



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Mitchell E. Daniels Jr.*  
Governor

*Thomas W. Easterly*  
Commissioner

100 North Senate Avenue  
Indianapolis, Indiana 46204  
(317) 232-8603  
Toll Free (800) 451-6027  
[www.idem.IN.gov](http://www.idem.IN.gov)

TO: Interested Parties / Applicant

DATE: October 7, 2008

RE: National Utility Equipment Co. / 003-26922-00372

FROM: Matthew Stuckey, Branch Chief  
Permits Branch  
Office of Air Quality

## Notice of Decision: Approval - Registration

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 4-21.5-3-4(d) this order is effective when it is served. When served by U.S. mail, the order is effective three (3) calendar days from the mailing of this notice pursuant to IC 4-21.5-3-2(e).

If you wish to challenge this decision, IC 4-21.5-3-7 requires 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 of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar 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.

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  
FN-REGIS.dot 1/2/08



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## REGISTRATION OFFICE OF AIR QUALITY

**National Utility Equipment Company, LLC**  
**4532 Allen Martin Drive**  
**Fort Wayne, Indiana 46806**

Pursuant to 326 IAC 2-5.1 (Construction of New Sources: Registrations) and 326 IAC 2-5.5 (Registrations), (herein known as the Registrant) is hereby authorized to construct and operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this registration.

Registration No. 003-26922-00372	
Issued by: Original signed by  Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: October 7, 2008

## SECTION A

## SOURCE SUMMARY

This registration 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 and A.2 is descriptive information and does not constitute enforceable conditions. However, the Registrant 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 Registrant to obtain additional permits pursuant to 326 IAC 2.

### A.1 General Information

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The Registrant owns and operates a stationary utility vehicle equipment manufacturing facility.

Source Address:	4532 Allen Martin Drive, Fort Wayne, IN 46806
Mailing Address:	4532 Allen Martin Drive, Fort Wayne, IN 46806
General Source Phone Number:	(800) 860-0183
SIC Code:	3714
County Location:	Allen County
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Registration

### A.2 Emission Units and Pollution Control Equipment Summary

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

- (a) One (1) fiberglass paint and gelcoat application booth, identified as PB-01, approved for construction in 2008, with a maximum capacity of two units per hour, using a fabric filter system, identified as CPB1, for particulate control, and exhausting to stack SPB1, consisting of the following processes:
  - (1) One paint booth spray application process, identified as PB-SA, using a high volume low pressure (HVLP) surface coating spray application to fiberglass molds.
  - (2) One gel coat application process, identified as PB-GC, using atomized air-assisted airless application of gel coat for open molding.
- (b) One (1) fiberglass equipment manufacturing operation, identified as FM-01, approved for construction in 2008, with a maximum capacity of one unit per hour, utilizing no control devices, and exhausting within the building.
- (c) One (1) fiberglass sanding operation, identified as FM-02, approved for construction in 2008, with a maximum capacity of one part per hour, utilizing a baghouse for particulate control, and exhausting within the building.
- (d) One (1) abrasive shot blast booth, identified as AB-01, approved for construction in 2008, with a maximum capacity of one part per hour, utilizing a cartridge filter dust collection system, identified as CAB1, for particulate control, and exhausting to stack SAB1.
- (e) Vehicle equipment service and maintenance operations, approved for construction in 2008, utilizing no controls, exhausting within the building; including:
  - (1) One (1) utility truck service operation with miscellaneous chemical usage, identified as SM-01, with a maximum capacity of one vehicle per hour.
  - (2) One (1) gas metal arc welding station, identified as SM-02, with a maximum consumption rate of 0.12 pounds of electrode per hour.
  - (3) One cold cleaner degreaser, identified as SM-03, with a maximum throughput of one unit

per hour.

