

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live

Evan Bayh Governor Kathy Prosser Commissioner

May 6, 1996

100 North Senate Avenue P.O. Box 6015 Indianapolis, Indiana 46206-6015 Telephone 317-232-8603 Environmental Helpline 1-800-451-6027

CERTIFIED MAIL

Z 441 073 116

Arvin North American Automotive 1001 Hurricane Street Franklin, Indiana 46131

Re:

A-081-5706

Plant ID Correction

Ladies and Gentlemen:

On April 3, 1996, the Office of Air Management issued Construction Permit to Arvin North American Automotive, 1001 Hurricane Street, Franklin, Indiana, for the construction and operation of Cadillac paint line consisting of the following:

- a) one (1) spray paint booth,
- b) one (1) natural gas fired dry off oven, and
- c) three (3) natural gas fired parts washer combustion units.

On Page 1 of 3 of the construction permit, the Plant Identification Number of the source has been incorrectly written as 005-00020. The correct Plant ID No. is 081-00020.

Therefore, this administrative amendment corrects the Plant ID No. from 005-00020 to 081-00020 of CP-081-4910, issued on April 3, 1996. All conditions and limitations of CP-081-4910 shall remain unchange and in effect.

Please attach this amendment to the original permit.

Sincerely

Paul Dubenetzky, Chief

Permits Branch

Office of Air Management

ilc

cc: File -- Johnson County

Johnson County Health Department Air Compliance Section -- D. J. Knotts Permit Tracking -- Janet Mobley Data Support Section -- Nancy Landau Permit Reviewer -- Yogesh Parikh

SENDER: Complete items 1 and/or 2 for additional services. Complete items 3, and 4a & b. Print your name and address on the reverse of this form so tha return this card to you. Attach this form to the front of the mailpiece, or on the back if does not permit. Write "Return Receipt Requested" on the mailpiece below the article "The Return Receipt will show to whom the article was delivered and elivered.	f space cle number. nd the date	Consult postmaster for fee.
3. Article Addressed to: Arvin No American Auto 1001 Hurricane St Franklin IN 46131 Corr. A-081-5706 5. Signature (Addressee) 6. Signature (Agent) PS Form 3811, December 1991 #U.S. GPO: 1993—352	4b. Ser Regi	icle Number Z 441 073 116 vice Type stered

CHECK LIST FOR THE ADMINISTRATIVE ADJUDICATION ACT (AAA)

Company Aruin North American CP# A 081-5706
County JOHNSON COUNTY City FRANKLIN
Draft Public Notice
Permanent County & Company AAA List checked No list/Date List attached
Final Permit
Permanent County & Company AAA List checked No list/Date List attached
Amendment
Permanent County & Company AAA List checked No list vm /Date 4/17/96 List attached
The following are concerned citizens:
<u> </u>
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D5

CONSTRUCTION PERMIT

Control No. 02011



Page 1 of <u>3</u>

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT VED

P.O. Box 6015 Indianapolis, Indiana 46206-6015

APR 03 1996

ARVIN NORTH AMERICAN AUTOMOTIVE
1001 HURRICANE STREET
FRANKLIN, INDIANA

STATE OF INDIANA

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OFFICE OF AIR MANAGEMENT

is hereby authorized to construct and operate

Cadillac paint line that includes the following:

- a) one (1) spray paint booth with a rated capacity of 137 mufflers per hour. Type of spray coating includes electrostatic air atomized guns, with overspray controlled by the dry filters, exhausting to Stack S-2
- b) one (1) natural gas-fired dry off oven with a rated capacity of 6.4 million Btu per hour of heat input, exhausting to Stack S-3, and,
- c) three (3) natural gas-fired parts washer combustion units with a rated capacity of 1.5, 1.5, and 0.8 million Btu per hour of heat input to each gas burner, exhausting to Stack S-1

THIS PERMIT IS ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1 AND 40 CFR 52.780, WITH CONDITIONS LISTED ON THE ATTACHED PAGES.

