ tons PM10/yr}$

(d) NOx Emissions From the Vehicle Production:
 The source has submitted that 40,000 veh/yr will emit 18 tons/yr as their average actual emissions for the last two years which is representative of normal source operation.

(1) Future Pot'l NOx Emissions = $\frac{262,000 \text{ veh/yr}}{40,000 \text{ veh/yr}} * 18 \text{ ton/yr}$

$$\begin{aligned}
 &= 118 \text{ ton/yr}
 \end{aligned}$$

(2) Actual NOx Emissions for the Last 2 Years:
 By ratio and proportion:

$$\begin{aligned}
 \frac{1421 \text{ tons VOC/yr}}{118 \text{ tons NOx/yr}} &= \frac{1195 \text{ tons VOC/yr, weighted ave.}}{X = \text{actual NOx emissions, 1997-1998}} \\
 X &= 99.2 \text{ tons NOx/yr}
 \end{aligned}$$

(3) NOx Emission Increase from Modification:
 $118 \text{ ton}^{\text{NOx}}/\text{yr} - 99.2 \text{ ton}^{\text{NOx}}/\text{yr} = 18.8 \text{ ton}^{\text{NOx}}/\text{yr} < 40 \text{ tons}/\text{yr}$

- (e) Emissions from the New PVC Undercoating Booth:
 The emissions from this operation was already accounted for in the production increase emissions. The installation of this new PVC Undercoating Booth is to allow the separation of the undercoating operations for the Subaru and Isuzu product lines. Currently, both Subaru and Isuzu undercoating operation is accomplished by only one (1) Undercoating Booth. The overall production volume of both product lines is governed by the vehicle production limitations in the permit.
- (f) Emissions from the installation of one (1) air atomization spray coating system in the existing Plastic Bumper Coating Booth, which will replace the electrostatic spray applicator:

Subaru-Isuzu's experience over a number of years has shown that electrostatic application presents technical difficulties and a threat to workers' safety. The plastic bumper does not contain a metal substrate, which is typically needed to act as an electrode to enable electrostatic coating application. To substitute for a metal substrate, Subaru-Isuzu attempted in the past to use a metal rack to hold the plastic bumpers during coating processes and to attach an electrode to the metal rack. This procedure did not prove reliable and posed hazards due to sparking which sporadically occurred from poor electrode contact during coating application.

Subaru-Isuzu had notified OAM to discontinue the use of the electrostatic application. Tests were conducted in 1998 by Dames and Moore to evaluate the impact on VOC and particulate emissions from this process revisions. The initial transfer efficiency tests for the electrostatic application were conducted by Roy F. Weston Consultants in August 1990. Tests are as follows:

Transfer Efficiencies - Plastic Bumper Coating			
Test Coating	July 1998 Tests w/o Electrostatic (Air Atomization)	August 1990 Tests w/ Electrostatic	June 1987 PSD BACT Determination
Metallic	61.5%	56.63%	42.6%
Monocoat	46.7%	56.87%	46%

From the above table it can be concluded that the elimination of the electrostatic application system has no significant effect, since the use of an air atomization system as a replacement still exceeds the efficiencies determined in the PSD BACT.

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)	20	20
Particulate Matter (PM10)	20	20
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	1,421	1,421
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	118	118
Combination of HAPs	469	469

- (a) Allowable emissions are determined from the applicability of rule 326 IAC 6-3. See attached spreadsheets for detailed calculations. The PM emissions from the this modification is determined using the following equation:

For process weight rates up to sixty thousand (60,000) pounds/hour:

$$E = 4.10 P^{0.67}$$

For process weight rates in excess of sixty thousand (60,000) pounds/hour

$$E = 55.0 P^{0.11} - 40$$

Where: E = Allowable PM emissions in pounds per hour
 P = Process weight rate in tons/hr

- (b) The potential emissions before control are equivalent to the allowable emissions, therefore, either the potential emissions before control or the allowable emissions are used for the permitting determination.
- (c) Allowable emissions (as defined in the Indiana Rule) of volatile organic compounds (VOC) and nitrogen oxides (NO_x) are greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, Sections 1 and 3, a construction permit is required.
- (d) Allowable emissions (as defined in the Indiana Rule) of any combination of the HAPs are greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, a construction permit is required.

