

July 8, 2003

Mr. Pravin Patel
Rolls Royce
2355 South Tibbs Avenue
Indianapolis, Indiana 46206

Re: 097-17398-00311 First Significant Permit Modification to Part 70 No.: T 097-7238-00311

Dear Mr. Pravin Patel:

Rolls Royce was issued a permit on August 8, 2003 for the operation of this manufacturing and testing facilities for aerospace engines. A letter requesting changes to this permit was received on June 9, 2003. Pursuant to the provisions of 326 IAC 2-7-12, a significant permit modification to this permit is hereby approved as described in the attached Technical Support Document.

The modification consists of the addition of three (3) new paint booths.

All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this modification and the following revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Ms. Angelique Oliger, OES, 2700 South Belmont Avenue, Indianapolis, Indiana, 46221, or call (317) 327-2846.

Sincerely,

Original Signed by John B. Chavez
John B. Chavez
Administrator

Attachments: Technical Support Document
Affected Permit Pages

aco

cc: File
Air Compliance, Matt Mosier
IDEM, Mindy Hahn
Permits, Angelique Oliger

PART 70 OPERATING PERMIT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY and CITY OF INDIANAPOLIS OFFICE OF ENVIRONMENTAL SERVICES

**Rolls Royce Corporation
Plant 8 - 2001 South Tibbs Avenue
Plant 5 - 2355 South Tibbs Avenue
Indianapolis, Indiana 46241**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15, IC 13-17 and the Code of Indianapolis and Marion County, Chapter 511.

Operation Permit No.: T097-7238-00311	
Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: August 15, 2003 Expiration Date: August 15, 2008

First Significant Permit Modification: T 097-17398-00311	
Issued by: ORIGINALLY SIGNED BY: John B. Chavez, Administrator Office of Environmental Services	Issuance Date: October 17, 2003

(b) Five (5) gas turbines identified below:

Emission Unit ID No.	Unit Identification	Maximum Capacity, MMBtu/hr	Fuels Permitted to use	Stack No.	Date Constructed or last permitted
0070-76	Gas Turbine	51	Natural Gas, Landfill gas	5-22	1999
0070-79	Gas Turbine	48	Natural Gas, Landfill gas	8-79	1999
0070-80	Gas Turbine	68	Natural Gas, Landfill gas	8-80	1999
0070-81	Gas Turbine	80	Natural Gas, Landfill gas	8-81	pending
0070-71	Gas Turbine	35	Natural Gas	8-9	1999

(c) Nine (9) paint booths identified as emission units 0070-N56a and 0070-N56b, units 0070-10a, 0070-10b, 0070-10c, 0070-10d, 0070-84, 0070-85, and 0070-86, controlled by dry filters, exhausting out stacks identified as SN56 a & b, 5-10a, 5-10b, 5-10c, 5-10d, S-84, S-85, and S-86, respectively. Paint booths 0070-N56a and 0070-N56b, units 0070-10a, 0070-10b, 0070-10c, and 0070-10d were installed prior to 1974 and modified in 1998 to comply with the aerospace NESHAPs. Paint booths 0070-84, 0070-85, and 0070-86 were installed in 2003.

(d) Facility-wide wipe cleaning operations.

(e) Degreasing operations, constructed prior to 1990, consisting of:

- (1) Two (2) Open Top Vapor Degreasers, identified as emission units 0070-13 and 0070-31, using perchloroethylene as the solvent, exhausting inside the building and reconstructed in 1997.
- (2) One (1) Open Top Vapor Degreasers, identified as emission units 0311-82 is permitted to use N-Propyl Bromide and Perchloroethylene as the solvent, exhausting inside the building and reconstructed in 2000.
- (3) Portable Cold Cleaner Degreasing Tanks, used for degreasing parts, identified as emission unit 0070-12, using mineral spirits as the solvent and exhausting into the building.
- (4) Spray cleaning booths, identified as emission unit 0070-14, using mineral spirits as the solvent and exhausting outside the building.

