INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

TO: Interested Parties / Applicant

DATE: June 30, 2005

RE: Quest Stamping Technologies, LLC / 039-21324-00610

FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval – Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-17-3-4 and 326 IAC 2, this permit modification is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-7-3 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

(1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
(2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
(3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

(1) the name and address of the person making the request;
(2) the interest of the person making the request;
(3) identification of any persons represented by the person making the request;
(4) the reasons, with particularity, for the request;
(5) the issues, with particularity, proposed for considerations at any hearing; and
(6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

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Pursuant to 326 IAC 2-7-18(d), any person may petition the U.S. EPA to object to the issuance of a Title V operating permit or modification within sixty (60) days of the end of the forty-five (45) day EPA review period. Such an objection must be based only on issues that were raised with reasonable specificity during the public comment period, unless the petitioner demonstrates that it was impractible to raise such issues, or if the grounds for such objection arose after the comment period.

To petition the U.S. EPA to object to the issuance of a Title V operating permit, contact:

U.S. Environmental Protection Agency
401 M Street
Washington, D.C. 20406

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNTV-PMOD.doc 1/10/05

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June 30, 2005

Mr. Ronald C. Ziemmer
Quest Stamping Technologies, LLC
21840 Protecta Drive
Elkhart, Indiana 46516

Re: 039-21324-00610
First Minor Permit Revision to
MSOP 039-20024-00610

Dear Mr. Ziemmer:

Quest Stamping Technologies, LLC was issued a Minor Source Operating Permit (MSOP) on January 13, 2005 for a stationary metal brake shoe manufacturing and assembly source located at 21840 Protecta Drive, Elkhart, Indiana 46516. A letter requesting a revision to this permit was received on June 17, 2005.

The following changes have been made to the source: (1) replacement of the coating material used in the one (1) varnish dip tank, identified as P37-01, from SVE1000 and isopropyl alcohol to a low emissions water based coating material with water cleanup; and (2) removal of the catalytic oxidizer associated with P37-01. These changes result in a decrease in the uncontrolled potential to emit (PTE) of volatile organic compounds (VOC) (from 38.24 tons per year to 0.80 tons per year) and hazardous air pollutants (from 0.55 tons per year to 0.50 tons per year). The new water based coating material has a VOC content of 3.39 pounds of VOC per gallon of coating, excluding water, which is in compliance with the VOC content requirement of 326 IAC 8-2-9 of 3.5 pounds of VOC per gallon of coating, excluding water. As a result, the varnish dip tank, P37-01, is not required to be equipped with a pollution control device in order to comply with the requirements of 326 IAC 8-2-9. The requirements and conditions associated with the catalytic oxidizer are no longer required and the permit has been revised accordingly.

This modification is being performed through a MSOP Minor Permit Revision pursuant to 326 IAC 2-6.1-6(g)(1). Pursuant to the provisions of 326 IAC 2-6.1-6 a Minor Permit Revision to this permit is hereby approved as described in the attached Technical Support Document. Pursuant to IAC 2-6.1-6, the minor source operating permit shall be revised by incorporating the minor permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this permit revision which includes this letter, the attached operating conditions applicable to these emission units, and 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 Nathan Bell, at OAQ, 100 North Senate Avenue, Indianapolis, Indiana, 46204, or call (800) 451-6027, press 0 and ask for Nathan Bell or extension (4-3350), or dial (317) 234-3350.

