

Mr. Tim Hollkamp
Toyota Industrial Equipment Manufacturing, Inc.
P. O. Box 2487
Columbus, Indiana 47202

Re: 005-15701
First Minor Permit Modification to
Part 70 No.: T 005-7545-00040

Dear Mr. Hollkamp:

Toyota Industrial Equipment Manufacturing, Inc., located at 5555 Inwood Drive, Columbus, Indiana, was issued a permit on April 14, 1999 for an industrial truck manufacturing source. A letter requesting changes to this permit was received on October 31, 2001 and March 11, 2002. Pursuant to the provisions of 326 IAC 2-7-12 a minor permit modification to this permit is hereby approved as described in the attached Technical Support Document. The permit consists of the following:

- (a) Sixteen (16) new metal inert gas (MIG) welding stations with a total maximum weld wire usage of 634 pounds per hour, to be utilized in fabricating cylinders in-house and X777 model change; and
- (b) The source also requested that the current pressure drop range of 1.0 and 6.0 inches of water across the dust collectors at the three (3) permitted shotblasts units (U009, U010, and U011) be changed to 0.1 and 6.0 inches of water or a range established during the latest stack test. When the filters are new, lack of differential pressure exists in the system which makes the pressure drop fall.

Section A.3 Specifically Regulated Insignificant Activities will be modified to add the sixteen (16) insignificant welding stations and be numbered A.3(10) as follows:

- A.3(e)(10) **Sixteen (16) new metal inert gas (MIG) welding stations with a total maximum weld wire usage of 634 pounds per hour, to be utilized in fabricating cylinders in-house and the X777 model change.**

These welding stations will also be added in Section D.3 as follows:

Section D.3

- (a) through (d) no change
- (e) (1) no change
- (9) no change
- (10) Sixteen (16) new metal inert gas (MIG) welding stations with a total maximum weld wire usage of 634 pounds per hour, to be utilized in fabricating cylinders in-house and the X777 model change.**

The source also requested that the current pressure drop range of 1.0 and 6.0 inches of water across the dust collectors at the three (3) permitted shotblasts units (U009, U010, and U011) be changed to 0.1 and 6.0 inches of water or a range established during the latest stack test. When the filters are new, lack of differential pressure exists in the system which makes the pressure drop fall. Therefore, Condition D.2.6 and D.4.7 be modified as follows:

D.2.6 Parametric Monitoring

The Permittee shall record the total static pressure drop across the dust collectors (C009 and C010) used in conjunction with the shotblasting processes, at least once weekly when the shot blasting in operation when venting to the atmosphere. Unless operated under condition for which the Compliance Response Plan specifies otherwise, the pressure drop across the dust collectors shall be maintained within the range of ~~4-6~~ **0.1** and 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any ne reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.4.7 Parametric Monitoring

The Permittee shall record the total static pressure drop across the dust collector (**U011**) used in conjunction with the shotblaster unit, at least once weekly when the shot blasting in operation when venting to the atmosphere. Unless operated under condition for which the Compliance Response Plan specifies otherwise, the pressure drop across the dust collector shall be maintained within the range of ~~4-6~~ **0.1** and 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any ne reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

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 Aida De Guzman, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call at (800) 451-6027, press 0 and ask for extension (3-4972), or dial (317) 233-4972.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments

APD

cc: File - Bartholomew County
U.S. EPA, Region V
Bartholomew County Health Department
Air Compliance Section Inspector - DJ Knotts
Compliance Data Section - Karen Nowak
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michele Boner

PART 70 OPERATING PERMIT OFFICE OF AIR QUALITY

**Toyota Industrial Equipment Manufacturing, Inc.
5555 Inwood Drive
Columbus, Indiana 47202**

(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 and 326 IAC 2-1-3.2 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.: T 005-7545-00040	
Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: April 14, 1999 Expiration Date: April 14, 2004