(f) Miscellaneous sand and shot Blast Machines operations identified as:

- (1) Emission unit 0070-08, shot blasting, each controlled by a baghouse, exhausting out stack 5-8, constructed in 1964.
- (2) Emission unit 0070-N55, miscellaneous sanding and blasting, controlled by dust collector, exhausting out stack SN55, constructed in 1991.
- (3) Emission unit 0070-74, sand blasting, controlled by a baghouse, exhausting out stack 8-18, constructed prior to 1969.

(g) Woodworking operations, prior to 1969, consisting of:

- (1) Emission unit 0070-72, controlled by dust collector, exhausting out stack 8-16,

- (b) A quarterly summary of the information to document compliance with condition D.1.5, D.1.6, and D.1.8, shall be submitted to the addresses 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.

SECTION D.2 FACILITY OPERATION CONDITIONS

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

- (c) Nine (9) paint booths identified as emission units 0070-N56a and 0070-N56b, units 0070-10a, 0070-10b, 0070-10c, 0070-10d, 0070-84, 0070-85, and 0070-86, controlled by dry filters, exhausting out stacks identified as SN56 a & b, 5-10a, 5-10b, 5-10c, 5-10d, S-84, S-85, and S-86, respectively. Paint booths 0070-N56a and 0070-N56b, units 0070-10a, 0070-10b, 0070-10c, and 0070-10d were installed prior to 1974 and modified in 1998 to comply with the aerospace NESHAPs. Paint booths 0070-84, 0070-85, and 0070-86 were installed in 2003.
- (d) Facility-wide wipe cleaning operations.

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

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

D.2.1 General Provisions Relating to HAPs [326 IAC 20-1-1][40 CFR 63, Subpart A]

The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR Part 63.743(a)(4) through (a)(10) and in Table 1 of 40 CFR 63, Subpart GG.

D.2.2 Applicability [326 IAC 20-15-1] [40 CFR 63, Subpart GG]

The provisions of 40 CFR 63, Subpart GG and 326 IAC 20-15-1 which incorporates by reference 40 CFR 63, Subpart GG, National Emission Standards for Aerospace Manufacturing and Rework Facilities, apply to the facility described in this section.

D.2.3 Standards for Cleaning Operations [40 CFR 63.744]

- (a) Pursuant to 40 CFR 63.744 (a), the Permittee shall comply with the housekeeping measures of 40 CFR 63.744(a), paragraphs (1) through (3) below, unless the cleaning solvent used is identified in Table 1 of 40 CFR 63.744, or contains HAP or VOC below the de-minimis levels specified in 63.741(f).
- (1) Pursuant to 40 CFR 63.744(a)(1) place cleaning solvent-laden cloth, paper, or other absorbent applicators used for cleaning in bags or other closed containers upon completing their use. Ensure that these bags and containers are kept closed at all times, except when depositing or removing these materials from the container. Use bags and containers of such design so as to contain the vapors of the cleaning solvent. Cotton tipped swabs used for very small cleaning operations are exempt from this requirement.
- (2) Pursuant to 40 CFR 63.744(a)(2) store fresh and spent cleaning solvents, except semi-aqueous solvent cleaners, used in aerospace cleaning operations in closed containers.
- (3) Pursuant to 40 CFR 63.744(a)(3) conduct the handling and transfer of cleaning

- (e) The requirements of 40 CFR 63.745(g)(1) through (3) do not apply to the situations listed in 40 CFR 63.745(g)(4).

D.2.7 Control Device Requirements [326 IAC 20-15-1] [40 CFR 63, Subpart GG]

Pursuant to 40 CFR 63.743(b) dry particulate filter systems operated per the manufacturer's instructions are exempt from a startup, shutdown, and malfunction plan.