Sincerely,

June 30, 2005

Nysa L. James, Section Chief
Permits Branch
Office of Air Quality

ncb

Attachments: Technical Support Document and revised permit pages

cc: File - Elkhart County
U.S. EPA, Region V
Elkhart County Health Department
IDEM Northern Regional Office
Air Compliance Section Inspector - Anthony Pelath
Compliance Data Section
Administrative and Development

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NEW SOURCE CONSTRUCTION PERMIT and MINOR SOURCE OPERATING PERMIT OFFICE OF AIR QUALITY

Quest Stamping Technologies, LLC
21840 Protecta Drive
Elkhart, Indiana 46516

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

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-5.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Operation Permit No.: MSOP 039-20024-00610	
Issued by: Original signed by Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: January 13, 2005 Expiration Date: January 13, 2010

First Minor Permit Revision No.: 039-21324-00610	Pages Affected: 3, 5, 17-19
Issued by:Original signed by Nysa L. James, Section Chief Office of Air Quality	Issuance Date: June 30, 2005

D.2 EMISSIONS UNIT OPERATION CONDITIONS: Varnish Dip Tank 17

Emission Limitations and Standards
D.2.1 Volatile Organic Compound (VOC) Content Limitations [326 IAC 8-2-9] [326 IAC 8-1-2]
D.2.2 Volatile Organic Compound (VOC) Limitations, Clean-up Requirements [326 IAC 8-2-9]
D.2.3 Preventive Maintenance Plan [326 IAC 1-6-3]

Record Keeping Requirement [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]
D.2.4 Record Keeping Requirements

D.3 EMISSIONS UNIT OPERATION CONDITIONS: Machining and Blasting 20

Emission Limitations and Standards
D.3.1 Particulate [326 IAC 6-3-2]

Compliance Determination Requirements
D.3.2 Particulate Control

Annual Notification 21
Malfunction Report..... 22

(h) One (1) varnish dip tank, identified as P37-01, exhausting through stack P37SV-01, capacity: 892.5 pounds of metal parts per hour.

(i) One (1) enclosed wheelabrator shot blaster, equipped with a baghouse identified as P35-01, with internal return air, capacity: 847.9 pounds of metal parts and 1,000 pounds of steel shot per hour.

(j) Friction brake material machining operations, equipped with an internal return bag filter identified as P38BF-01, with a capacity of 892.5 pounds of metal/friction brake material per hour, including the following:

(1) Seven (7) grinding/shaping stations.

(2) Wire/rod-free spot welding.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(h) One (1) varnish dip tank, identified as P37-01, exhausting through stack P37SV-01, capacity: 892.5 pounds of metal parts per hour.

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

Emission Limitations and Standards

D.2.1 Volatile Organic Compound (VOC) Content Limitations [326 IAC 8-2-9] [326 IAC 8-1-2]

(a) Pursuant to 326 IAC 8-2-9, the Permittee shall not allow the discharge into the atmosphere of VOC in excess of three and five-tenths (3.5) pounds of VOC per gallon of coating, excluding water.

(b) Pursuant to 326 IAC 8-1-2(b), the varnish dip tank VOC emissions shall be limited to no greater than the equivalent emissions, expressed as pounds of VOC per gallon of coating solids, allowed in (a).

This equivalency was determined by the following equation:

$$E = L / (1 - (L/D))$$

Where

L = Applicable emission limit from 326 IAC 8 in pounds of VOC per gallon of coating;
D = Density of VOC in coating in pounds per gallon of VOC;
E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.

Actual solvent density shall be used to determine compliance of the surface coating operation using the compliance methods in 326 IAC 8-1-2(a).

(c) The pounds of VOC emitted per gallon of coating solids shall be limited to less than 6.7.

D.2.2 Volatile Organic Compound (VOC) Limitations, Clean-up Requirements [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9 (f), all solvents sprayed from the application equipment of the varnish dip tank during cleanup or color changes shall be directed into containers. Said containers shall be closed as soon as the solvent spraying is complete. In addition, all waste solvent shall be disposed of in such a manner that minimizes evaporation.

D.2.3 Preventive Maintenance Plan [326 IAC 1-6-3]

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

Record Keeping Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.2.4 Record Keeping Requirements

(a) To document compliance with Condition D.2.1, the Permittee shall maintain records in accordance with (1) through (2) below. Records maintained for (1) through (2) shall be taken as stated below and shall be complete and sufficient to establish compliance with the VOC emission limit established in Condition D.2.1.

