

Terri Evans
Brunner Engineering & Manufacturing
P. O. Box 1367
Bedford, IN 47421

Re: 093-14347-00010
Minor Source Modification to:
Part 70 permit No.: T093-7549-00010

Dear Ms. Evans:

Brunner Engineering & Manufacturing was issued Part 70 operating permit T093-14347-00010 on November 2, 2000 for operation of a stationary metal pressure vessels manufacturing plant. An application to modify the source was received on May 10, 2001. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

- (a) One (1) paint spray booth, identified as PP1, utilizing an airless and air-assisted airless system, coating a maximum of 1180 square feet of steel tanks per hour, using dry filters for particulate matter overspray control, and exhausting to one stack, identified as PP-01;
- (b) One (1) natural gas fired bake oven, identified as BkO1, with a maximum heat input capacity of 1.65 million British thermal units per hour (MMBtu/hr), for drying the coated tanks from spray booth PP1, with emissions exhausting to stacks BkO-01 and BkO-02;
- (c) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour:
 - (1) One (1) dry-off oven, identified as NDO1, rated at 0.5 MMBtu/hr and exhausting to one (1) stack, identified as NDO-01;
 - (2) Two (2) water heaters, each rated at 1.5 MMBtu/hr; and
- (d) Degreasing operations performed with an aqueous-based phosphate cleaner (consists of an aqueous parts washer, identified as NW1 and exhausting to four (4) stacks, NW-01 to NW-04).

The following construction conditions are applicable to the proposed project:

- General Construction Conditions
1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).

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

The source may begin construction when the minor source modification has been issued. Operating conditions shall be incorporated into the Part 70 operating permit as a minor permit modification in accordance with 326 IAC 2-7-10.5(l)(2) and 326 IAC 2-7-12.

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 call Nishat Hydari at (973) 575-2555, ext. 3216, or call (800) 451-6027, press 0 and ask for extension 3-6878.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments
NH/EVP

cc: File - Lawrence County
Lawrence County Health Department
Air Compliance Section Inspector - Joe Foyst
Compliance Data Section - Karen Nowak
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michele Boner

PART 70 OPERATING PERMIT OFFICE OF AIR QUALITY

**Brunner Engineering & Manufacturing
800-900 X Street
Bedford, Indiana 47421**

(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 and IC 13-17.

Operation Permit No.: T093-7549-00010	
Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Management	Issuance Date: November 2, 2000 Expiration Date: November 2, 2005
First Minor Source Modification No.: 093-14347-00010	Pages Affected: 4, 5, 27, 28, 29
Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Quality <i>Original signed by Paul Dubenetzky</i>	Issuance Date: June 12, 2001

SECTION A

SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

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

The Permittee owns and operates a stationary metal pressure vessels manufacturing plant.

Responsible Official:	Darryl Zupancic
Source Address:	800-900 X Street, Bedford, IN 47421
Mailing Address:	800-900 X Street, Bedford, IN 47421
Phone Number:	(812) 275-5931
SIC Code:	3443
County Location:	Lawrence
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Minor Source, under PSD or Emission Offset Rules; Major Source, Section 112 of the Clean Air Act

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

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

- (a) One (1) paint spray booth, identified as #7, utilizing an air atomization system, coating a maximum of 911 square feet of steel tanks per hour, using dry filters for particulate matter overspray control, and exhausting to one (1) stack, identified as C4;
- (b) One (1) paint spray booth, identified as PP1, utilizing an airless and air-assisted airless system, coating a maximum of 1180 square feet of steel tanks per hour, using dry filters for particulate matter overspray control, and exhausting to one stack, identified as PP-01; and
- (c) One (1) natural gas fired bake oven, identified as BkO1, with a maximum heat input capacity of 1.65 million British thermal units per hour (MMBtu/hr), for drying the coated tanks from spray booth PP1, with emissions exhausting to stacks BkO-01 and BkO-02.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour:
 - (1) one (1) furnace at 660 thousand Btu per hour,
 - (2) one (1) furnace at 6.6 million Btu per hour,
 - (3) one (1) furnace at 80 thousand Btu per hour ,
 - (4) one (1) furnace at 65 thousand Btu per hour,