D.2.8 Compliance Monitoring Requirements for Aerospace Manufacturing and Rework Facilities [326 IAC 20-15] [40 CFR 63.751, Subpart GG]

The compliance monitoring requirements of 40 CFR 63.751 are applicable to the cleaning operations and dry particulate filter system. The Permittee shall perform monthly visual inspection requirements for enclosed spray gun cleaners pursuant to 40 CFR 63.751(a). The Permittee shall also continuously monitor, read and record the pressure drop once per shift pursuant to 40 CFR 63.751(c).

D.2.9 VOC Emissions [326 IAC 8-2-9]

Any change or modification to the facilities listed below which may increase the actuals before add-on controls shall obtain prior approval from the Office of Environmental Services (OES) and Office of Air Quality (OAQ). Current equipment operations are as follows:

- (a) paint booths identified as, N56a and N56b, VOC actual emissions before add-on controls of less than 15 pounds of VOC per day each; and
- (b) paint booths identified as, 0070-10a, 0070-10b, 0070-10c, 0070-10d, 0070-84, 0070-85, and 0070-86, VOC actual emissions before add-on controls of less than 15 pounds of VOC per day each.

Compliance with this condition shall make the Miscellaneous Metal Parts Rule 326 IAC 8-2-9 not applicable.

D.2.10 Particulate Matter Emissions [326 IAC 6-1-2(a)]

Pursuant to 326 IAC 6-1-2(a) the PM emissions from each paint booth, identified as emission units 56Na, 56Nb, 0070-10a, 0070-10b, 0070-10c, 0070-10d, 0070-84, 0070-85, and 0070-86, shall not exceed 0.03 grains per dry standard cubic foot of exhaust air.

D.2.11 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the dry filters and parametric monitoring associated with emission units N56a, N56b, 0070-10a, 0070-10b, 0070-10c, 0070-10d, 0070-84, 0070-85, and 0070-86.

Compliance Determination Requirements

D.2.12 Compliance Testing and Procedures for Aerospace Manufacturing and Rework Facilities [326 IAC 20-15] [40 CFR 63.750, Subpart GG]

The compliance test methods and procedures of 40 CFR 63.750 are to be used for demonstrating compliance with the cleaning operations. The specific requirements include the following:

- (a) The composition and vapor pressure requirements for cleaning operations shall be determined by the test methods and procedures specified in 40 CFR 63.750(a) and (b).
- (b) Dry particulate filters used to comply with 40 CFR 63.745(g)(2) must be certified by the filter manufacturer or distributor, paint/depainting booth supplier, and/or the facility owner or operator using method 319 in appendix A of subpart A of this part, to meet or

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

Technical Support Document (TSD) for a Part 70 Significant Source
Modification & a Significant Permit Modification

Source Background and Description

Source Name:	Rolls Royce Corporation
Source Location:	Plant 8 - 2001 South Tibbs Avenue, Indianapolis, Indiana 46241
Source Location:	Plant 5 - 2355 South Tibbs Avenue, Indianapolis, Indiana 46241
County:	Marion
SIC Code:	3724
Operation Permit No.:	T097-7238-00311
Operation Permit Issuance Date:	August 8, 2003
Sig. Source Mod. No.:	097-17981-00311
Sig. Permit Mod. No.:	097-17398-00311
Permit Reviewer:	Angelique Oliger

The Office of Air Quality (OAQ) and Office of Environmental Services (OES) have reviewed a modification application from Rolls Royce Corporation relating to the construction of the following emission units and pollution control devices:

- (a) Three (3) paint booths identified as emission units 0070-84, 0070-85, and 0070-86, controlled by dry filters, exhausting out stacks identified as S-84, S-85, and S-86, respectively. Paint booths 0070-84, 0070-85, and 0070-86 are to be installed in 2003.

History

On June 9, 2003, Rolls Royce Corporation submitted an application to the OES requesting to add additional surface coating lines to their existing plant. Rolls Royce Corporation was issued a Part 70 permit on August 13, 2003. This is a significant source modification and a significant permit modification because the additional surface coating lines have the potential to emit greater than twenty-five (25) tons per year of volatile organic compounds (VOC).