First Administrative Amendment 005-10989, issued on July 21, 1999
Second Administrative Amendment 005-11174, issued on September 7, 1999
Third Administrative Amendment 005-11975, issued on March 30, 2000
Fourth Administrative Amendment 005-13981, issued on March 19, 2001
First Reopening 005-13154, issued on October 25, 2001
Fifth Administrative Amendment 005-14983, issued on October 26, 2001

First Minor Permit Modification No.: 005-15701	Pages Affected: 8, 36, 38, 42
Issued by: Original signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: April 29, 2002

- (6) Sixteen (16) metal inert gas (MIG) welding stations.
- (7) One (1) four-stage iron phosphate washer.
- (8) Sixteen (16) metal inert gas (MIG) welding stations, constructed in 2001.
- (9) Nine (9) metal inert gas (MIG) welding stations, constructed in December 2001, used for fabricating X700 and D700 tanks and rear axle beams.
- (10) Sixteen (16) new metal inert gas (MIG) welding stations with a total maximum weld wire usage of 634 pounds per hour, to be utilized in fabricating cylinders in-house and the X777 model change.

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); and
- (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).

blast cabinet is in operation.

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

D.2.5 Visible Emissions Notations

- (a) Daily visible emission notations of the shot blast units at the point of exhaust shall be performed during normal daylight operations when exhausting to the outside atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.2.6 Parametric Monitoring

The Permittee shall record the total static pressure drop across the dust collectors (C009 and C010) used in conjunction with the shot blasting processes, at least once weekly when the shot blasting is in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the dust collectors shall be maintained within the range of 0.1 and 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.2.7 Dust Collector Inspections

An inspection shall be performed each calendar quarter of all filters controlling the shot blasting operations when venting to the atmosphere. A dust collector inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

D.2.8 Dust Collector Failure Detection

In the event that a dust collector failure has been observed:

- (a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the

SECTION D.3

FACILITY OPERATION CONDITIONS

Insignificant Activities

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

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour. Forty-three (43) emission units with a total heat input capacity of 29.33 million British thermal units per hour. Includes, two (2) boilers rated at 0.75 million British thermal units per hour.
- (b) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. Two (2) parts cleaners, using non-VOC materials, with capacities of 60 and 80 gallons, and one (1) maintenance parts cleaner, using mineral spirits, with a capacity of 16 gallons.
- (c) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches soldering equipment, welding equipment.
- (d) Grinding and machining operations controller with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations.
- (e) Other activities or categories with emissions equal to or less than the insignificant activity thresholds:
 - (1) One (1) counter-weight sanding booth, identified as I003, controlled by a dry filter, and exhausting to stack S003c.
 - (2) One (1) powder coat line, identified as I011, controlled by a primary and secondary filter and exhausting to the building.
 - (3) Ninety-nine (99) metal inert gas (MIG) welding stations.
 - (4) Two (2) powder coating booths, identified as I012, with a maximum raw material usage rate of 4861 gallons per year, one line consists of a powder reclamation process, both lines are controlled voluntarily by a two (2) stage filtration system consisting of HEPA filters in series and the filters exhaust to the atmosphere.
 - (5) Seven (7) metal inert gas (MIG) welding stations in process B300.
 - (6) Sixteen (16) metal inert gas (MIG) welding stations.
 - (7) One (1) four-stage iron phosphate washer.
 - (8) Sixteen (16) metal inert gas (MIG) welding stations, constructed in 2001.
 - (9) Nine (9) metal inert gas (MIG) welding stations, constructed in December 2001, used for fabricating X700 and D700 tanks and rear axle beams.
 - (10) Sixteen (16) new metal inert gas (MIG) welding stations with a total maximum weld wire usage of 634 pounds per hour, to be utilized in fabricating cylinders in-house and the X777 model change.

- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.4.6 Dust Collector Inspections

An inspection shall be performed each calendar quarter of all the dust collector. Defective cartridges and collectors shall be replaced. A record shall be kept of the results of the inspection and the number of dust collectors and cartridges replaced.