County Attainment Status

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

- (b) Tippecanoe 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 after controls, based on the permits issued):

Permit No.	Permit Issued Date	Allowable Emissions (ton/yr)
PSD (79) 1651	July 30, 1987 as revised on July 26, 1989	VOC -1,506
		PM - 24.7
		SO2 - 0.8
		CO - 37
CP157-4485-00050	September 13, 1995	NOx - 175
		VOC - 30
		PM - 4.6
		NOx - 18

- (a) This existing source is a major stationary source because at least one attainment regulated pollutant is emitted at a rate of 250 tons per year.

Proposed Modification

Pollutant	PM (ton/yr)	PM10 (ton/yr)	SO ₂ (ton/yr)	VOC (ton/yr)	CO (ton/yr)	NO _x (ton/yr)
Proposed Modification	20	20	0	1,421	0	118
Contemporaneous Increases	0	0	0	0	0	0
Contemporaneous Decreases	16.8	16.8	0	1,195 192	0	99.2
Net Emissions	3.2	3.2	0	34.0	0	18.8
PSD Significant Level	25	15	40	40	100	40

- (a) This modification to an existing major stationary source is not major because the emissions 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-157-5906-00050) application on May 21, 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:

(1) 40 CFR, Part 60.390, Subpart MM : Standards of Performance for Automobile and Light-Duty Truck Surface Coating Operation -

(a) This standard has already been determined to be applicable to the source's existing coating facilities. This NSPS still applies to the same facilities that are affected by the proposed modification. Limits set forth in the existing permits for the affected coating facilities will remain unchanged and in effect.

(b) The PVC Undercoating Booth is not subject to 40 CFR, Part 60.390, Subpart MM, because it is not one of the listed affected facilities in this NSPS.

(c) The modification of the existing Bumper Coating facility is not subject to 40 CFR, Part 60.390, Subpart MM. Pursuant to Part 60.390, Section (b) of this NSPS coating of plastic components (bumper) are exempted.

(2) 40 CFR 12, Subpart Kb: Standard of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels for which Construction, Reconstruction, or Modification Commenced after July 23, 1984.

This Standard has already been applied to the existing gasoline storage tank. Under the proposed modification, this NSPS still applies to the same gasoline storage tank.

(b) National Emission Standards for Hazardous Air Pollutants (NESHAPs)
There are no NESHAPs, 40 CFR Part 63 applicable to this source.

State Rule Applicability

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

This facility is subject to 326 IAC 2-6 (Emission Reporting), because the source as a whole emits 100 tons/yr of VOC. 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 6-3 (Process Operations PM Allowable Emissions)
This rule is applicable to this modification. The PM emissions from the modification is determined using the following equation:

For process weight rates up to sixty thousand (60,000) pounds/hour:

$$E = 4.10 P^{0.67}$$

For process weight rates in excess of sixty thousand (60,000) pounds/hour

$$E = 55.0 P^{0.11} - 40$$

Where: E = Allowable PM emissions in pounds per hour
P = Process weight rate in tons/hr

The source is in compliance with this rule using water curtains to control the PM overspray.

- (c) 326 IAC 8-2-2 (Surface Coating Emission Limitation for Automobile and Light-Duty Truck):
- (1) The proposed modification will not affect the limits set forth in the existing permit PSD (79) 1651, issued on July 30, 1987 for the coating facilities. These limits are still in effect and will stay the same.
 - (2) The proposed PVC Undercoating Booth is not subject to this rule, because the under body part that is coated by this booth is not one of the body parts of an automobile and light duty truck that is subject to this rule.
 - (3) The modification of the existing Plastic Bumper Coating Booth is not subject to this rule, because the Bumper is not one of the body parts of an automobile and light duty truck that is subject to this rule.
- (d) 326 IAC 8-2-9 (Surface Coating Emission Limitation for Miscellaneous Metal Coating Operations):
The proposed PVC Undercoating Booth to be dedicated in undercoating of Isuzu vehicles is subject to this rule. This rule mandates a limit in the volatile organic compounds (VOC) content of the **extreme performance coatings** applied in undercoating of these vehicles to 3.5 pounds per gallon of coating, excluding water.

This Undercoating Booth is in compliance with the rule, since it will utilized the same compliant coatings currently being utilized by the existing undercoating booth which coats both Subaru and Isuzu vehicles.
- (e) 326 IAC 8-1-6 (General Reduction Requirements)
- (a) The proposed modification will not affect the limits set forth in the existing permit PSD (79) 1651, issued on July 30, 1987 for the plastic coating facilities. These limits are still in effect and will stay the same.

- (b) The Plastic Bumper Coating Booth is still subject to this rule.