Source Definition

Rolls Royce Corporation consists of two (2) plants:

- (a) Plant 8 is located at 2001 South Tibbs Avenue, Indianapolis, Indiana 46241; and
- (b) Plant 5 is located at 2355 South Tibbs Avenue, Indianapolis, Indiana 46241.

Since the two (2) plants are located in contiguous properties, have the same SIC codes and are owned by one (1) company, they are considered one (1) source.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
S84	70-84	30	2.5	8000	ambient
S85	70-85	30	2.5	8000	ambient
S86	70-86	30	2.5	8000	ambient

Recommendation

The staff recommends to the Administrator that the Part 70 Significant Source Modification and Significant Permit Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on June 9, 2003.

Emission Calculations

See Appendix A (two pages) of this document for detailed emissions calculations.

Potential To Emit of Modification Before Controls

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

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	10.09
PM-10	10.09
SO ₂	negligible
VOC	37.00
CO	negligible
NO _x	negligible

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

HAP's	Potential To Emit (tons/year)
methyl isobutyl ketone	8.37
formaldehyde	0.23

toluene	5.35
phenol	0.70
xylene	5.76
chromium compounds	2.02
TOTAL	22.44

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 1999 OES STEPS Summary.

Pollutant	Actual Emissions (tons/year)
PM	23.42
PM-10	18.41
SO ₂	56.40
VOC	53.95
CO	53.13
NO _x	236.83

HAPs	Actual Emissions (tons/year)
Tetrachloroethylene	2.50

Justification for Modification

The Part 70 source and operating permit are being modified through a Part 70 Significant Permit Modification and a Part 70 Source Modification. The source was issued a Title V Permit on August 13, 2003. This is a significant source modification because the additional surface coating lines have the potential to emit greater than twenty-five (25) tons per year of volatile organic compounds (VOC). This is a significant permit modification because it does not qualify for a minor permit modification under 326 IAC 2-7-12(b).

County Attainment Status

The source is located in Marion County.

Pollutant	Status
PM-10	Attainment
SO ₂	Maintenance Attainment
NO ₂	Attainment
Ozone	Maintenance Attainment
CO	Maintenance Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Marion County has been designated as attainment or unclassifiable for ozone.
- (b) Marion County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Emission Unit	Limited Potential to Emit (tons/year)						
	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
0070-67 (12) Gas Turbine Engines	(4)	N.L.	N.L.	N.L.	N.L.	N.L.	N.L.
0070-68 (10) Gas Turbine Engines	(4)	N.L.	N.L.	N.L.	N.L.	N.L.	N.L.
0070-69 (4) Gas Turbine Engines	(4)	N.L.	N.L.	N.L.	N.L.	N.L.	N.L.
0070-70 (3) American Shack Heater	(4)	N.L.	(5)	N.L.	N.L.	N.L.	N.L.
0070-N3 to 0070-N54 (51) Engine Test Cells	(4)	N.L.	(5)	N.L.	N.L.	N.L.	N.L.
0070-09 (x) Blade Grinding Booths	(4)	N.L.	N.L.	N.L.	N.L.	N.L.	N.L.
0070-08 (x) Shot Blast Machines	(4)	N.L.	N.L.	N.L.	N.L.	N.L.	N.L.
0070-72 Woodworking Pattern Shop	(4)	N.L.	N.L.	N.L.	N.L.	N.L.	N.L.
0070-73 Woodworking Carpenter Shop	(4)	N.L.	N.L.	N.L.	N.L.	N.L.	N.L.
0070-74 Sandblasting Equipment	(4)	N.L.	N.L.	N.L.	N.L.	N.L.	N.L.
0070-75 Woodworking	(4)	N.L.	N.L.	N.L.	N.L.	N.L.	N.L.
0070-N55 Mics. Sanding, Blasting and Grinding	(4)	N.L.	N.L.	N.L.	N.L.	N.L.	N.L.
0070-99 Hard Chrome Plating	(4)	N.L.	N.L.	N.L.	N.L.	N.L.	(9)
Insignificant Tanks 1 through 6 and 9 through 20 at plant 5 and tanks 1 through 5 at plant 8	N.L.	N.L.	N.L.	N.L.	N.L.	N.L.	N.L.