- (5) one (1) furnace at 85 thousand Btu per hour,
 - (6) one (1) furnace at 120 thousand Btu per hour;
 - (7) one (1) furnace at 120 thousand Btu per hour,
 - (8) one (1) furnace at 120 thousand Btu per hour;
 - (9) one (1) water heater at 40 thousand Btu per hour,
 - (10) One (1) dry-off oven, identified as NDO1, rated at 0.5 MMBtu/hr and exhausting to one (1) stack, identified as NDO-01; and
 - (11) Two (2) water heaters, each rated at 1.5 MMBtu/hr.
- (b) Combustion source flame safety purging on startup;
 - (c) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids;
 - (d) Machining where an aqueous cutting coolant continuously floods the machining interface;
 - (e) Degreasing operations performed with an aqueous-based phosphate cleaner (consists of an aqueous parts washer, identified as NW1 and exhausting to four (4) stacks, NW-01 to NW-04);
 - (f) The following equipment related to manufacturing activities resulting in the emission of HAPs below insignificant emission levels: brazing equipment, cutting torches, soldering equipment, welding equipment;
 - (g) Process vessel degassing and cleaning to prepare internal repairs;
 - (h) Paved and unpaved roads and parking lots with public access;
 - (i) Blowdown for any of the following: sight glass, boiler, compressors, pumps, and cooling tower;
 - (j) Other categories with emissions below insignificant thresholds:
 - (1) welding operations with PM-10 emission less than twenty-five (25) pounds per day,
 - (2) one (1) plate burner with PM-10 emissions less than twenty-five (25) pounds per day,
 - (3) one (1) hole burner with PM-10 emissions less than twenty-five (25) pounds per day,
 - (4) one (1) fork lift operation utilizing multiple forklifts with PM-10 emissions less than twenty-five (25) pounds per day, and
 - (5) aerosol spray paint cans with VOC emissions less than fifteen (15) pounds per day.

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

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

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION D.1 FACILITY OPERATION CONDITIONS

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

- (a) One (1) paint spray booth, identified as #7, utilizing an air atomization system, coating a maximum of 911 square feet of steel tanks per hour, using dry filters for particulate matter overspray control, and exhausting to one (1) stack, identified as C4;
- (b) One (1) paint spray booth, identified as PP1, utilizing an airless and air-assisted airless system, coating a maximum of 1180 square feet of steel tanks per hour, using dry filters for particulate matter overspray control, and exhausting to one stack, identified as PP-01; and
- (c) One (1) natural gas fired bake oven, identified as BkO1, with a maximum heat input capacity of 1.65 million British thermal units per hour (MMBtu/hr), for drying the coated tanks from spray booth PP1, with emissions exhausting to stacks BkO-01 and BkO-02.

(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.1.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]

- (a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coatings applied to metal parts or products in each of the two (2) paint spray booths (identified as #7 and PP1) shall be limited to 3.5 pounds of VOC per gallon of coating less water delivered to the applicator, for air dried, forced warm air dried, or extreme performance coatings.
- (b) Solvent sprayed from the application equipment during clean up or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

D.1.2 Particulate Matter (PM) [326 IAC 6-3-2]

The PM from the two (2) paint booths (#7 and PP1) shall not exceed the pound per hour emission rate established as E in the following formula:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

D.1.3 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 these facilities and any control devices.

Compliance Determination Requirements

D.1.4 Volatile Organic Compounds (VOC)

Compliance with the VOC content contained in Condition D.1.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.5 Particulate Matter (PM)

The dry filters for PM control shall be in operation at all times when the two (2) paint booths (#7 and PP1) are in operation.

D.1.6 Monitoring

- (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, the Permittee shall monitor the pressure drop across the dry filters twice per day when one or more of the paint booths are in operation. The pressure drop shall remain within the range established by the manufacturer's specifications.
- (b) The Permittee shall, on a weekly basis, monitor surface coating booth stacks C4 and PP-01 for evidence of visible emissions while one or more of the booths are in operation. During this inspection, the Permittee shall also inspect the nearby ground for the presence of overspray.
- (c) The Permittee, shall, on a semiannual basis, monitor for the presence of overspray on the rooftops.
- (d) The Compliance Response Plan shall be followed whenever a condition exists that 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.
- (e) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.7 Record Keeping Requirements