(1) The VOC content of each coating material and solvent used less water.

(2) The amount of coating material and solvent used on a monthly basis.

(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(b) To document compliance with Condition D.2.3, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.

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

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Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Minor Permit Revision to a Minor Source Operating Permit

Source Background and Description

Source Name:	**Quest Stamping Technologies, LLC**
Source Location:	**21840 Protecta Drive, Elkhart, Indiana 46516**
County:	**Elkhart**
SIC Code:	**3714**
Operation Permit No.:	**039-20024-00610**
Operation Permit Issuance Date:	**January 13, 2005**
Minor Permit Revision No.:	**039-21324-00610**
Permit Reviewer:	**Nathan C. Bell**

History

Quest Stamping Technologies, LLC was issued a Minor Source Operating Permit (MSOP) on January 13, 2005 for a stationary metal brake shoe manufacturing and assembly source located at 21840 Protecta Drive, Elkhart, Indiana 46516. A letter requesting a revision to this permit was received on June 17, 2005.

The following changes have been made to the source: (1) replacement of the coating material used in the one (1) varnish dip tank, identified as P37-01, from SVE1000 and isopropyl alcohol to a low emissions water based coating material with water cleanup; and (2) removal of the catalytic oxidizer associated with P37-01. These changes result in a decrease in the uncontrolled potential to emit (PTE) of volatile organic compounds (VOC) (from 38.24 tons per year to 0.80 tons per year) and hazardous air pollutants (from 0.55 tons per year to 0.50 tons per year).

The new water based coating material has a VOC content of 3.39 pounds of VOC per gallon of coating, excluding water, which is in compliance with the VOC content requirement of 326 IAC 8-2-9 of 3.5 pounds of VOC per gallon of coating, excluding water. As a result, the varnish dip tank, P37-01, is not required to be equipped with a pollution control device in order to comply with the requirements of 326 IAC 8-2-9. The requirements and conditions associated with the catalytic oxidizer are no longer required and the permit has been revised accordingly.

Justification for the Revision

The MSOP is being revised through a Minor Permit Revision pursuant to 326 IAC 2-6.1-6(g)(1), since modifications that reduce the frequency of any monitoring or reporting required by a permit condition or applicable requirement require minor permit revisions.

Recommendation

The staff recommends to the Commissioner that the Minor Permit Revision 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 17, 2005

Emission Calculations

See Appendix A of this TSD for detailed emissions calculations (Appendix A, pages 1 through 2).

Changes To The Permit:

The following changes have been made to the permit, with deleted language as ~~strikeouts~~ and new language **bolded**:

A.2 Emissions Units and Pollution Control Equipment Summary

This stationary source is approved to construct and operate the following emissions units and pollution control devices:

(h) One (1) varnish dip tank, identified as P37-01, ~~equipped with a catalytic oxidizer with a supplemental fuel capacity of 0.5724 million British thermal units per hour of natural gas,~~ exhausting through stack P37SV-01, capacity: 892.5 pounds of metal parts per hour.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(h) One (1) varnish dip tank, identified as P37-01, ~~equipped with a catalytic oxidizer with a supplemental fuel capacity of 0.5724 million British thermal units per hour of natural gas,~~ exhausting through stack P37SV-01, capacity: 892.5 pounds of metal parts per hour.

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

Emission Limitations and Standards

D.2.1 Volatile Organic Compound (VOC) Content Limitations [326 IAC 8-2-9] [326 IAC 8-1-2]

(a) Pursuant to 326 IAC 8-2-9, the Permittee shall not allow the discharge into the atmosphere of VOC in excess of three and five-tenths (3.5) pounds of VOC per gallon of coating, excluding water.

(b) Pursuant to 326 IAC 8-1-2(b), the varnish dip tank VOC emissions shall be limited to no greater than the equivalent emissions, expressed as pounds of VOC per gallon of coating solids, allowed in (a).