- (f) Natural gas-fired combustion sources, including:
  - (1) Eight (8) comfort heaters, collectively identified as NG-01, rated at 0.2 MMBtu/hr each.
  - (2) Two (2) comfort heaters, collectively identified as NG-02, rated at 0.075 MMBtu/hr each.
  - (3) One (1) process heater, identified as NG-03, rated at 2.2 MMBtu/hr.
- (g) One diesel fuel storage tank, identified as ST-01, approved for construction in 2008, with a maximum capacity of 300 gallons.

## SECTION B

## GENERAL CONDITIONS

### B.1 Definitions [326 IAC 2-1.1-1]

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Terms in this registration shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-1.1-1) shall prevail.

### B.2 Effective Date of Registration [IC 13-15-5-3]

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Pursuant to IC 13-15-5-3, this registration is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

### B.3 Registration Revocation [326 IAC 2-1.1-9]

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Pursuant to 326 IAC 2-1.1-9 (Revocation), this registration to operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this registration.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this registration.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this registration shall not require revocation of this registration.
- (d) For any cause which establishes in the judgment of IDEM, the fact that continuance of this registration is not consistent with purposes of this article.

### B.4 Prior Permits Superseded [326 IAC 2-1.1-9.5]

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- (a) All terms and conditions of permits established prior to Registration No. 003-26922-00372 and issued pursuant to permitting programs approved into the state implementation plan have been either:
  - (1) incorporated as originally stated,
  - (2) revised, or
  - (3) deleted.
- (b) All previous registrations and permits are superseded by this registration.

### B.5 Annual Notification [326 IAC 2-5.1-2(f)(3)] [326 IAC 2-5.5-4(a)(3)]

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Pursuant to 326 IAC 2-5.1-2(f)(3) and 326 IAC 2-5.5-4(a)(3):

- (a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this registration.
- (b) The annual notice shall be submitted in the format attached no later than March 1 of each year to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003

Indianapolis, IN 46204-2251

- (c) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

**B.6 Source Modification Requirement [326 IAC 2-5.5-6(a)]**

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Pursuant to 326 IAC 2-5.5-6(a), an application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

**B.7 Registrations [326 IAC 2-5.1-2(i)]**

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Pursuant to 326 IAC 2-5.1-2(i), this registration does not limit the source's potential to emit.

**SECTION C**

**SOURCE OPERATION CONDITIONS**

Entire Source

**Emission Limitations and Standards [326 IAC 2-5.1-2(g)] [326 IAC 2-5.5-4(b)]**

**C.1 Opacity [326 IAC 5-1]**

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

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

**C.2 Fugitive Dust Emissions [326 IAC 6-4]**

The Registrant shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

## SECTION D.1

## OPERATION CONDITIONS

Facility Description [326 IAC 2-5.1-2(f)(2)] [326 IAC 2-5.5-4(a)(2)]:

- (c) One (1) fiberglass sanding operation, identified as FM-02, approved for construction in 2008, with a maximum capacity of one part per hour, utilizing a baghouse for particulate control, and exhausting within the building.

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

### Emission Limitations and Standards [326 IAC 2-5.1-2(f)(1)] [326 IAC 2-5.5-4(a)(1)]

#### D.1.1 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the fiberglass sanding operation, identified as FM-02, operation shall not exceed:

- (a) 1.12 pounds per hour when operating at a process weight rate of 0.15 tons per hour when processing booms.
- (b) 0.76 pounds per hour when operating at a process weight rate of 0.08 tons per hour when processing buckets.
- (c) 1.24 pounds per hour when operating at a process weight rate of 0.17 tons per hour when processing bucket covers.

The pound per hour limitations were calculated with the following equation:

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 baghouse shall be in operation at all times the sanding operation is in operation, in order to comply with this limit.