- (a) To document compliance with Condition D.1.1, the Permittee shall maintain records in accordance with (1) below. Records maintained for (1) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Condition D.1.1.
 - (1) 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;
- (b) To document compliance with Conditions D.1.5 and D.1.6, the Permittee shall maintain a log of daily, weekly, and semiannual inspections. The Permittee shall maintain a log of pressure drop readings, and record the dates that dry filters are replaced. The pressure drop log shall indicate the base measurement for establishing the pressure drop range.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Page Intentionally Left Blank

**Indiana Department of Environmental Management
Office of Air Quality**

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

Source Background and Description

Source Name:	Brunner Engineering & Manufacturing
Source Location:	800-900 X Street, Bedford, IN 47421
County:	Lawrence
SIC Code:	3443
Operation Permit No.:	T093-7549-00010
Operation Permit Issuance Date:	November 2, 2000
Minor Source Modification No.:	093-14347-00010
Permit Reviewer:	NH/EVP

The Office of Air Quality (OAQ) has reviewed a modification application from Brunner Engineering & Manufacturing relating to the operation of a stationary metal pressure vessels manufacturing plant.

History

On May 10, 2001, Brunner Engineering & Manufacturing submitted an application to the OAQ requesting modifications to their existing plant. The modifications consist of the following:

- (a) Replacement of existing paint booths B1 and B2 with new paint booth PP1;
- (b) Replacement of existing drying oven D1 with new bake oven BkO1 (only the oven is being replaced, the same natural gas burner from the drying oven will be used in the bake oven);
- (c) Replacement of the existing parts washer with a new aqueous parts washer (the new aqueous parts washer will use an aqueous-based phosphate cleaner just as the existing parts washer did);
- (d) Addition of a dry-off oven;
- (e) Replacement of the existing 1.0 MMBtu/hr water heater with two (2) new 1.5 MMBtu/hr water heaters.

Brunner Engineering & Manufacturing was issued a Part 70 permit on November 2, 2000.

New Emission Units and Pollution Control Equipment

The application includes information relating to the construction of the following equipment pursuant to 326 IAC 2-7-10.5(d):

- (a) One (1) paint spray booth, identified as PP1, utilizing an airless and air-assisted airless system, coating a maximum of 1180 square feet of steel tanks per hour, using dry filters for particulate matter overspray control, and exhausting to one stack, identified as PP-01;
- (b) One (1) natural gas fired bake oven, identified as BkO1, with a maximum heat input capacity of 1.65 million British thermal units per hour (MMBtu/hr), for drying the coated tanks from spray booth PP1, with emissions exhausting to stacks BkO-01 and BkO-02.

Permitted Emission Units and Pollution Control Equipment Removed from the Source

- (a) One (1) paint spray booth, identified as B1, utilizing an airless and air-assisted airless system, coating a maximum of 968 square feet of steel tanks per hour, using dry filters for particulate matter overspray control, and exhausting to one (1) stack, identified as C1;
- (b) One (1) paint spray booth, identified as B2, utilizing an airless and air-assisted airless system, coating a maximum of 968 square feet of steel tanks per hour, using dry filters for particulate matter overspray control, and exhausting to one (1) stack, identified as C2;
- (c) One (1) natural gas fired drying chamber, identified as D1, with maximum heat input capacity of 1.65 million British thermal units per hour (MMBtu/hr), for drying the coated tanks from spray booths B1 and B2, with emissions exhausting to stack D01.

The following insignificant activities have also been removed from the source:

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour:
 - (1) one (1) water heater at 1 million Btu per hour; and
- (b) Degreasing operations performed with an aqueous-based phosphate cleaner.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

Insignificant Activities

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour:
 - (1) One (1) dry-off oven, identified as NDO1, rated at 0.5 MMBtu/hr and exhausting to one (1) stack, identified as NDO-01;
 - (2) Two (2) water heaters, each rated at 1.5 MMBtu/hr; and
- (b) Degreasing operations performed with an aqueous-based phosphate cleaner (consists of an aqueous parts washer, identified as NW1 and exhausting to four (4) stacks, NW-01 to NW-04).

Existing Approvals

The source was issued a Part 70 Operating Permit T093-7549-00010 on November 2, 2000. Since this date, the source has received no additional approvals.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the Minor Source 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 May 10, 2001.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (Appendix A, pages 1 through 4).

Potential To Emit Before Controls (Modification)

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.”