This equivalency was determined by the following equation:

$$E = L / (1 - (L/D))$$

Where

L = Applicable emission limit from 326 IAC 8 in pounds of VOC per gallon of coating;
D = Density of VOC in coating in pounds per gallon of VOC;
E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.

Actual solvent density shall be used to determine compliance of the surface coating operation using the compliance methods in 326 IAC 8-1-2(a).

(c) The pounds of VOC emitted per gallon of coating solids shall be limited to less than 6.7.

~~(d) Pursuant to 326 IAC 8-1-2(c), the overall efficiency of the catalytic oxidizer shall be no less than the equivalent overall efficiency calculated by the following equation:~~

$$\cancel{O = \frac{V - E}{V} X\ 100}$$

~~Where:~~

~~V = The actual VOC content of the coating or, if multiple coatings are used, the daily weighted average VOC content of all coatings, as applied to the subject coating line as determined by the applicable test methods and procedures specified in 326 IAC 8-1-4 in units of pounds of VOC per gallon of coating solids as applied.~~

~~E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.~~

~~O = Equivalent overall efficiency of the capture system and control device as a percentage.~~

~~The overall efficiency of the catalytic oxidizer shall be greater than 95.9%.~~

D.2.2 Volatile Organic Compound (VOC) Limitations, Clean-up Requirements [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9 (f), all solvents sprayed from the application equipment of the varnish dip tank during cleanup or color changes shall be directed into containers. Said containers shall be closed as soon as the solvent spraying is complete. In addition, all waste solvent shall be disposed of in such a manner that minimizes evaporation.

D.2.3 Preventive Maintenance Plan [326 IAC 1-6-3]

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

~~Compliance Determination Requirements~~

~~D.2.4 Volatile Organic Compounds (VOC) [326 IAC 8-1-2]~~

~~Pursuant to 326 IAC 8-1-2(a), the Permittee shall operate the catalytic oxidizer to achieve compliance with Condition D.2.1.~~

~~D.2.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]~~

~~Within one hundred and eighty (180) days after initial startup, the Permittee shall conduct a performance test to verify the VOC control efficiency specified in Condition D.2.1 for the catalytic oxidizer utilizing methods as approved by the Commissioner. Testing shall be conducted in accordance with Section C - Performance Testing.~~

~~Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]~~

~~D.2.6 Catalytic Oxidizer Temperature~~

~~(a) A continuous monitoring system shall be calibrated, maintained, and operated on the catalytic oxidizer for measuring the temperature at the inlet to the catalyst bed. The output of this system shall be recorded as a three-hour average. From the date of issuance of this permit until the approved stack test results are available, the Permittee shall take appropriate response steps in accordance with Section C - Compliance Response Plan - Preparation and Implementation whenever the three-hour average inlet temperature is below 550°F. A three-hour average temperature that is below 550°F is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation and Implementation shall be considered a deviation from this permit.~~

~~(b) The Permittee shall determine the three-hour average temperature from the most recent valid stack test that demonstrates compliance with the limits in Condition D.2.1, as approved by IDEM.~~

~~(c) On and after the date the approved stack test results are available, the Permittee shall take appropriate response steps in accordance with Section C - Compliance Response Plan - Preparation and Implementation whenever the three-hour average inlet temperature of the catalyst bed is below the three-hour average temperature as observed during the compliant stack test. A three-hour average temperature that is below the three-hour average temperature as observed during the compliant stack test is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation and Implementation shall be considered a deviation from this permit.~~

~~D.2.7 Catalyst Replacement Inspections~~

~~The Permittee shall inspect the catalyst activity level at least every twelve (12) months. If there are indications of excess fouling or excess catalyst degradation, the Permittee shall test the catalyst activity or replace the catalyst.~~

~~D.2.8 Parametric Monitoring~~

~~(a) The Permittee shall determine fan amperage or duct pressure from the most recent valid stack test that demonstrates compliance with the limits in Condition D.2.1, as approved by IDEM.~~