Subaru-Isuzu had notified OAM to discontinue the use of the electrostatic application. Tests were conducted in 1998 by Dames and Moore to evaluate the impact on VOC and particulate emissions from this process revisions. The initial transfer efficiency tests for the electrostatic application were conducted by Roy F. Weston Consultants in August 1990. Tests are as follows:

Transfer Efficiencies - Plastic Bumper Coating			
Test Coating	July 1998 Tests w/o Electrostatic (Air Atomization)	August 1990 Tests w/ Electrostatic	June 1987 PSD BACT Determination
Metallic	61.5%	56.63%	42.6%
Monocoat	46.7%	56.87%	46%

The replacement of the electrostatic application system with an air atomization system, has no significant effect, since the air atomization system still exceeds the efficiencies determined in the PSD BACT.

- (f) 326 IAC 2-1-3.4 (New Sources Toxics Control Rule)
The source or the proposed PVC undercoating booth is **not** subject to this rule or the MACT because of the following reasons:
- (1) The PVC undercoating booth is not an independent facility by itself that can produce an intermediate or a final product. It is one of the several units that make up a process or a production line.
 - (2) The vehicle production increase also constitutes a modification and therefore, should not be subject to this rule. It is also minor for HAPs emissions, because the combined HAPs emissions are less than 25 tons per year.
 - (3) The replacement of the electrostatic application system into an air atomization system also constitute a modification and therefore, should not be subject to this rule.

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 189 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) The modification will emit levels of air toxics greater than those that constitute major source applicability according to Section 112 of the Clean Air Act. However, the source had used creditable VOC reductions that resulted in a contemporaneous VOC net emissions increase of 344 tons^{VOC}/year. In this case, the HAPs emissions will also follow with the VOC emissions, and the combined HAPs emissions are less than 25 tons per year.
- (b) See page 3 of 9 of this TSD, for detailed air toxic calculations.

Conclusion

The construction of this modification will be subject to the conditions of the attached proposed **Construction Permit No. CP-157-9619-00050.**

Indiana Department of Environmental Management Office of Air Management

Addendum to the Technical Support Document for New Construction and Operation

Source Name: Subaru-Izusu Automotive, Inc.
 Source Location: 5500 State Road 38 East, Lafayette, Indiana 47903
 County: Tippecanoe
 Construction Permit No.: CP-157-9619-00050
 SIC Code: 3711
 Permit Reviewer: Aida De Guzman

On December 28, 1998, the Office of Air Management (OAM) had a notice published in the Journal & Courier, Lafayette, Indiana, stating that Subaru-Izusu Automotive, Inc. had applied for a construction permit to construct and operate the modification to increase the annual vehicle production from 240,000 to 262,000 with control. 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 January 26, 1999 and February 4, 1999, Subaru-Izusu Automotive, Inc. submitted comments on the proposed construction permit. The summary of the comments and corresponding responses is as follows (changes are bolded and strike-through are deleted for emphasis):

Comment 1: Subaru-Izusu Automotive (SIA) respectfully request the following changes to Condition D.1.1 on Page 13 of 19 of the proposed permit:

SIA proposed the following revisions to Section (1) of this condition for the purposes of clarification only. The language proposed to be stricken implies that the production "limit" shall not exceed 1,200 vehicles a day, which is somewhat confusing grammatically. What is being limited is the daily production and the limit proposed for such production is 1,200 vehicles per day. It seems more straightforward and clear to restate this as follows:

D.1.1 (1) The source's total production shall be limited to 262,000 vehicles per 12 consecutive month period. ~~This limit shall not exceed a maximum of 1,200 vehicles at any given day.~~ **Daily production at the source shall not exceed 1,200 vehicles.**

Response 1: Condition D.1.1(1) is revised to reflect your comments and will have the condition stated as the source proposed.

Comment 2: SIA has provided data on VOC/unit of production solely as a convenient means of describing its long-term average actual VOC emissions rate and the decreases that have occurred over time in that average emissions rate. SIA disagrees with IDEM in imposing the emission limit expressed in pounds per unit of production as a means of assuring the enforceability of past emission reductions which have been applied in the netting of contemporaneous emission increases and decreases. The enforceability of these past reductions should be assured by the imposition of an overall source VOC limit which is calculated on the basis of the new production limit and the VOC per unit of production

that has resulted from those reductions. The 1,421 tons per year VOC limit as proposed directly reflects the past VOC reductions inherent in an overall long-term VOC emission rate of 10.85 pounds per unit. This limit is directly based upon the past reductions and therefore makes them enforceable. Therefore, D.1.1(2) should be revised as follows:

D.1.1(2) The volatile organic compounds (VOC) emissions **from the source** shall be limited to: ~~an average of 10.85 pounds per vehicle, calculated per 12 consecutive month period. This limit shall not exceed 11.96 pounds per any model at any given time.~~

**(a) 1,421 tons per 12 month period, rolled on a monthly basis;
and**

(b) a maximum of 14,352 pounds for any calendar day.