Pollutant	Potential To Emit (tons/year)
PM	35.36
PM-10	35.46
SO ₂	0.01
VOC	12.35
CO	1.28
NO _x	0.77

Justification for Modification

The Title V permit is being modified through a Minor Source Modification. This modification is being performed pursuant to the following:

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of volatile organic compounds (VOC) is equal to or greater than ten (10) tons per year and less than twenty-five (25) tons per year. The source is subject to the provisions of 326 IAC 2-7 for Part 70 permit T093-7549-00010, issued November 2, 2000. Therefore the modification is being performed pursuant to 326 IAC 2-7-10.5(d)(4)(B)(iii).

- (b) Pursuant to 326 IAC 2-7-10.5(d)(5)(C), the source is ““Using a particulate air pollution control device as follows:
- (i) Achieving and maintaining ninety-nine percent (99%) efficiency.
 - (ii) Complying with a no visible emission standard.
 - (iii) The potential to emit before controls does not exceed major source thresholds for federal permitting programs.
 - (iv) Certifying to the commissioner that the control device supplier guarantees that a specific outlet concentration, in conjunction with design air flow, will result in actual emissions less than twenty-five (25) tons of particulate matter (PM) or fifteen (15) tons per year of particulate matter with an aerodynamic diameter less than or equal to ten (10) micrometers (PM10).”

The source will use dry filters on its paint spray booth (identified as PP1) to control PM emissions and will comply with all the above mentioned rules.

County Attainment Status

The source is located in Lawrence County.

Pollutant	Status
PM-10	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Lawrence 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.

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):

Pollutant	Emissions (tons/year)
PM	85.96
PM-10	86.23
SO ₂	0.02
VOC	53.14
CO	3.88
NO _x	4.25
Total HAPs	44.12

- (a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.
- (b) These emissions are based upon the Title V (T093-7549-00010) issued to the source on November 2, 2000.

Potential to Emit After Controls for the Modification

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units for the modification.

Process/facility	Potential to Emit (tons/year)							
	PM	PM-10	SO ₂	VOC	CO	NO _x	Single HAP	HAPs
Paint booth (PP1)	0.35	0.35	--	12.27	--	--	--	--
Insignificant Activities	0.02	0.12	0.01	0.08	1.28	0.77	--	--
Total Emissions	0.37*	0.47*	0.01	12.35	1.28	0.77	--	--
PSD Threshold Level	250	250	250	250	250	250	N/A	N/A

*Reflects total emissions after controls.

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

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 61) applicable to this source.
- (c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 20 and 40 CFR Part 63) applicable to this source.
- (d) The degreasing operation is not subject to the National Emission Standards for Hazardous Air Pollutants, 326 IAC 20, (40 CFR 63, Subpart T) because it does not use any air regulated solvents in its degreasing operation.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is located in Lawrence County, which is not one of the listed counties for this rule. Additionally, the source does not have the potential to emit CO, VOC, NO_x, PM-10, or SO₂ at greater than a 100 ton per year rate. Therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Visible Emissions 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 forty percent (40%) 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

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

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating delivered to the applicator at the paint spray booth (identified as PP1) shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for forced warm air dried coatings.

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

Based on the MSDS submitted by the source and calculations made, the spray booth is in compliance with this requirement.

326 IAC 6-3-2 (Process Operations)

The particulate matter (PM) from the paint spray booth (identified as PP1) shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The dry filters shall be in operation at all times the paint spray booth (identified as PP1) is in operation, in order to comply with this limit.

326 IAC 8-3 (Organic Solvent Degreasing Operations)

Degreasing operations performed at parts washer NW1 are not subject to the requirements of 326 IAC 8-3, since the facility will utilize an aqueous based phosphate cleaner that is not, nor does it contain, an organic solvent.

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.

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

Note: Brunner had previously objected to these same compliance monitoring conditions in an administrative appeal of a Source Modification issued to Brunner on or about November 22, 1999. Those objections were incorporated into the Part 70 permit (T093-7549-00010) and thus are being included in this Minor Source Modification.

1. The paint spray booth (identified as PP1) has applicable compliance monitoring conditions as specified below:
 - (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, the Permittee shall monitor the pressure drop across the dry filters twice per day when one or more of the paint booths are in operation. The pressure drop shall remain within the range established by the manufacturer's specifications.
 - (b) The Permittee shall, on a weekly basis, monitor surface coating booth stack PP-01 for evidence of visible emissions while one or more of the booths are in operation. During this inspection, the Permittee shall also inspect the nearby ground for the presence of overspray.
 - (c) The Permittee, shall, on a semiannual basis, monitor for the presence of overspray on the rooftops.
 - (d) The Compliance Response Plan shall be followed whenever a condition exists that should result in a response step.