- (1) Pursuant to 326 IAC 6-1-12, the PTE for emissions unit 0070-01 through 0070-04, 0070-58, 0070-59, and 0070-62 through 0070-65 combined is limited to 130 tons per year
- (2) Pursuant to 326 IAC 7-4-2(2), the PTE SO₂ from emission units 0070-01 through 0070-04 are limited to 299.4 pounds per hour and 3.55 pounds per million Btu for each boiler individually.
- (3) Pursuant to 326 IAC 7-4-2(28), the PTE SO₂ from emission units 0070-58, 59, 62, 63, 64, and 65 are limited to 2.1 pounds per million Btu when combusting fuel oil and following the operating requirements in 326 IAC 7-4-2(28)(B)(i) through (iii).
- (4) Pursuant to 326 IAC 6-1-2(a), the PTE PM for emission units 0070-08, 0070-09, 0070-10, 0070-66, 0070-67, 0070-68, 0070-69, 0070-70, 0070-71, 0070-72, 0070-73, 0070-74, 0070-75, 0070-76, 0070-79, 0070-80, 0070-81 0070-N3 through 0070-N54, 0070-N55, and 0070-N56 are each limited to 0.03 grains per dry standard cubic feet.
- (5) Pursuant to 326 IAC 7-1.1-2 the SO₂ emissions from 0070-70, N3 through N54 are limited to 0.5 lbs/MMBtu when firing distillate oil.
- (6) Pursuant to 40 CFR Part 63 Subpart T the PTE HAPs from emission units 0070-13 and 0070-31 by operating requirements of Subpart T.

- (7) Pursuant to 40 CFR Part 60 Subpart (GG) the PTE for NO_x and SO₂ from emissions unit 0070-71, 76, 79, 80 and 81 are limited.
- (8) Pursuant to 40 CFR Part 63 Subpart (GG) the PTE HAPs from emission units 0070-N56 are limited.
- (9) Pursuant to 40 CFR Part 63 Subpart N the PTE for Total Chromium Emissions from the emissions unit 0070-99 is limited.
- (10) Pursuant to condition 9 of CP099-0311-01, issued on June 10, 1999 the PM-10 and NO_x emissions from emission units 01, 02, 03, 04, 58, 59, 62, 63, 64, 65, 76, 79, 80, and 81 are limited to less than 130 tons of PM-10 and 325.74 tons of NO_x per twelve consecutive month period.

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.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to these paint booths.
- (b) These paint booths are subject to the National Emission Standards for Hazardous Air Pollutants, 326 IAC 14, (40 CFR 60.741, Subpart GG), because they are engaged in the manufacture of commercial, civil, or military aerospace vehicles or components and is a major source as defined in 40 CFR §63.2. The requirements of this subpart have been applied to the source in the past.
- (c) The provisions of 40 CFR Part 63, Subpart A- General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the new paint booths except when otherwise specified in 40 CFR Part 63.743(a)(4) through (a)(10) and in Table 1 of 40 CFR 63, Subpart GG.
- (d) The provisions of CFR 63, Subpart GG and 326 IAC 20-15-1 which incorporates by reference 40 CFR 63, Subpart GG, National Emission Standards for Aerospace Manufacturing and Rework Facilities, apply to the new paint booths.
 - (1) Pursuant to 40 CFR 63.743(b) dry particulate filter systems operated per the manufacturer's instructions are exempt from a startup, shutdown, and malfunction plan.
 - (2) The compliance test methods and procedures of 40 CFR 63.750 are to be used for demonstrating compliance with the painting operations. The specific requirements include the following:
 - (A) Dry particulate filters used to comply with 40 CFR 63.745(g)(2) must be certified by the filter manufacturer or distributor, paint/depainting booth supplier, and/or the facility owner or operator using method 319 in appendix A of subpart A of this part, to meet or exceed the efficiency data points found in Tables 1 and 2, or 3 and 4 of 40 CFR 63.745 for existing or new sources respectively as outlined in 40 CFR 63.750(o).
 - (3) The compliance monitoring requirements of 40 CFR 63.751 are applicable to the dry particulate filter system. The Permittee shall perform monthly visual inspection requirements for enclosed spray gun cleaners pursuant to 40 CFR 63.751(a). The Permittee shall also continuously monitor, read and record the pressure drop once per shift pursuant to 40 CFR 63.751(c).
 - (4) Pursuant to 40 CFR 63.752(d) *Primer and topcoat application operations--inorganic HAP emissions* and to demonstrate compliance, the operator shall record the pressure drop across the dry filter system once each