## SECTION D.2

## OPERATION CONDITIONS

Facility Description [326 IAC 2-5.1-2(f)(2)] [326 IAC 2-5.5-4(a)(2)]:

- (e) Vehicle equipment service and maintenance operations, approved for construction in 2008, utilizing no controls, exhausting within the building; including:
- (1) One (1) utility truck service operation with miscellaneous chemical usage, identified as SM-01, with a maximum capacity of one vehicle per hour.
  - (2) One (1) gas metal arc welding station, identified as SM-02, with a maximum consumption rate of 0.12 pounds of electrode per hour.
  - (3) One cold cleaner degreaser, identified as SM-03, with a maximum throughput of one unit 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 [326 IAC 2-5.1-2(f)(1)] [326 IAC 2-5.5-4(a)(1)]

#### D.2.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2][326 IAC 8-3-5]

Pursuant to 326 IAC 8-3-2, for cold cleaning operations constructed after January 1, 1980, the Permittee shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

Pursuant to 326 IAC 8-3-5(a), the owner or operator of a cold cleaner degreaser facility shall ensure that the following control equipment requirements are met:

- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
  - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
  - (B) The solvent is agitated; or
  - (C) The solvent is heated.
- (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of

mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

- (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
- (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
- (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
  - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
  - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
  - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller of carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

Pursuant to 326 IAC 8-3-5(b), the owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:

- (1) Close the cover whenever articles are not being handled in the degreaser.
- (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
- (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH**

**REGISTRATION  
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-5.1-2(f)(3) and 326 IAC 2-5.5-4(a)(3).

<b>Company Name:</b>	National Utility Equipment Company, LLC
<b>Address:</b>	4532 Allen Martin Drive
<b>City:</b>	Fort Wayne, Indiana 46806
<b>Phone Number:</b>	source general phone
<b>Registration No.:</b>	003-26922-00372

I hereby certify that National Utility Company, LLC is :

- still in operation.
- no longer in operation.
- in compliance with the requirements of Registration No. 003-26922-00372.
- not in compliance with the requirements of Registration No. 003-26922-00372.

I hereby certify that National Utility Company, LLC is :

<b>Authorized Individual (typed):</b>
<b>Title:</b>
<b>Signature:</b>
<b>Phone Number:</b>
<b>Date:</b>

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

<b>Noncompliance:</b>

## Indiana Department of Environmental Management Office of Air Quality

### Technical Support Document (TSD) for a Registration

#### Source Description and Location

**Source Name:** National Utility Equipment Company, LLC  
**Source Location:** 4532 Allen Martin Drive, Fort Wayne, IN 46806  
**County:** Allen  
**SIC Code:** 3714  
**Registration No.:** 003-26922-00372  
**Permit Reviewer:** Jason R. Krawczyk

On August 27, 2008, the Office of Air Quality (OAQ) has received an application from National Utility Equipment Company, LLC related to the construction and operation of a new stationary utility vehicle equipment manufacturing facility.

#### Existing Approvals

There have been no previous approvals issued to this source.

#### County Attainment Status

The source is located in Allen County.

Pollutant	Designation
SO <sub>2</sub>	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O <sub>3</sub>	Attainment effective February 12, 2007, for the Fort Wayne area, including Allen County, for the 8-hour ozone standard. <sup>1</sup>
PM <sub>10</sub>	Unclassifiable effective November 15, 1990.
NO <sub>2</sub>	Cannot be classified or better than national standards.
Pb	Not designated.
<sup>1</sup> Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005. Unclassifiable or attainment effective April 5, 2005, for PM2.5.	

(a) Ozone Standards

Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Allen County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) PM2.5

Allen County has been classified as attainment for PM2.5. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM2.5 emissions, and the effective date of these rules was July 15<sup>th</sup>, 2008. Indiana has three years from the publication of these rules to revise its PSD rules, 326 IAC 2-2, to include those requirements. The May 8, 2008 rule revisions require IDEM to regulate PM10 emissions as a surrogate for PM2.5 emissions until 326 IAC 2-2 is revised.

- (c) Other Criteria Pollutants  
Allen County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

### Fugitive Emissions

The fugitive emissions of criteria pollutants and hazardous air pollutants are counted toward the determination of 326 IAC 2-5.1-2 (Registrations) applicability.