D.4.7 Parametric Monitoring

The Permittee shall record the total static pressure drop across the dust collector used in conjunction with the shot blast unit, at least once weekly when the shot blast unit is in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the dust collector shall be maintained within the range of 0.1 and 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.4.8 Failure Detection

In the event that a dust collector's failure has been observed:

- (a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions)
- (b) For single compartment dust collectors, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Indiana Department of Environmental Management Office of Air Quality

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

Source Background and Description

Source Name:	Toyota Industrial Equipment Manufacturing, Inc.
Source Location:	5555 Inwood Drive, Columbus, Indiana
County:	Bartholomew
SIC Code:	3537
Operation Permit No.:	T005-7545-00040
Operation Permit Issuance Date:	April 14, 1999
1 st Minor Permit Modification No.:	005-15701
Permit Reviewer:	Aida De Guzman

The Office of Air Quality (OAQ) has reviewed a permit modification application from Toyota Industrial Equipment Manufacturing, Inc., an industrial truck manufacturing source relating to the installation of the following emission units:

- (a) Sixteen (16) new metal inert gas (MIG) welding stations with a total maximum weld wire usage of 634 pounds per hour, to be utilized in fabricating cylinders in-house and the X777 model change; and
- (b) The source also requested that the current pressure drop range of 1.0 and 6.0 inches of water across the dust collectors at the three (3) permitted shotblasts units (U009, U010, and U011) be changed to 0.1 and 6.0 inches of water or a range established during the latest stack test. When the filters are new, lack of differential pressure exists in the system which makes the pressure drop fall.

History

On October 31, 2001 and March 11, 2002, Toyota Industrial equipment Manufacturing, Inc. submitted an application to the OAQ requesting to add new MIG weld stations. Toyota Industrial Equipment Manufacturing, Inc. was issued a Part 70 permit 005- 7545-00040 on April 14, 1999.

Existing Approvals

The source was issued a Part 70 Operating Permit 005- 7545-00040 on April 14, 1999. The source has since received the following:

- (a) First Administrative Amendment No.: 005-10989, issued on July 21, 1999;
- (b) Second Administrative Amendment No.: 005-11174, issued on September 7, 1999;
- (c) Third Administrative Amendment No.: 005-11975, issued on March 30, 2000;
- (d) Fourth Administrative Amendment No.: 005-13981, issued on March 19, 2001;
- (e) First Reopening No.: 005-13154 issued, on October 25, 2001; and
- (f) Fifth Administrative Amendment No.: 005-14983, issued on October 26, 2001.

Recommendation

The staff recommends to the Commissioner that the Minor 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 October 31, 2001 and March 11, 2002.

Emission Calculations

- (a) Sixteen Welding Stations: See page 1 of 1 TSD Appendix A for detailed emission calculations.

Potential To Emit

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	2.46
PM-10	2.46
SO ₂	0.0
VOC	0.0
CO	0.0
NO _x	0.0

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)
Manganese	0.223
TOTAL	0.223

Justification for Modification

This modification constitutes of new welding operation which is an exempted operation, but the request to change the pressure drop range qualifies as a Minor Permit Modification under 326 IAC 2-7-12(b)(1)(B) that “do not involve significant change to existing monitoring, reporting, or record keeping requirements in the Part 70 permit”.

Actual Emissions

The following table shows the actual emissions from the source. The emissions from the criteria pollutants reflects the 2000 emission data, however the HAPs actual emissions came from the Part 70 permit:

Pollutant	Actual Emissions (tons/year)
PM	2.0
PM-10	2.0

SO ₂	0.0
VOC	56.0
CO	5.0
NO _x	6.0
Ethyl benzene	2.60
Ethylene Glycol	0.083
Formaldehyde	0.007
Methanol	0.015
MEK	13.3
Toluene	0.486
Xylene	12.6
Chromium	0.003
Glycol Ethers	7.46
Manganese	0.011
Nickel	0.003

Potential to Emit After the Modification

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

Process/facility	Limited Potential to Emit (tons/year)						
	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
16 Welding Stations	2.46	2.46	0.0	0.0	0.0	0.0	0.223
Total Emissions	2.46	2.46	0.0	0.0	0.0	0.0	0.223

County Attainment Status

The source is located in Bartholomew County.