shift during which coating operations occur. The acceptable limit(s) of pressure drop, as specified by the filter manufacturer should be included in the log.

- (5) Pursuant to 40 CFR 63.753(c) *Primer and topcoat application operations*
- (A) All times when a primer or topcoat application operation was not immediately shut down when the pressure drop across a dry particulate filter system was outside the limit specified by the filter manufacturer
 - (B) If the operations have been in compliance for the semiannual period, a statement that the operations have been in compliance with the applicable standards; and
 - (C) Annual reports listing the number of times the pressure drop for each dry filter system was outside the limit specified by the filter manufacturer.

State Rule Applicability - Entire Source

326 IAC 1-6-3 (Preventive Maintenance Plan)

A Preventive Maintenance Plans (PMP) should have been developed for each facility that was formerly permitted as a registration level or higher. A Part 70 application requirement 326 IAC 2-7-4(c)(10) is a confirmation that the source maintains on-site a preventive maintenance plan as described in 326 IAC 1-6-3. Since, 326 IAC 1-6-1 is applicable to any facility that requires a registration or Minor source operating permit, IDEM, OAQ developed a guidance for determining applicability of a PMP for each facility permitted under the Part 70 program.

Based on OES's review a PMP is not required for emissions units 70-84, 70-85, and 70-86. They are subject to the Aerospace NESHAP but are exempt from any primer and topcoat application operations requirements, because the coatings used are "specialty coatings". Since the paint booths are not regulated, but the dry filters and parametric monitoring are used to assure compliance with state rules, it has been determined that a PMP will only be required for the dry filters and parametric monitoring associated with emission units 0070-84, 0070-85, and 0070-86.

326 IAC 1-5-2 (Emergency Reduction Plans)

The source has submitted an Emergency Reduction Plan (ERP) on September 9, 1992. The ERP has been verified to fulfill the requirements of 326 IAC 1-5-2 (Emergency Reduction Plans).

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than ten (10) tons per year of VOC and is located in Marion County. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by April 15 of each year and contain the minimum requirement as 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).

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

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

continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

Three (3) Paint Booths (Emission unit 0070-84, 0070-85, and 0070-86)

APPLICABILITY: 326 IAC 2-4.1-1 (New Source Toxics Control)

Since July 27, 1997, all modifications have had a net HAP emission increase of less than 10 tons per year of a single HAP and less than 25 tons per year of any combination of HAPs. Therefore, 326 IAC 2-4.1-1 does not apply.

APPLICABILITY: 326 IAC 8-2-9 Miscellaneous Metal Coating

Emission units 0070-84, 0070-85, and 0070-86, to be installed in 2003, are located at a source which coats metal parts or products under the Standard Industrial Code (SIC) of major group #37. The source keeps records of actual usage rates and the actuals for these facilities have been less than 15 pounds per day since the rule's inception. The company must continue to keep records to ensure the emissions do not exceed 15 pounds per day. Consequently, the Miscellaneous Metal Parts Regulation 326 IAC 8-2-9 does not apply.

APPLICABILITY: 326 IAC 8-6 Organic Solvent Emission Limitations

Emission units 0070-84, 0070-85, and 0070-86 are located at a source which has the potential to emit 100 tons per year of VOC, but none were constructed between October 7, 1974 and January 1, 1980. Consequently, the Organic Solvent Emission Limitations regulation at 326 IAC 8-6 does not apply.