Identification No.	CP	081-4910
	ID	005-00020
Expiration Date	N/A	

Issued by Commissioner Ty

Date Issued _April 3

Page 2 of 3 CP No. 081 -4910 Plt ID No. 081 -00020

Arvin North American Automotive Franklin, Indiana Permit Reviewer Name: Yogesh Parikh

Construction Conditions

- 1. That the data and information supplied with the application shall be considered part of this permit. Prior to <u>any</u> proposed change in construction which may affect potential emissions, this change must be approved by the Office of Air Management (OAM).
- That this permit to construct does not relieve the permittee of the possibility to comply with the provisions of the Indiana Department of Environmental Management Law (IC 13-7), Air Pollution Control Law (IC 13-1-1) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
- 3. That the equipment shall be installed in accordance with the manufacturer's specifications, and as stated in the application.
- 4. That pursuant to 326 IAC 2-1-9(b) the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is discontinued for a period of one (1) year or more.
- 5. That notwithstanding Condition No. 6, all requirements and conditions of this construction permit shall remain in effect unless modified consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2.
- 6. That this document shall also become the first-time operation permit pursuant to 326 IAC 2-1-4 when, prior to start of operation, the following requirements are met:
 - a. The attached affidavit shall be submitted to the Office of Air Management (OAM), verifying that the facilities were constructed as proposed in the application. If construction is done in phases; ie construction is not done continuously, one 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.
 - b. Permittee shall receive an Operation Permit Validation Letter from the Chief of the Air Compliance Section and attach it to this document.

The first-time operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-1-7.1

The permittee shall apply for an operation permit renewal at least ninety (90) days prior to the expiration date established in the validation letter.

7. That when the facility is constructed and placed into operation the following operation conditions shall be met:

Page 3 of 3 CP No. 081 -4910 Plt ID No. 081 -00020

Arvin North American Automotive Franklin, Indiana

Permit Reviewer Name: Yogesh Parikh

Operation Conditions

- 1. That the data and information supplied in the application shall be considered part of this permit. Prior to <u>any</u> change in the operation which may result in an increase in potential emissions exceeding those specified in 326 IAC 2-1-1, this change must be approved by the Office of Air Management (OAM).
- 2. That the permittee shall comply with the provisions of the Indiana Environmental Management Law (IC 13-7), Air Pollution Control Law (IC 13-1-1) and the rules promulgated thereunder.
- 3. That the equipment shall be operated and maintained in accordance with the manufacturer's specifications.
- 4. Pursuant to 326 IAC 8-2-9, the volatile organic compounds content of the coating applied to the muffler of the motor vehicle exhaust system shall be limited to 3.5 pounds per gallon of coating delivered to the applicator less water.
- 5. That the records of the quantity of VOC emitted from the permitted Cadillac paint line which includes a spray paint booth and the three stages parts washer with the dry off oven shall be maintained for a minimum period of 24 months and made available upon request of the Office Of Air Management. Any change or modification which may increase potential emissions from the spray paint booth, three stages parts washer and the dry off oven and the other equipment covered under this permit shall obtain a permit pursuant to 326 IAC 2-1.
- 6. That the particulate matter overspray from the surface coating facilities shall be considered in compliance with 326 IAC 6 provided that the overspray is not:
 - a) visibly detectable at the exhaust and
 - b) accumulated on the rooftops or on the ground.
- 7. Pursuant to 326 IAC 2-6-4, the owner / operator shall submit an emission statement of the facility for VOC emissions.

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

The submittal must be received by the Office of Air Management each year by April 15. The submittal must comply with the requirements contained in 326 IAC 2-6 and shall cover the latest twelve (12) consecutive month period starting December 1, and ending November 30.