### Background and Description of Emission Units and Pollution Control Equipment

The Office of Air Quality (OAQ) has reviewed an application, submitted by National Utility Equipment Company, LLC on August 27, 2008, relating to the construction and operation of a utility vehicle equipment manufacturing facility.

The following is a list of the new emission units and pollution control devices:

- (a) One (1) fiberglass paint and gelcoat application booth, identified as PB-01, approved for construction in 2008, with a maximum capacity of two units per hour, using a fabric filter system, identified as CPB1, for particulate control, and exhausting to stack SPB1, consisting of the following processes:
- (1) One paint booth spray application process, identified as PB-SA, using a high volume low pressure (HVLP) surface coating spray application to fiberglass molds.
  - (2) One gel coat application process, identified as PB-GC, using atomized air-assisted airless application of gel coat for open molding.
- (b) One (1) fiberglass equipment manufacturing operation, identified as FM-01, approved for construction in 2008, with a maximum capacity of one unit per hour, utilizing no control devices, and exhausting within the building.
- (c) One (1) fiberglass sanding operation, identified as FM-02, approved for construction in 2008, with a maximum capacity of one part per hour, utilizing a baghouse for particulate control, and exhausting within the building.
- (d) One (1) abrasive shot blast booth, identified as AB-01, approved for construction in 2008, with a maximum capacity of one part per hour, utilizing a cartridge filter dust collection system, identified as CAB1, for particulate control, and exhausting to stack SAB1.
- (e) Vehicle equipment service and maintenance operations, approved for construction in 2008, utilizing no controls, exhausting within the building; including:
- (1) One (1) utility truck service operation with miscellaneous chemical usage, identified as SM-01, with a maximum capacity of one vehicle per hour.
  - (2) One (1) gas metal arc welding station, identified as SM-02, with a maximum consumption rate of 0.12 pounds of electrode per hour.
  - (3) One cold cleaner degreaser, identified as SM-03, with a maximum throughput of one unit per hour.
- (f) Natural gas-fired combustion sources, including:
- (1) Eight (8) comfort heaters, collectively identified as NG-01, rated at 0.2 MMBtu/hr each.

- (2) Two (2) comfort heaters, collectively identified as NG-02, rated at 0.075 MMBtu/hr each.
- (3) One (1) process heater, identified as NG-03, rated at 2.2 MMBtu/hr.
- (g) One diesel fuel storage tank, identified as ST-01, approved for construction in 2008, with a maximum capacity of 300 gallons.

**Unpermitted Emission Units and Pollution Control Equipment**

There are no unpermitted emission units operating at this source.

**Enforcement Issues**

There are no pending enforcement actions related to this source.

**Emission Calculations**

See Appendix A of this TSD for detailed emission calculations.

**Permit Level Determination – Registration**

The following table reflects the unlimited potential to emit (PTE) of the entire source before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Process/ Emission Unit	Potential To Emit of the Entire Source (tons/year)								
	PM	PM10*	PM2.5	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	Total HAPs	Worst Single HAP
Paint / Gelcoat Booth (PB-01)	1.27	1.27	1.27	negl.	negl.	2.25	negl.	1.77	0.46 Styrene
Fiberglass Manufacturing (FM-01)	negl.	negl.	negl.	negl.	negl.	1.83	negl.	1.12	0.91 Styrene
Fiberglass Sanding (FM-02)	11.13	11.13	11.13	negl.	negl.	negl.	negl.	negl.	negl.
Abrasive Shot Blast Booth (AB-01)	negl.	negl.	negl.	negl.	negl.	negl.	negl.	negl.	negl.
Miscellaneous Chemical Usage (SM-01)	negl.	negl.	negl.	negl.	negl.	0.22	negl.	0.12	0.09 Styrene
Gas Metal Arc Welding (SM-02)	negl.	negl.	negl.	negl.	negl.	negl.	negl.	negl.	negl.
Cold Cleaner Degreaser (SM-03)	negl.	negl.	negl.	negl.	negl.	2.12	negl.	negl.	negl.
Natural Gas Combustion	0.03	0.13	0.13	0.49	1.73	0.10	1.45	0.03	negl.
<b>Total PTE of Entire Source</b>	<b>12.43</b>	<b>12.53</b>	<b>12.53</b>	<b>0.49</b>	<b>1.73</b>	<b>6.52</b>	<b>1.45</b>	<b>3.04</b>	<b>1.47 Styrene</b>
Exemptions Levels	5	5	5	10	10	10	25	25	10
Registration Levels	25	25	25	25	25	25	100	25	10