PERMIT LIMIT: VOC Emissions [326 IAC 8-1]

Any change or modification to the facilities listed below which may increase the actuals before add-on controls shall obtain prior approval from the Office of Environmental Services (OES) and Office of Air Quality (OAQ). Current equipment operations are as follows:

- (a) Paint booths, identified as 0070-84, 0070-85, and 0070-86, have actual VOC emissions before add-on controls of less than 15 pounds of VOC per day each.

Compliance with this condition shall make the Miscellaneous Metal Parts Rule 326 IAC 8-2-9 not applicable.

APPLICABILITY: 326 IAC 6-1-2 PM Limitations

Marion County is listed under 326 IAC 6-1-7. However, emission units 0070-84, 0070-85, and 0070-86 are not specifically listed in 326 IAC 6-1-12 and the source has the potential to emit one hundred (100) tons or more of particulate matter per year. Since the 326 IAC 6-1-2(b) through (g) are not applicable, then 326 IAC 6-1-2(a) applies to emission units 0070-84, 0070-85, and 0070-86.

PERMIT LIMIT: Particulate Matter Emissions [326 IAC 6-1-2(a)]

Pursuant to 326 IAC 6-1-2(a) the PM emissions from each paint booth, identified as emission units 0070-84, 0070-85, and 0070-86, shall not exceed 0.03 grains per dry standard cubic foot of exhaust gas.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

Compliance monitoring plans for demonstrating compliance are as follows under Rule 326 IAC 2-7-5(3) which requires all permitted sources to demonstrate that all emitting units are in continuous compliance with all "applicable requirements" as defined by 326 IAC 2-7-1(6). Compliance is demonstrated by taking sufficient measurements of emissions or operating parameters or by gathering other data.

Based on IDEM and OES's review Compliance Monitoring is required for the following emission units:

- (a) Emission unit 0070-84, 0070-85, and 0070-86 shall have CM requirements, since these units are subject to the Aerospace NESHAP but are exempt from any primer and topcoat application operations requirements, because the coatings used are "specialty coatings". Since the dry filters and parametric monitoring are used to assure compliance, it has been determined that CM will be required for the dry filters and parametric monitoring associated with emission units 0070-84, 0070-85, and 0070-86. However, emission units 0070-84, 0070-85, and 0070-86 have Compliance Monitoring required by 40 CFR 63, Subpart GG and 326 IAC 20-15-1 that satisfied Part 70 compliance monitoring requirements.

The compliance monitoring requirements applicable to this source are as follows:

1. For the surface coaters 0070-84, 0070-85, and 0070-86 Compliance Monitoring is satisfied by the requirements of 40 CFR 63, Subpart GG and 326 IAC 20-15-1.

Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 097-17981-00311 and Significant Permit Modification No. 097-17398-00311.

**Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations**

**Company Name: Rolls-Royce
Address City IN Zip: 2355 South Tibbs Avenue, Indianapolis, Indiana 46241
CP: 097-17981-00311 & 097-17398-00311
Reviewer: Angelique Olinger
Date: July 8, 2003**