Mail to:

Permit Administration & Development Section

Office Of Air Management 100 North Senate Avenue

P. O. Box 6015

Indianapolis, Indiana 46206-6015

Arvin North American Automotive 1001 Hurricane Street Franklin, Indiana 46131

Affidavit of Construction

l,	being duly sworn upon my oath, depose and say	/ :
1.	I live in County, Indiana and being of sound mind and over the twenty -one (21) years of age, I am competent to give this affidavit.	
2.	I hold the position of for	
3.	By virtue of my position with I have personal knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of	
4.	I hereby certify that Arvin North American Automotive, 1001 Hurricane Street, Frankli Indiana 46131, has constructed Cadillac Paint line with the spray paint booth, three (3) stage parts washer combustion units and the dry - off oven with the requirements and intent of the construction permit application received by the Office of Air Management on September 29,1995 as permitted pursuant to Construction Permit No. CP- 081 - 4910, Plant ID No. 081 - 00020 issued on	je ne er

Further Affiant said not.

I affirm under penalties of perjury that the repres my information and belief.	entations contained in this affidavit are tru	ue, to the best of
	Signature	
	Name (typed or printed)	
	Date	
STATE OF INDIANA))SS		
COUNTY OF)		
Subscribed and sworn to me, a notary p	ublic in and for	County
and State of Indiana on this	day of,	19
My Commission expires:	·	
	Signature	
	Name (typed or printed)	

Indiana Department of Environmental Management Office of Air Management

Technical Support Document (TSD) for New Construction and Operation

Arvin North American Automotive 1001 Hurricane Street Franklin, Indiana 46131

The Office of Air Management has reviewed an application from Arvin North American Automotive, relating to construction and operation of a Cadillac paint line to increase the current production of mufflers in the existing facility.

Arvin North American Automotive currently operates two (2) paint lines at the Franklin plant which are defined as the Cadillac line and the Mazda line. The Mazda line was permitted in 1992. The interim construction permit CP 081-3535, Plt ID 081-00020 was issued to the Cadillac paint line on February 11, 1994, and was put on operation in July 1994. The Cadillac line generated approximately 4.4 tons of VOC emissions in 1994 and the Mazda paint line generated approximately 4.0 tons of VOC in 1994. The remaining 2.1 tons of VOC emissions at the facility were from cleaning the paint equipment and fuel combustion. The total VOC emissions from the source is reported to be 10.5 tons per year. The Mazda line is currently not in use and its future use is uncertain. However, there are no plans to use the Mazda line in the foreseeable future.

The Cadillac line has potential to emit VOC emissions of 33.6 tons per year. Arvin North American Automotive has requested to relax their limit to 99 tons per year. This constitutes that the facility has never operated as a major source in the past and will continue to operate as a minor source.

The Cadillac paint line includes one (1) spray paint booth and a three (3) stage parts washer area with natural gas fired drying oven.

The spray paint booth will increase the production rate from 96 mufflers to 137 mufflers per hour with this proposed modification. The method of paint application is by electrostatic air atomized guns with the overspray controlled by dry filters with 95.0% control efficiency. There are no controls provided to control VOC emissions.

The construction of the Cadillac paint line started in 2/11/94 and was completed in 6/11/94. The interim construction permit was issued on 2/11/94. There was no operation permit issued at that time, and this facility has been in operation. This will be referred to IDEM Office of Enforcement because the source is operating without an operation permit (OWOP)

Stack Summary:

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (ºF)
S-1	Parts washer	29.0	2.0	7,030	450
S-2	Spray booth	29.0	2.5	30,000	Ambient
S-3	Drying oven	29.0	1.0	7,500	450

Plt ID No. 081 -00020

Arvin North American Automotive Franklin, Indiana Permit Reviewer: Yogesh Parikh

Enforcement Issue

IDEM is aware that this Cadillac paint line has been operated prior to receipt of the proper permit. IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction permit rules.

Recommendation

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

A construction application for the purposes of this review was received on September 29, 1995, with additional information received on October 26, 1995.