These monitoring conditions are necessary because the dry filters for the paint spray booth (identified as PP1) must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations) and 326 IAC 2-7 (Part 70).

Changes Proposed

- 1) The following changes have been made to Section A.2 to include the new emission units and to delete the units removed from the source.

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

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

- ~~(a) One (1) paint spray booth, identified as B1, utilizing an airless and air-assisted airless system, coating a maximum of 968 square feet of steel tanks per hour, using dry filters for particulate matter overspray control, and exhausting to one (1) stack, identified as C1;~~
- ~~(b) One (1) paint spray booth, identified as B2, utilizing an airless and air-assisted airless system, coating a maximum of 968 square feet of steel tanks per hour, using dry filters for particulate matter overspray control, and exhausting to one (1) stack, identified as C2;~~

- (ea) One (1) paint spray booth, identified as #7, utilizing an air atomization system, coating a maximum of 911 square feet of steel tanks per hour, using dry filters for particulate matter overspray control, and exhausting to one (1) stack, identified as C4; ~~and~~
 - ~~(d) One (1) natural gas fired drying chamber, identified as D1, with maximum heat input capacity of 1.65 million British thermal units per hour (MMBtu/hr), for drying the coated tanks from spray booths B1 and B2, with emissions exhausting to stack D01.~~
 - (b) One (1) paint spray booth, identified as PP1, utilizing an airless and air-assisted airless system, coating a maximum of 1180 square feet of steel tanks per hour, using dry filters for particulate matter overspray control, and exhausting to one stack, identified as PP-01; and**
 - (c) One (1) natural gas fired bake oven, identified as BkO1, with a maximum heat input capacity of 1.65 million British thermal units per hour (MMBtu/hr), for drying the coated tanks from spray booth PP1, with emissions exhausting to stacks BkO-01 and BkO-02.**
- 2) The following changes have been made to Section A.3 to include the new insignificant units and to delete the insignificant units removed from the source.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)]
[326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour:
 - (1) one (1) furnace at 660 thousand Btu per hour,
 - (2) one (1) furnace at 6.6 million Btu per hour,
 - (3) one (1) furnace at 80 thousand Btu per hour ,
 - (4) one (1) furnace at 65 thousand Btu per hour,
 - (5) one (1) furnace at 85 thousand Btu per hour,
 - (6) one (1) furnace at 120 thousand Btu per hour;
 - (7) one (1) furnace at 120 thousand Btu per hour,
 - (8) one (1) furnace at 120 thousand Btu per hour;
 - (9) one (1) water heater at 40 thousand Btu per hour, ~~and~~
 - ~~(10) one (1) water heater at 1 million Btu per hour;~~
 - (10) One (1) dry-off oven, identified as NDO1, rated at 0.5 MMBtu/hr and exhausting to one (1) stack, identified as NDO-01; and**
 - (11) Two (2) water heaters, each rated at 1.5 MMBtu/hr.**
- (b) Combustion source flame safety purging on startup;
- (c) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids;
- (d) Machining where an aqueous cutting coolant continuously floods the machining interface;
- ~~(e) Degreasing operations performed with an aqueous-based phosphate cleaner;~~
- (e) Degreasing operations performed with an aqueous-based phosphate cleaner (consists of an aqueous parts washer, identified as NW1 and exhausting to four (4) stacks, NW-01 to NW-04);**

- (f) The following equipment related to manufacturing activities resulting in the emission of HAPs below insignificant emission levels: brazing equipment, cutting torches, soldering equipment, welding equipment;
 - (g) Process vessel degassing and cleaning to prepare internal repairs;
 - (h) Paved and unpaved roads and parking lots with public access;
 - (i) Blowdown for any of the following: sight glass, boiler, compressors, pumps, and cooling tower;
 - (j) Other categories with emissions below insignificant thresholds:
 - (1) welding operations with PM-10 emission less than twenty-five (25) pounds per day,
 - (2) one (1) plate burner with PM-10 emissions less than twenty-five (25) pounds per day,
 - (3) one (1) hole burner with PM-10 emissions less than twenty-five (25) pounds per day,
 - (4) one (1) fork lift operation utilizing multiple forklifts with PM-10 emissions less than twenty-five (25) pounds per day, and
 - (5) aerosol spray paint cans with VOC emissions less than fifteen (15) pounds per day.
- 3) The following changes have been made to the facility description box in Section D.1 to include the new emission units and to delete the units removed from the source.