negl. = negligible

\* Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".

- (a) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(16)) of all criteria pollutants are within the ranges or less than the ranges listed in 326 IAC 2-5.1-2(a)(1). Therefore, the source is subject to the provisions of 326 IAC 2-5.1-2 (Registrations). A Registration will be issued.
- (b) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is less than ten (10) tons per year and the PTE of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-7.

### **Federal Rule Applicability Determination**

#### New Source Performance Standards (NSPS)

- (a) The requirements of the New Source Performance Standard for Automobile and Light Duty Truck Surface Coating Operations, 40 CFR 60, Subpart MM (326 IAC 12), are not included in the permit, since this source does not perform automobile and light duty truck surface coating .
- (b) The requirements of the New Source Performance Standard for Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines, 40 CFR 60, Subpart TTT (326 IAC 12), are not included in the permit, since this source does not manufacture plastic parts for business machines.
- (c) There are no New Source Performance Standards (NSPS)(40 CFR Part 60) included in the permit.

#### National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (d) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Halogenated Solvent Cleaning, 40 CFR 63.460, Subpart T (326 IAC 20-6), are not included in the permit, since this source is not a major source of HAPs.
- (e) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Boat Manufacturing, 40 CFR 63.5680, Subpart VVVV (326 IAC 20-48), are not included in the permit, since this source is not a manufacturer of boats and is not a major source of HAPs.
- (f) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Reinforced Plastic Composites Production, 40 CFR 63.5780, Subpart WWWW (326 IAC 20-56), are not included in the permit, since this source does not operate a reinforced plastic composites production facility that is located at a major source of HAP emissions.
- (g) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources, 40 CFR 63.11169, Subpart HHHHHH, are not included in the permit, since this source does not perform paint stripping using MeCl, perform spray application of coatings, to motor vehicles and mobile equipment, or perform spray application of coatings that contain the a target HAP, to a plastic and/or metal substrate on a part or product.
- (h) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit.

#### Compliance Assurance Monitoring (CAM)

- (i) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the unlimited potential to emit of the source is less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

### State Rule Applicability Determination

The following state rules are applicable to the source:

- (a) 326 IAC 2-5.1-2 (Registrations)  
Registration applicability is discussed under the Permit Level Determination – Registration section above.
- (b) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))  
The potential to emit of any single HAP is less than ten (10) tons per year and the potential to emit of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-4.1.
- (c) 326 IAC 2-6 (Emission Reporting)  
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.
- (d) 326 IAC 5-1 (Opacity Limitations)  
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
  - (1) Opacity shall not exceed an average of forty percent (40%) in 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.
- (e) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)  
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.
- (f) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)  
The source is not subject to the requirements of 326 IAC 6-5, because the source does not have potential fugitive particulate emissions greater than 25 tons per year. Therefore, 326 IAC 6-5 does not apply.
- (g) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)  
Each of the emission units at this source is not subject to the requirements of 326 IAC 8-1-6, since the unlimited VOC potential emissions from each emission unit is less than twenty-five (25) tons per year.

#### Paint and Gelcoat Application Booth (PB-01)

- (h) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)  
Pursuant to 326 IAC 6-3-2, the paint and gelcoat application booth, identified as PB-01, is exempt from 326 IAC 6-3-2, because the potential emissions are less than five hundred fifty-one thousandths (0.551) pound per hour.
- (i) Volatile Organic Compound (VOC) Limitations (326 IAC 8-2-9)  
Pursuant to 326 IAC 8-2-9, the paint and gelcoat application booth, identified as PB-01, is not

subject to 326 IAC 8-2-9 because the actual VOC emissions are less than 15 lbs/day.