Pollutant	Status
PM-10	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	not determined

- (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. Bartholomew County has been designated as attainment or unclassifiable for ozone.

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 63) applicable to this source.

State Rule Applicability - Entire Source

- (a) 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:
- (1) 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.
 - (2) 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

- (a) (326 IAC 6-3-2 (Process Operations)
The sixteen (16) welding stations shall be subject to 326 IAC 6-3-2, this rule mandates PM emission limits from these welding stations using the following equation:
- Interpolation and extrapolation 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:
- $$E = 4.10 P^{0.67}$$
- where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

Changes to the Part 70 Permit

Section A.3 Specifically Regulated Insignificant Activities will be modified to add the sixteen (16) insignificant welding stations and be numbered A.3(10) as follows:

- A.3(e)(10) **Sixteen (16) new metal inert gas (MIG) welding stations with a total maximum weld wire usage of 634 pounds per hour, to be utilized in fabricating cylinders in-house and the X777 model change.**

These welding stations will also be added in Section D.3 as follows:

Section D.3

- (a) through (d) no change
- (e) (1) no change
- (9) no change
- (10) **Sixteen (16) new metal inert gas (MIG) welding stations with a total maximum weld wire usage of 634 pounds per hour, to be utilized in fabricating cylinders in-house and the X777 model change.**

The source also requested that the current pressure drop range of 1.0 and 6.0 inches of water across the dust collectors at the three (3) permitted shotblasts units (U009, U010, and U011) be changed to 0.1 and 6.0 inches of water or a range established during the latest stack test. When

the filters are new, lack of differential pressure exists in the system which makes the pressure drop fall. Therefore, Condition D.2.6 and D.4.7 be modified as follows:

D.2.6 Parametric Monitoring

The Permittee shall record the total static pressure drop across the dust collectors (C009 and C010) used in conjunction with the shotblasting processes, at least once weekly when the shot blasting in operation when venting to the atmosphere. Unless operated under condition for which the Compliance Response Plan specifies otherwise, the pressure drop across the dust collectors shall be maintained within the range of ~~4-θ~~ **0.1** and 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any ne reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.4.7 Parametric Monitoring

The Permittee shall record the total static pressure drop across the dust collector (**U011**) used in conjunction with the shotblaster unit, at least once weekly when the shot blasting in operation when venting to the atmosphere. Unless operated under condition for which the Compliance Response Plan specifies otherwise, the pressure drop across the dust collector shall be maintained within the range of ~~4-θ~~ **0.1** and 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any ne reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

Conclusion

The operation of these welding stations shall be subject to the conditions of the **Minor Permit Modification No. 005-15701-00040**.

**Appendix A: Emissions Calculations
Insignificant Welding Operations**

Company Name: Toyota Industrial Equipment Manufacturing, Inc.
Address City IN Zip: 5555 Inwood Drive, Columbus, Indiana
1st Minor Permit Modification: 005-15701
Plant ID No.: 005-00040
Reviewer: Aida De Guzman
Date Application Received: October 31, 20001 & March 11, 2002

Type of Welding	Number of New Stations	Electrode Type	Maximum Total Electrode Consumption (lbs/hr)	Emission Factors (lb pollutant/lb electrode consumed)		Potential Emissions (tons/year)	
				PM	Manganese	PM	Manganese
Metal Inert Gas (MIG)	16.0	Carbon Steel	102	0.0055	0.0005	2.46	0.223
Stick Welding	0.0	Carbon Steel	0.00	0.0370	0.0030	0.00	0.00
Oxyacetylene	0.0	Carbon Steel	0.00	0.0055	0.0005	0.00	0.00
Total Potential Emissions (tons/yr):						2.46	0.223

METHODOLOGY

Maximum total electrode consumption (lbs/hr) = potential weld wire usage per stations x number of new stations
 Emissions (tons/yr) = Maximum Total Electrode Consumption per Unit * Emission Factor (lb pollutant/lb electrode consumed) * 8760 (hrs/yr) * (1 ton/2000 lbs)
 Emission Factors are from the SARA 313 Reporting Guide.