SECTION D.1 FACILITY OPERATION CONDITIONS

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

- (a) ~~One (1) paint spray booth, identified as B1, utilizing an airless and air-assisted airless system, coating a maximum of 968 square feet of steel tanks per hour, using dry filters for particulate matter overspray control, and exhausting to one (1) stack, identified as C1;~~
- (b) ~~One (1) paint spray booth, identified as B2, utilizing an airless and air-assisted airless system, coating a maximum of 968 square feet of steel tanks per hour, using dry filters for particulate matter overspray control, and exhausting to one (1) stack, identified as C2;~~
- (ea) One (1) paint spray booth, identified as #7, utilizing an air atomization system, coating a maximum of 911 square feet of steel tanks per hour, using dry filters for particulate matter overspray control, and exhausting to one (1) stack, identified as C4; ~~and~~
- (d) ~~One (1) natural gas fired drying chamber, identified as D1, with maximum heat input capacity of 1.65 million British thermal units per hour (MMBtu/hr), for drying the coated tanks from spray booths B1 and B2, with emissions exhausting to stack D01.~~
- (b) **One (1) paint spray booth, identified as PP1, utilizing an airless and air-assisted airless system, coating a maximum of 1180 square feet of steel tanks per hour, using dry filters for particulate matter overspray control, and exhausting to one stack, identified as PP-01; and**
- (c) **One (1) natural gas fired bake oven, identified as BkO1, with a maximum heat input capacity of 1.65 million British thermal units per hour (MMBtu/hr), for drying the coated tanks from spray booth PP1, with emissions exhausting to stacks BkO-01 and BkO-02.**

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

- 4) Condition D.1.1 has been revised to indicate that only two (2) paint spray booths are at the plant and subject to 326 IAC 8-2-9.

D.1.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]

- (a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coatings applied to metal parts or products in each of the ~~three (3)~~ **two (2)** paint spray booths (**identified as #7 and PP1**) shall be limited to 3.5 pounds of VOC per gallon of coating less water delivered to the applicator, for air dried, forced warm air dried, or extreme performance coatings.
- (b) Solvent sprayed from the application equipment during clean up or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.
- 5) Condition D.1.2 has been revised to indicate that only two (2) paint spray booths are at the plant and subject to 326 IAC 6-3-2.

D.1.2 Particulate Matter (PM) [326 IAC 6-3-2]

The PM from the ~~three (3)~~ **two (2)** paint booths (**B1, B2 and #7 and PP1**) shall not exceed the pound per hour emission rate established as E in the following formula:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

- 6) Condition D.1.5 has been revised to indicate that only two (2) paint spray booths are at the plant.

D.1.5 Particulate Matter (PM)

The dry filters for PM control shall be in operation at all times when the ~~three (3)~~ **two (2)** paint booths (**B1, B2 and #7 and PP1**) are in operation.

- 7) Condition D.1.6 has been revised to update the stacks for the two (2) paint spray booths.

D.1.6 Monitoring

- (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, the Permittee shall monitor the pressure drop across the dry filters twice per day when one or more of the paint booths are in operation. The pressure drop shall remain within the range established by the manufacturer's specifications.
- (b) The Permittee shall, on a weekly basis, monitor surface coating booth stacks ~~C1, C2 and C4~~ **and PP-01** for evidence of visible emissions while one or more of the booths are in operation. During this inspection, the Permittee shall also inspect the nearby ground for the presence of overspray.
- (c) The Permittee, shall, on a semiannual basis, monitor for the presence of overspray on the rooftops.
- (d) The Compliance Response Plan shall be followed whenever a condition exists that 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.
- (e) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

Conclusion

The construction of this stationary metal pressure vessels manufacturing plant shall be subject to the conditions of the attached proposed **Minor Source Modification No. 093-14347-00010**.