~~(b) The duct pressure or fan amperage shall be observed at least once per day when the catalytic oxidizer is in operation. When for any one reading, the duct pressure or fan amperage is outside the normal range as established in most recent compliant stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation and Implementation. A reading that is outside the range as established in the most recent compliant stack test is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation and Implementation shall be considered a deviation from this permit.~~

Record Keeping Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.2.~~4~~**9** Record Keeping Requirements

(a) To document compliance with Condition D.2.1, the Permittee shall maintain records in accordance with (1) through (**2**4) below. Records maintained for (1) through (**2**4) shall be taken as stated below and shall be complete and sufficient to establish compliance with the VOC emission limit established in Condition D.2.1.

(1) The VOC content of each coating material and solvent used less water.

(2) The amount of coating material and solvent used on a monthly basis.

(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

~~(3) The continuous temperature records (on a three-hour average basis) for the catalytic oxidizer and the three-hour average temperature used to demonstrate compliance during the most recent compliant stack test.~~

~~(4) Daily records of the duct pressure or fan amperage.~~

~~(b) To document compliance with Condition D.2.7, the Permittee shall maintain records of the results of the inspections required under Condition D.2.7.~~

(**b**~~c~~) To document compliance with Condition D.2.3, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.

(**c**~~d~~) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

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Conclusion

The operation of this stationary metal brake shoe manufacturing and assembly source shall be subject to the conditions of the attached proposed Minor Permit Revision No. 039-21324-00610.

Appendix A: Emissions Calculations
Emission Summary

Company Name: Quest Stamping Technologies, LLC
Address City IN Zip: 21840 Protecta Drive, Elkhart, Indiana 46516
Permit Number: 039-21324
Plt ID: 039-00610
Reviewer: Nathan C. Bell
Date: June 28, 2005

	Uncontrolled Potential Emissions (tons/year)					
		Existing Source			Modification	
Category	Pollutant	Natural Gas Combustion	Abrasive Blasting	Griding	Surface Coating	**TOTAL**
Criteria Pollutants	PM	0.07	17.52	33.2	0	50.82
	PM10	0.30	15.07	3.32	0	18.69
	SO2	0.02		0		0.02
	NOx	3.93		0		3.93
	VOC	0.22		0	0.58	0.80
	CO	3.30		0		3.30
Hazardous Air Pollutants	Glycol Ethers				0.30	0.30
	Arsenic			4.3E-03		4.3E-03
	Benzene	8.3E-05				8.3E-05
	Cadmium	4.3E-05		2.0E-03		2.0E-03
	Chromium	5.5E-05		0.01		0.01
	Cobalt			1.0E-03		1.0E-03
	Dichlorobenzene	4.7E-05				4.7E-05
	Formaldehyde	2.9E-03			0.05	0.05
	Lead	2.0E-05		8.8E-03		8.8E-03
	Manganese	1.5E-05				1.5E-05
	n-Hexane	0.07				0.07
	Nickel	8.3E-05		0.02		0.02
	Selenium			3.3E-04		3.3E-04
	Toluene	1.3E-04				1.3E-04
	Triethethylamine				0.03	0.03
	Totals	**0.07**	**0**	**0.05**	**0.38**	**0.50**
					Worst Single HAP	**0.30**

Total emissions based on rated capacity at 8,760 hours/year.