Emissions Calculations

See Appendix A (Emissions Calculation Spreadsheets) for detailed calculations.

Total Allowable Emissions

Total Allowable Emissions Definition (emissions after compliance with the rules, based on 8,760 hours of operation per year at rated capacity):

Pollutant	Emissions (tons/year)
PM	58.4
VOC	94.5
CO	0.9
NO _x	4.4

Allowable emissions (as defined in the Indiana Rule) of Volatile Organic Compounds and the particulate matter are greater than 25 tons per year. Therefore, the facility or source in question requires a construction permit pursuant to 326 IAC 2-1, section 1 and 3.

County Attainment Status

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

Johnson County has been classified as attainment or unclassifiable for the rest of the 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.

Page 3 of 4 CP No. 081 -4910 Plt ID No. 081 -00020

Arvin North American Automotive Franklin, Indiana Permit Reviewer: Yogesh Parikh

Source Status:

The Existing source PSD Definition (emissions based upon the letter, dated October 25,1995, from Mr. Andrew H Weisman of Pacific Environmental Services, Inc.) is as follows:

Pollutant

Tons per year

Volatile Organic Compounds (VOC)

10.5

This existing source is not a major stationary source because emissions of VOC are not emitted at a rate of 250 tons per year or greater. Therefore, pursuant to 326 IAC 2-2 and 40 CFR 52.21, the PSD requirements do not apply.

Proposed Modification

Allowable PSD emissions from the proposed modification (after compliance with applicable rules, based on 8,760 hours of operation per year at 137 mufflers per hour) are as follows:

Pollutant	P M (ton/yr)	VOC (ton/yr)	CO (ton/yr)	NO _x (ton/yr)
Proposed Modification	3.9	94.5	0.9	4.4
PSD or Offset Threshold Level	250	250	250	250

See attached calculation sheets for detailed calculations.

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

Federal Rule Applicability

There are no New Source Performance Standards (326 IAC 12) applicable to this facility.

State Rule Applicability

326 IAC 8-2-9 (Miscellaneous Metal Coating Operations)

This painting is subject to the above rule. Pursuant to this rule, the volatile organic compound content of coatings applied to the motor vehicle exhaust system shall be limited to:

Air dried coatings: 3.5 lb of VOC/ gallon of coating less water

Based on the volume weighted average, the VOC content is 3.50 lb/gallon of coating. Therefore, it complies with the applicable rule. See Appendix A for detailed compliance calculation.

Arvin North American Automotive Franklin, Indiana Permit Reviewer: Yogesh Parikh CP No. 081 -4910 Plt ID No. 081 -00020

326 IAC 2-6 (Emission reporting)

The modification of the Cadillac paint line does not emit more than 100 tons per year of VOC. Therefore, it is not subject to the rule 326 IAC 2-6.

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of 189 selected hazardous pollutants. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries in the state. They are listed as air toxic on the Office of Air Management (OAM) Construction Permit Application Form Y.

This proposed modification will emit levels of air toxics greater than those that constitute major source applicability according to Section 112 of the Clean Air Act. The concentrations of these air toxics were modeled and found to be (in worst case possible) as follows: The concentrations of these air toxics were compared to the Permissible Exposure Limits (PEL) developed by the Occupational Safety and Health Administration (OSHA). The Office of Air Management (OAM) does not have at this time any specific statutory or regulatory authority over these substances. The applicant has been notified in writing that the air toxic emissions exceed the major source applicability levels stated by Section 112 of the Clean Air Act Amendments, and that it would be beneficial, both to the applicant and to the public, for the applicant to take steps to reduce or eliminate these air toxic emissions.