Fiberglass Equipment Manufacturing (FM-01)

- (j) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)  
Pursuant to 326 IAC 6-3-2, the fiberglass equipment manufacturing operation, identified as FM-01, is exempt from 326 IAC 6-3-2, because the potential emissions are less than five hundred fifty-one thousandths (0.551) pound per hour.
- (k) Volatile Organic Compound (VOC) Limitations (326 IAC 8-2-9)  
Pursuant to 326 IAC 8-2-9, the fiberglass equipment manufacturing operation, identified as FM-01, is not subject to 326 IAC 8-2-9 because the actual VOC emissions are less than 15 lbs/day.

Fiberglass Sanding Operation (FM-02)

- (l) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)  
Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the fiberglass sanding operation, identified as FM-02, operation shall not exceed 1.12 pounds per hour when operating at a process weight rate of 0.15 tons per hour when processing booms.

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the fiberglass sanding operation, identified as FM-02, operation shall not exceed 0.76 pounds per hour when operating at a process weight rate of 0.08 tons per hour when processing buckets.

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the fiberglass sanding operation, identified as FM-02, operation shall not exceed 1.24 pounds per hour when operating at a process weight rate of 0.17 tons per hour when processing covers.

The pound per hour limitations were calculated with the following equation:

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 baghouse shall be in operation at all times the woodworking operation is in operation, in order to comply with this limit.

Shot Blast Booth (AB-01)

- (m) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)  
Pursuant to 326 IAC 6-3-2, the abrasive shot blast booth, identified as AB-01, is exempt from 326 IAC 6-3-2, because the potential emissions are less than five hundred fifty-one thousandths (0.551) pound per hour.

Utility Truck Service Operation with Miscellaneous Chemical Usage (SM-01)

- (n) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)  
Pursuant to 326 IAC 6-3-2, utility truck service operation with miscellaneous chemical usage, identified as SM-01, is exempt from 326 IAC 6-3-2, because the potential emissions are less than five hundred fifty-one thousandths (0.551) pound per hour.
- (o) Volatile Organic Compound (VOC) Limitations (326 IAC 8-2-9)  
Pursuant to 326 IAC 8-2-9, the utility truck service operation with miscellaneous chemical usage, identified as SM-01, is not subject to 326 IAC 8-2-9 because the actual VOC emissions are less than 15 lbs/day.

Gas Metal Arc Welding Station (SM-02)

- (p) 326 IAC 6-3 (Particulate Emission Limitations, Work Practices, and Control Technologies)  
Pursuant to 326 IAC 6-3-1(a)(9) the gas metal arc welding station, identified as SM-02, is exempt from the requirements of 326 IAC 6-3, because the potential to consume welding wire is less than six hundred twenty-five (625) pounds per day

Cold Cleaner Degreaser (SM-03)

- (q) 326 IAC 8-3-2 (Cold Cleaner Operations)  
Pursuant to 326 IAC 8-3-2, for cold cleaning operations constructed after January 1, 1980, the Permittee shall:
- (a) Equip the cleaner with a cover;
  - (b) Equip the cleaner with a facility for draining cleaned parts;
  - (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
  - (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
  - (e) Provide a permanent, conspicuous label summarizing the operation requirements;
  - (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.
- (r) 326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control)  
Pursuant to 326 IAC 8-3-5(a), the owner or operator of a cold cleaner degreaser facility shall ensure that the following control equipment requirements are met:
- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
    - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
    - (B) The solvent is agitated; or
    - (C) The solvent is heated.
  - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
  - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
  - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
  - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury)

or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):

- (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
- (B) A water cover when solvent is used is insoluble in, and heavier than, water.
- (C) Other systems of demonstrated equivalent control such as a refrigerated chiller of carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

Pursuant to 326 IAC 8-3-5(b), the owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:

- (1) Close the cover whenever articles are not being handled in the degreaser.
- (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
- (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

#### Conclusion and Recommendation

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 August 27, 2008.