	Controlled Potential Emissions (tons/year)					
		Existing Source			Modification	
Category	Pollutant	Natural Gas Combustion	Abrasive Blasting	Griding	Surface Coating	**TOTAL**
Criteria Pollutants	PM	0.07	0.018	0.03	0	0.13
	PM10	0.30	0.015	3.3E-03	0	0.32
	SO2	0.02		0		0.02
	NOx	3.93		0		3.93
	VOC	0.22		0	0.58	0.80
	CO	3.30		0		3.30
Hazardous Air Pollutants	Glycol Ethers				0.30	0.30
	Arsenic			4.3E-03		4.3E-03
	Benzene	8.3E-05				8.3E-05
	Cadmium	4.3E-05		2.0E-03		2.0E-03
	Chromium	5.5E-05		0.01		0.01
	Cobalt			1.0E-03		1.0E-03
	Dichlorobenzene	4.7E-05				4.7E-05
	Formaldehyde	2.9E-03			0.05	0.05
	Lead	2.0E-05		8.8E-03		8.8E-03
	Manganese	1.5E-05				1.5E-05
	n-Hexane	0.07				0.07
	Nickel	8.3E-05		0.02		0.02
	Selenium			3.3E-04		3.3E-04
	Toluene	1.3E-04				1.3E-04
	Triethethylamine				0.03	0.03
	Totals	**0.07**	**0**	**0.05**	**0.38**	**0.50**
					Worst Single HAP	**0.30**

Total emissions based on rated capacity at 8,760 hours/year.

Appendix A: Emissions Calculations
From Surface Coating Operations
Varnish Dip Tank

Company Name: Quest Stamping Technologies, LLC
Address City IN Zip: 21840 Protecta Drive, Elkhart, Indiana 46516
Permit Number: 039-21324
Plt ID: 039-00610
Reviewer: Nathan C. Bell
Date: June 28, 2005

Volatile Organic Comounds (VOC) and Particulate Matter (PM)

Material	Density (lb/gal)	Weight % Volatile (H20 & Organics)	Weight % Water + Non-VOCs	Weight % Solids	Weight % VOCs	Volume % Water + Non-VOCs	Volume % Solids	Maximum Material Usage (gal/unit)	Maximum Throughput (units/hr)	Maximum Matieral Usage (gal/day)	Maximum Matieral Usage (lbs/hour)	Pounds VOC per gallon of coating less water and non-VOCs	Pounds VOC per gallon of coating	Potential VOC (lbs/hr)	Potential VOC (lbs/day)	Potential VOC (tons/year)	Particulate Potential (lb/day)	Particulate Potential (tons/yr)	lb VOC per gal solids	Transfer Efficiency
AL6006	8.60	78.30%	66.09%	21.70%	12.2%	69.0%	18.0%	0.00024	525	3.02	1.084	3.39	1.05	0.13	3.18	0.58	0	0	5.83	100%
													Totals	**0.13**	**3.18**	**0.58**	**0**	**0**		

METHODOLOGY
Maximum Paint Usage (lbs/hr) = Maximum Paint Usage (gal/day) * Density of Paint (lb/gal) / (24 hour/day)
Pounds of VOC per Gallon Coating less Water and non-VOCs = (Density (lb/gal) * Weight % VOCs) / (1-Volume % water and non-VOCs)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % VOCs)
Potential VOC Pounds per Hour = Maximum Paint Usage (lbs/hr) * Weight % VOCs
Potential VOC Pounds per Day = Potential VOC (lbs/hr) * (24 hours/day)
Potential VOC Tons per Year = Potential VOC (lbs/day) * (365 days/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = Density (lbs/gal) * Maximum Paint Usage (gal/day) * (Weight % Solids) * (1-Transfer efficiency) *(365 days/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % VOCs) / (Volume % solids)

Hazardous Air Pollutants (HAPs)

Material	Density (lb/gal)	Maximum Matieral Usage (gal/day)	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Triethylamine	Glycol Ethers Emissions	Formaldehyde Emissions	Triethylamine Emissions
AL6006	8.60	3.024	6.42%	0.96%	0.57%	0.305	0.046	0.027

* 2-Butoxyethanol is a Glycol Ether, which is a Hazardous Air Pollutant

TOTAL HAPs 0.38 ton/yr

METHODOLOGY
HAPS emission rate (tons/yr) = Density (lb/gal) * Maximum Paint Usage (gal/day) * Weight % HAP * 365 days/yr * 1 ton/2000 lbs