~~Limits (1) and (2) of this condition will limit the sourcewide VOC emissions to 1,421 tons per 12 month period. This emission limit shall not exceed a maximum of 14,352 pounds at any given day.~~

Compliance with this Operation Condition will make 326 IAC 2-2 the Prevention of Significant Deterioration (PSD) and 40 CFR 52.21 not applicable.

Response 2: OAM agrees that the past emission reductions which have been applied in the netting of contemporaneous emission increases and decreases for the purposes of PSD analysis can be imposed through a source VOC limit. The limit in pounds of VOC per unit of production will be deleted and Condition D.1.1(2) will be revised to reflect your comments.

The Reporting Forms in the proposed permit were also revised to reflect this changed in the VOC emissions limitation.

Comment 3: Condition D.1.4 on Page 14 of 19 of the proposed permit should only state the pound per hour PM emissions limit under 326 IAC 6-3 from the vehicle production. The remainder of the proposed condition D.1.4 merely explains the derivation and background for the PM limitation and can be adequately stated in the Technical Support Document. Its inclusion here is superfluous and unnecessary.

Response 3: OAM considers it essential to include the equation under 326 IAC 6-3 in the permit condition, which determine the process PM allowable emissions. Condition D.1.4 of the proposed permit stays the same.

Comment 4: Condition D.1.9 as proposed to be modified below, should be adequate to identify specific compliance monitoring activities for the particulate overspray emissions from coating operations. The proposed weekly monitoring of water curtain performance is unnecessary given the type of underflow water curtain used at the SIA plant. It is sufficient to verify that the water curtain is in operation on a daily basis. (Note; it is unclear whether this condition is intended to apply only to the new proposed PVC Undercoat Booth or to all coating booths at the SIA plant). There is no need to specify response steps here since reporting of compliance monitoring and of any response to permit deviations is already in Part C of the proposed permit and would be redundant in this condition.

D.1.9 Monitoring

- (a) Daily inspections shall be made **to verify the operation of** ~~on~~ all the water curtains used for the surface coating operation ~~to verify its performance. To monitor the performance of the water curtains, weekly observations shall be made of the overspray while the booth is in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.~~
- (b) Monthly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. ~~The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an overspray emission, evidence of overspray emission, or other abnormal emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.~~

Response 4: Condition D.1.9 of the proposed permit is intended for all new and existing coating booths at the source, since the increase in the vehicle production will affect all the existing facilities used in the manufacture of vehicles.

The goal of the C section is to set out the compliance requirements that are applicable to the entire source. The D section set out conditions that are specific to the facilities listed in this section.

The intent of Condition D.1.9 of the proposed permit is to make sure that the water curtains are operating properly to ensure continuous compliance. This condition is revised to reflect the way the water curtains are operated. The revision is as follows:

D.1.9 Monitoring

- (a) Daily **visual** inspections shall be made ~~of~~ ~~on~~ all surface coating ~~operation~~ ~~operation to verify its performance~~ **booths used in the vehicle production to verify that (i) the continuous underflow water curtain is operating properly to provide full coverage of the flood pan and (ii) the downdraft air system is providing sufficient air flow for normal booth operation.** To monitor the performance of the water curtain **systems**, weekly observations shall be made ~~of the overspray while the booth is in operation~~ **during the operation of each surface coating booth to determine whether any visible overspray is leaving the booths.** The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (b) Monthly inspections shall be performed of the coating emissions **from the surface coating booths'** stacks and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for ~~this unit~~ **these units** shall contain troubleshooting contingency and response steps for when an

overspray emission, evidence of overspray emission, or other abnormal emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

On January 27, 1999, the Environmental Protection Agency (EPA) Region 5, made the following comments to the proposed construction permit (changes are bolded and strike-through are deleted for emphasis):

Comment 1: The calculations for PM emissions list 0.131 pound of PM per vehicle (lb/veh) as the average actual emissions for the last two (2) years. How was this number determined?

Also, the future potential potential rate is listed as 0.153 lb/veh. How is this determined? Is this maximum potential rate?

Response 1: The 0.131 lb/veh average emissions for the last two(2) years, was determined based on the company's coating overspray, taking into account the efficiency of the spray systems used, and the vehicles produced.