Air Toxic Analysis

Pollutant	Rate (lb/hr)	Rate @ 8,760 hr/yr (ton/yr)	Modeled Concentration (mg/m3)	OSHA PEL (mg/m3)	% OSHA PEL
Toluene	0.2479	1.0858	0.00464	375.0	0.001
Xylene	7.4900	32.8062	0.13700	435.0	0.030
Glycol Ethers	0.3229	1.4143	0.00199	N/A	N/A
Total	8.0608	35.3063			

Methodology:

Rate (ton/yr) = (rate; lb/hr) * (hr/yr of operation)* (1 ton/2,000 lbs.)

Building Dimensions: Height = 24.0 feet, width = 620.0 feet and length = 940.0 feet.

Conclusion

The modification of this Cadillac paint line used for manufacturing motor vehicle exhaust systems with spray paint booth, three (3) stage washer area and the drying oven will be subject to the conditions of the attached construction permit **CP# 081 -4910**, **Plt Id. # 081 -00020**.

Appendix A

Arvin North American Automotive 1001 Hurricane Street Franklin, Indiana CP No. 081 - 4910 - 00020 Emission Calculations:

I. Emissions from the parts washer and dry off oven:

The drying oven has a gas fired burner rated at 6.4 MM Btu per hour and the three stage parts washer has gas fired burners with a rated capacity of 1.5, 1.5 and 0.8 MM Btu per hour. The total usage of natural gas in these washers is 3.8 MM Btu per hour. The total throughput of natural gas will be 10.2 MMBtu per hour which is equivalent to 89.35 MMCF per year.

Pollutant	PM	PM ₁₀	SO ₂	NOx	voc	co
Emission factor in lb/MMCF	12.00	12.00	0.60	100.0	3.80	21.00
Potential Emissions in Tons/yr.	0.54	0.54	0.03	4.42	0.17	0.94
Total	0.54	0.54	0.03	4.42	0.17	0.94

Methodology:

Pollutant in tons per year =(Maximum throughput ,MMCF/yr) x (emission factor, lb/MMCF) x (1 ton/2,000 lb)

Emissions factors are from AP42 1.4- Natural Gas Combustion (EPA 450/4-90-003, SCC # 1-03-006-03)

II. Emissions from the spray booth S-2: See attached spread sheet for detailed calculations

III. Allowable Emissions Summary: All the emissions listed in the following table are in tons per year.

Process or equipment	PM	voc	NOx	SO ₂	со
Combustion	0.54	0.17	4.42	0.03	0.94
Painting operations	57.89	94.29	0.00	0.00	0.00
Total	58.43	94.46	4.42	0.03	0.94

IV. VOC Emissions after control:

Since there are no controls provided, the VOC emissions after controls will remain the same as potential emissions.

V. PM Emissions after control:

PM emissions after control = Emissions of PM before the control x (1-% control efficiency)

= 57.89 tons/year x (1-0.95)

 $= 13.75 \times 0.05 = 2.89$ tons/year.

Arvin North American Automotive Franklin, Indiana

CP No. 081 -4910 Plt ID No. 081 -00020

VI. Summary of Emissions after control: All emissions listed in the following table are in tons/year.

Process or equipment	РМ	voc	NOx	SO ₂	со
Combustion	0.54	0.17	4.42	0.03	0.94
Paint booth	2.89	94.29	0.00	0.00	0.00
Total	3.43	94.46	4.42	0.03	0.94

VII. Compliance verification of 326 IAC 8-2-9:

Rule 326 IAC 8-2-9: Extreme duty coating, the limit is 3.5 lb. of VOC per gallon of coating less water.