The construction and operation of this source shall be subject to the conditions of the attached proposed Registration No. 003-26922-00372. The staff recommends to the Commissioner that this Registration be approved.

#### IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Jason R. Krawczyk at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5175 or toll free at 1-800-451-6027 extension 4-5175.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: [www.idem.in.gov](http://www.idem.in.gov)

**SUMMARY OF EMISSIONS**

**Company Name:** National Utility Equipment Co.  
**Address City IN Zip:** 4532 Allen Martin Drive, Fort Wayne, IN 46806  
**Permit Number:** 003-26922-00372  
**Plt ID:** 003-00372  
**Reviewer:** Jason R. Krawczyk  
**Date:** September 29, 2008

Total Potential to Emit (TONS/YR)										
Pollutant	NG-01, NG-02, NG-03	PB-01	FM-01	FM-02	AB-01	SM-01	SM-02	SM-03	Total PTE	
PM	0.03	1.27	0.00	11.13	0.00	0.00	0.00	-	12.43	
PM10	0.13	1.27	0.00	11.13	0.00	0.00	0.00	-	12.53	
PM2.5	0.13	1.27	0.00	11.13	0.00	0.00	0.00	-	12.53	
VOC	0.10	2.25	1.83	-	-	0.22	-	2.12	6.52	
NOx	1.73	-	-	-	-	-	-	-	1.73	
SO2	0.49	-	-	-	-	-	-	-	0.49	
CO	1.45	-	-	-	-	-	-	-	1.45	
Single HAP	-	0.46	0.91	-	-	0.09	0.00	0.00	1.47	
Combined HAPs	0.03	1.77	1.12	-	-	0.12	0.00	0.00	3.04	

Controlled Potential to Emit (TONS/YR)										
Pollutant	NG-01, NG-02, NG-03	PB-01	FM-01	FM-02	AB-01	SM-01	SM-02	SM-03	Total PTE	
PM	0.03	0.01	0.00	0.11	0.00	0.00	0.00	-	0.16	
PM10	0.13	0.01	0.00	0.11	0.00	0.00	0.00	-	0.26	
PM2.5	0.13	0.01	0.00	0.11	0.00	0.00	0.00	-	0.26	
VOC	0.10	2.25	1.83	-	-	0.22	-	2.12	6.52	
NOx	1.73	-	-	-	-	-	-	-	1.73	
SO2	0.49	-	-	-	-	-	-	-	0.49	
CO	1.45	-	-	-	-	-	-	-	1.45	
Single HAP	-	0.46	0.91	-	-	0.09	0.00	0.00	1.47	
Combined HAPs	0.03	1.77	1.12	-	-	0.12	0.00	0.00	3.04	

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

**Company Name:** National Utility Equipment Co.  
**Address City IN Zip:** 4532 Allen Martin Drive, Fort Wayne, IN 46806  
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**Heat Input Capacity**

**MMBtu/hr**

1.60  
0.15  
2.20  
4.0

**Potential Throughput**

**MMCF/yr**

14.02  
1.31  
19.27  
34.60

**Emission Unit ID**

NG-01 (8 Comfort Heaters rated @ 0.20 MMBtu/hr each)  
 NG-02 (2 Comfort Heaters rated @ 0.075 MMBtu/hr each)  
 NG-03 (1 Process Heater rated @ 2.20 MMBtu/hr)

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	28.5	100	5.5	84
				**see below		
Potential Emission in tons/yr	0.03	0.13	0.49	1.73	0.10	1.45

\*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

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

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

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

See page 3 for HAPs emissions calculations.