0.153 lb/veh is a typographical error. Item (1) for Future Potential PM Emissions on Page 4 of 10 of the Technical Support Document is revised as follows:

$$\begin{aligned} (1) \quad \text{Future Pot'l PM Emissions} &= \frac{262,000 \text{ veh/yr}}{222,000 \text{ veh/yr}} * 0.131 \text{ lb/veh} * \text{ton/2000 lb} \\ &= 0.153 \text{ lb/veh} * 262,000 \text{ veh/yr} * \text{ton/2000 lb} \\ &= 20.17 \text{ ton/yr} \end{aligned}$$

Comment 2: The past actual emissions for PM is calculated based on the ratio of future VOC emissions and past actual (based on weighted average) VOC emissions. How accurate is this method? Doesn't this source have any actual data of past PM emissions?

The past actual NOx emissions is calculated based on the ratio of future potential VOC emissions and past actual (based on weighted average) VOC emissions. How accurate is this method? Doesn't this source have actual data of past Nox emissions?

Response 2: A re-calculation of the PM and NOx emissions were made using the two years average past actual emissions. The emissions based on the ratio and proportion are worse than the new calculations. The new calculations are as follows:

PM or PM10 Emissions from the Vehicle Production:

Based on the source submitted PM emissions data, the average actual PM emissions for the last 2 years was 0.131 lb/veh.

$$\begin{aligned} (1) \quad \text{Future Pot'l. PM Emissions} &= 262,000 \text{ veh/yr} * 0.131 \text{ lb/veh} * \text{ton/2000 lb} \\ &= 17.6 \text{ ton/yr} \end{aligned}$$

$$\begin{aligned} (2) \quad \text{Past Actual Emissions:} & \\ 1997 - 0.141 \text{ lb/veh.} & - 186,892 \text{ veh/yr} \\ 1998 - 0.131 \text{ lb/veh.} & - 225,000 \text{ veh./yr} * \text{data from 10/97 thru 3/98} \end{aligned}$$

$$\begin{aligned} \text{Weighted Average} &= (0.141 \text{ lb/veh} * 186,892 \text{ veh/yr}) + 0.131 \text{ lb/veh} \\ &\quad (225,000 \text{ veh/yr} - 186,892 \text{ veh/yr}) \\ &= \frac{26,352 \text{ lb/yr} + 4992 \text{ lb/yr}}{2000 \text{ lb/ton}} \\ &= 10.68 \text{ ton/yr} \end{aligned}$$

(3) Emissions from the Modification = 17.6 ton/yr - 10.68 ton/yr
 = 6.92 ton/yr

Nox Emissions from the Vehicle Production:

Based on the source submitted actual natural gas usage, the average actual usage for the last 2 years is as follows:

$$635.1 \text{ MMCF/yr} * 1 \text{ year} / 225,000 \text{ veh} = 0.0028 \text{ MMCF/veh}$$

(1) Future Potential Emissions = 262,000 veh/yr * 0.0028 MMCF/veh
 = 733.6 MMCF/yr * 100 lb NOx/MMCF * ton/2000 lb
 = 36.7 ton/yr

(2) Past Actual Emissions:
 1997 actual NOx Emissions - 35.16 ton/yr - 186,892 veh/yr - 0.000188 ton/veh
 1998 actual NOx Emissions - 35.7 ton/yr - 225,000 veh/yr - 0.00016 ton/veh

(3) Weighted Average = [(0.000188 ton/veh * 186,892 veh/yr) + [(0.00016 ton/veh * (225,000 veh/yr - 186,892 veh/yr)]
 = 35.13 ton/yr + 6.09 ton/yr
 = 41.25 ton/yr

(4) NOx Emissions Increase from the Modification:
 = 36.7 ton/yr - 41.25 ton/yr
 = - 4.6 ton/yr

This new PM and NOx emissions calculations will result in the revisions of the **Proposed Modification** Table on page 7 of 10 of the TSD as follows:

Proposed Modification

Pollutant	PM (ton/yr)	PM10 (ton/yr)	SO ₂ (ton/yr)	VOC (ton/yr)	CO (ton/yr)	NO _x (ton/yr)
Proposed Modification	20 17.6	20 17.6	0	1,421	0	41.8 36.7
Contemporaneous Increases	0	0	0	0	0	0
Contemporaneous Decreases	46.8 10.68	46.8 10.68	0	1,195 192	0	99.2 41.25
Net Emissions	3.2 6.92	3.2 6.92	0	34.0	0	48.8 - 4.6
PSD Significant Level	25	15	40	40	100	40