Average VOC in lb/gal of coating = summation of (lb of VOC / gal of coating less volume of water in that coating x use of each coating in gal/unit)/ Summation of total volume of coating in gallons per unit. Average VOC in lb/gal of coating less water = VF = $(V_1xF_1 + V_2xF_2 + V_3xF_3.....+V_{19}xF_{19})$ / F = F₁+ F₂+ F₃.....F₁₉

Where $V_1 = \underline{\text{Density Ib/gal } x(\text{ Wt. of \% organic - Wt. \% water)} \times \underline{\text{gal/unit}}}$ (1 - % weight of water x <u>density of the coating</u>)

a x density of the coating

density of water

= column II x column III

column IV

and F₁ = Volume of each coating in gal/unit.(column I)

Volume of each coating F=gal/unit	Density in lb/gal	Wt. of % organic	1- (wt. % of water) (density_of the coating) /density of water	VF = I x II x III IV
ı	II	III	IV	v
0.04400	11.79	29.30	1-0=1	0.1519
0.04400	12.30	28.70	1-0=1	0.1553
0.00025	7.24	100.00	1-0=1	0.0018
0.08825				0.3090

VF (from column V) = $V_1F_1 + V_2F_2 + V_3F_3 = 0.1519 + 0.1553 + 0.0018 = 0.3090$ F (from column I) = $F_1 + F_2 + F_3 = 0.04400 + 0.04400 + 0.00025 = 0.08825$

Page 3 of 3

Arvin North American Automotive Franklin, Indiana

CP No. 081 -4910 PIt ID No. 081 -00020

Therefore, VF/F = 0.3090 / 0.08825 = 3.50 lb of VOC/gal. of coating less water.

Therefore, the proposed coating will comply with applicable rule 326 IAC 8-2-9.

Plant Point/Segment ID

Use this form to enter new segments or modifications into the AFS system. The BOLD information is necessary for new segment data of existing plant. Use a separate sheet for each segment added. Use RED ink to make modifications in existing segments only. When entering a new plant, all information must be filled in.

CP#: 884 Plant # 081 - 00020 CPS Eng: #	
Plant Name: Arvin North American Automotive, Franklin Plant New Segment Modify Existing:Circle o	ne: N/M
Plant Address: 1001 Hurricane Street City/Zip: Franklin 46131	
Contact Person: Robert Elliot Phone #: (317)736-7111 Primary SIC Code: 3714	
Mail Address/Zip: Same	
Point #Segment#Stack#SCC#	_
Description of process for point Noc emission from Sprong Pow both of Max Design Rate (MDR) NIA (list units e.g. T/H) Annual Process Weight Rate NU Ann Fuel Usage 89-35 MMCF Fuel Data: Suplhur (%) NA Ash (%) NA Heat Content 100	n J - Co BN/CU.F
Hours of Operation: Hrs/Day 24 Days/Week 7 Weeks/Year 32	2 -
Control Equipment (description) Nove for Vac Emissims, Dy fileus for Pr Pollutant PM Em. Factor Appl Rule Control Eff.% Allow: Pollutant Voc Em. Factor Appl Rule Control Eff.% Allow:	
Pollutant Em. Factor Appl Rule Control Eff.% Allow:	
Pollutant Em. Factor Appl Rule Control Eff.% Allow:	
Pollutant Em. Factor Appl Rule Control Eff.% Allow:	
Pollutant Em. Factor Appl Rule Control Eff.% Allow:	
Stack Ht. (ft.) $\frac{29.0}{}$ Stack Dia.(ft.) $\frac{2.5}{}$ Plume Height(ft)(only if no ht. or dia. available) $\frac{N/\Lambda}{}$	
Exit Gas Temp (f) Ambient Gas Flow Rate (acfm) 30,000 UTM H: UTM V:	_
Construction Permit #: 049-4910 Facility Subject to: PSD NSPS Subpart MA Offsets NESHA	Р
Are tests required as part of the operating or construction permit?	_
What time limits are given to the company to complete testing?	_
Permit limited potential? Y / W What are the limitations?(amount)	
Permit limited potential? Y/N What are the limitations?(amount) None Describe what the limitations are for: Noc 2m1351mm (3-5 lb/gd g a	natily)
For NEW plants or processes, fill form out completely. For entering petroleum storage tank data, please see NJL	
Date Entered:Year of Emission Inventory Inspector:	