Appendix A: Emission Calculations

Company Name: Brunner Engineering & Manufacturing
Address City IN Zip: 800-900 X Street, Bedford, IN 47421
Minor Source Modification: 039-14347
Pit ID: 093-00010
Reviewer: NH/EVP

Uncontrolled Potential Emissions (tons/year)				
Emissions Generating Activity				
Pollutant	Natural Gas Heater	Natural Gas Water Heaters	Surface Coating	TOTAL
PM	0.00	0.02	35.34	35.36
PM10	0.02	0.10	35.34	35.46
SO2	0.00	0.01	0.00	0.01
NOx	0.11	0.66	0.00	0.77
VOC	0.01	0.07	12.27	12.35
CO	0.18	1.10	0.00	1.28
total HAPs	0.00	0.00	0.00	0.00
worst case single HAP	0.00	0.00	0.00	0.00
Total emissions based on rated capacity at 8,760 hours/year.				
Controlled Potential Emissions (tons/year)				
Emissions Generating Activity				
Pollutant	Natural Gas Heater	Natural Gas Water Heaters	Surface Coating	TOTAL
PM	0.00	0.02	0.35	0.37
PM10	0.02	0.10	0.35	0.47
SO2	0.00	0.01	0.00	0.01
NOx	0.11	0.66	0.00	0.77
VOC	0.01	0.07	12.27	12.35
CO	0.18	1.10	0.00	1.28
total HAPs	0.00	0.00	0.00	0.00
worst case single HAP	0.00	0.00	0.00	0.00
Total emissions based on rated capacity at 8,760 hours/year, after control.				

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

Company Name: Brunner Engineering & Manufacturing
Address City IN Zip: 800-900 X Street, Bedford, IN 47421
Minor Source Modification: 039-14347
Pit ID: 093-00010
Reviewer: NH/EVP

Material	Process	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (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
SC8002 Grey	PP1	9.82	53.69%	49.18%	4.51%	57.44%	36.81%	0.49360	11.800	1.04	0.44	2.58	61.91	11.30	29.00	1.20	75%
SB6002 Blue Enamel	PP1	9.25	54.39%	49.23%	5.16%	54.68%	39.14%	0.49360	11.800	1.05	0.48	2.78	66.72	12.18	26.91	1.22	75%
SB8001 Grey Enamel	PP1	9.62	53.06%	48.06%	5.00%	54.91%	38.85%	0.49360	11.800	1.07	0.48	2.80	67.24	12.27	28.80	1.24	75%
SB1001 White Enamel	PP1	10.47	47.08%	42.56%	4.52%	52.45%	41.39%	0.49360	11.800	1.00	0.47	2.76	66.15	12.07	35.34	1.14	75%
SB9001 Black Enamel	PP1	9.07	55.88%	50.67%	5.21%	55.18%	38.70%	0.49360	11.800	1.05	0.47	2.75	66.06	12.06	25.52	1.22	75%
SC2006 Red Primer	PP1	9.8	53.25%	48.68%	4.57%	57.34%	36.86%	0.49360	11.800	1.05	0.45	2.61	62.61	11.43	29.22	1.22	75%

State Potential Emissions **Add worst case coating to all solvents** **2.80 67.24 12.27 35.34**

Controlled Potential Emissions		
Total Controlled Potential Emissions:	Control Efficiency PM	Controlled PM tons/yr
	99.00%	0.35

Note: Coating are mutually exclusive

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
Natural Gas Combustion Only
MM BTU/HR <100**

Company Name: Brunner Engineering & Manufacturing
Address City IN Zip: 800-900 X Street, Bedford, IN 47421
Minor Source Modification: 039-14347
Pit ID: 093-00010
Reviewer: NH/EVP

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
3.0	26.3

**each with low
NOx burners**

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	50.0	5.5	84.0
				**see below		
Potential Emission in tons/yr	0.02	0.10	0.01	0.66	0.07	1.10

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

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

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

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

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

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

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

**Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100**

Company Name: Brunner Engineering & Manufacturing
Address City IN Zip: 800-900 X Street, Bedford, IN 47421
Minor Source Modification: 039-14347
Plt ID: 093-00010
Reviewer: NH/EVP

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
0.5	4.4

Consists of one (1) natural gas heater (identified as Maxon 405 Ovenpak) rated at 0.5 MMBtu/hr with a low NOx burner

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	50.0	5.5	84.0
				**see below		
Potential Emission in tons/yr	0.00	0.02	0.00	0.11	0.01	0.18

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

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

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

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

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

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

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).