Material	Density (Lb/Gal)	Weight % Volatile (H2O& Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Vol (solids)	Gal of Mat (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential ton/yr	lb VOC /gal solids	Transfer Efficiency
Deft Gray	9.75	47.85%	0.0%	47.9%	0.0%	0.00%	1	1	4.67	4.67	4.67	111.97	20.43	5.57	#DIV/0!	75%
Surf-Kote M1284	9.17	59.00%	0.0%	59.0%	0.0%	5.00%	1	1	5.41	5.41	5.41	129.85	23.70	4.12	108.21	75%
Amtes RC-21	7.34	88.00%	0.0%	88.0%	0.0%	12.00%	1	1	6.46	6.46	6.46	155.02	28.29	0.96	53.83	75%
Blue Resin Coating	5.35	71.20%	0.0%	71.2%	0.0%	22.60%	1	1	3.81	3.81	3.81	91.42	16.68	1.69	16.85	75%
Aiseal 598	10.40	50.00%	0.0%	50.0%	0.0%	0.00%	1	1	5.20	5.20	5.20	124.80	22.78	5.69	#DIV/0!	75%
AMFSN	11.92	62.25%	0.0%	62.3%	0.0%	0.00%	1	1	7.42	7.42	7.42	178.08	32.50	4.93	#DIV/0!	75%
Siloxseal 210	9.76	62.00%	57.0%	5.0%	0.0%	23.00%	1	1	0.49	0.49	0.49	11.71	2.14	4.06	2.12	75%
Siloxseal 225	9.34	75.50%	69.7%	5.8%	0.0%	24.30%	1	1	0.54	0.54	0.54	13.00	2.37	2.51	2.23	75%
Aiseal 500	13.26	63.70%	0.0%	63.7%	0.0%	36.30%	1	1	8.45	8.45	8.45	202.72	37.00	5.27	23.27	75%
Aiseal 518	13.76	60.80%	0.0%	60.8%	0.0%	39.20%	1	1	8.37	8.37	8.37	200.79	36.64	5.91	21.34	75%
Aiseal 370	10.84	60.00%	0.0%	60.0%	0.0%	0.00%	1	1	6.50	6.50	6.50	156.10	28.49	4.75	#DIV/0!	75%
Sermabond	30.71	70.00%	70.0%	0.0%	0.0%	50.00%	1	1	0.00	0.00	0.00	0.00	0.00	10.09	0.00	75%
State Potential Emissions													37.00	10.09		

Add worst case coating to all solvents

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

**Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations**

Company Name: Rolls-Royce
Address City IN Zip: 2355 South Tibbs Avenue, Indianapolis, Indiana 46241
Plt ID: 097-17981-00311 & 097-17398-00311
Reviewer: Angelique Oliger
Date: July 8, 2003

Material	Density (lb/ gal)	Usage (gal/hr)	HAP Percent by Weight						Hap Emissions (tons/yr)						
			methyl isobutyl ketone	formaldehyd	Toluene	phenol	xylene	Chromium Compounds	methyl isobutyl ketone	formaldehyde	Toluene	phenol	xylene	Chromium Compounds	Total HAPs Emissions
Deft Gray	8.22	1.00	20.00%	0.0%	0.0%	0.00%	0.00%	0.00%	7.20	0.00	0.00	0.00	0.00	0.00	7.20
Surf-Kote M1284	9.17	1.00	0.00%	0.0%	0.0%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Amtes RC-21	7.33	1.00	0.00%	0.0%	13.0%	0.00%	0.00%	0.00%	0.00	0.00	4.17	0.00	0.00	0.00	4.17
Blue Resin Coating	5.35	1.00	5.00%	1.0%	5.0%	3.00%	5.00%	0.00%	1.17	0.23	1.17	0.70	1.17	0.00	4.45
Alseal 598	10.40	1.00	0.00%	0.0%	0.0%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AMFSN	11.92	1.00	0.00%	0.0%	0.0%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Siloxseal 210	9.76	1.00	0.00%	0.0%	0.0%	0.00%	5.00%	0.00%	0.00	0.00	0.00	0.00	2.14	0.00	2.14
Siloxseal 225	9.34	1.00	0.00%	0.0%	0.0%	0.00%	6.00%	3.30%	0.00	0.00	0.00	0.00	2.45	1.35	3.80
Alseal 500	13.26	1.00	0.00%	0.0%	0.0%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alseal 518	13.76	1.00	0.00%	0.0%	0.0%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alseal 370	10.84	1.00	0.00%	0.0%	0.0%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sermabond	30.71	1.00	0.00%	0.0%	0.0%	0.00%	0.00%	0.50%	0.00	0.00	0.00	0.00	0.00	0.67	0.67
Total HAP Emissions:									8.37	0.23	5.35	0.70	5.76	2.02	22.44