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

**Company Name:** National Utility Equipment Co.  
**Address City IN Zip:** 4532 Allen Martin Drive, Fort Wayne, IN 46806  
**Permit Number:** 003-26922-00372  
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HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	3.633E-05	2.076E-05	1.298E-03	3.114E-02	5.882E-05

HAPs - Metals					
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	8.651E-06	1.903E-05	2.422E-05	6.574E-06	3.633E-05

Methodology is the same as page 2.

The five highest organic and metal HAPs emission factors are provided above.  
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.

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

**Company Name:** National Utility Equipment Co.  
**Address City IN Zip:** 4532 Allen Martin Drive, Fort Wayne, IN 46806  
**Permit Number:** 003-26922-00372  
**Plt ID:** 003-00372  
**Reviewer:** Jason R. Krawczyk  
**Date:** September 29, 2008

Material	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	Particulate Control Efficiency
<b>PB-SA</b>																	
Gray Primer RS4202	10.47	43.84%	0.0%	43.84%	0.0%	40.10%	0.0010	2.000	4.59	4.59	0.01	0.22	0.04	0.03	11.45	45%	99.00%
Primer CP-041A	9.38	49.89%	0.0%	49.89%	0.0%	40.00%	0.0010	2.000	4.68	4.68	0.01	0.22	0.04	0.02	11.70	45%	99.00%
Primer 988	6.68	50.87%	0.0%	50.87%	0.0%	11.00%	0.0060	2.000	3.40	3.40	0.04	0.98	0.18	0.09	30.89	45%	99.00%
Red Oxide Primer	10.40	44.71%	0.0%	44.71%	0.0%	56.00%	0.0004	2.000	4.65	4.65	0.00	0.09	0.02	0.01	8.30	45%	99.00%
White GC-2030PS	11.69	29.43%	0.0%	29.43%	0.0%	41.00%	0.0040	2.000	3.44	3.44	0.03	0.66	0.12	0.16	8.39	45%	99.00%
Paint GC-40685	11.47	30.95%	0.0%	30.95%	0.0%	39.00%	0.0010	2.000	3.55	3.55	0.01	0.17	0.03	0.04	9.10	45%	99.00%
Acryld Enamel F8-W2030	8.50	54.71%	0.0%	54.71%	0.0%	18.00%	0.0010	2.000	4.65	4.65	0.01	0.22	0.04	0.02	25.84	45%	99.00%
Clearcoat CC950	8.41	36.98%	0.0%	36.98%	0.0%	49.70%	0.0004	2.000	3.11	3.11	0.00	0.06	0.01	0.01	6.26	45%	99.00%
Hardener GH-1091	8.92	24.89%	0.0%	24.89%	0.0%	75.00%	0.0015	2.000	2.22	2.22	0.01	0.16	0.03	0.05	2.96	45%	99.00%
Hardener UH80	9.03	19.93%	0.0%	19.93%	0.0%	80.00%	0.0001	2.000	1.80	1.80	0.00	0.01	0.00	0.00	2.25	45%	99.00%
Hardener UH904	9.03	21.48%	0.0%	21.48%	0.0%	79.00%	0.0001	2.000	1.94	1.94	0.00	0.01	0.00	0.00	2.46	45%	99.00%
Accelerator GA-1097	8.13	98.77%	0.0%	98.77%	0.0%	0.00%	0.0005	2.000	8.03	8.03	0.01	0.19	0.04	0.00	N/A	45%	99.00%
Activator V6-V79	9.04	19.91%	0.0%	19.91%	0.0%	80.00%	0.0001	2.000	1.80	1.80	0.00	0.01	0.00	0.00	2.25	45%	99.00%
Reducer US-4	7.31	99.86%	0.0%	99.86%	0.0%	0.00%	0.0010	2.000	7.30	7.30	0.01	0.35	0.06	0.00	N/A	45%	99.00%
V3K780 Leveler	7.34	94.96%	0.0%	94.96%	0.0%	0.00%	0.0001	2.000	6.97	6.97	0.00	0.02	0.00	0.00	N/A	45%	99.00%
Acrylic Lacquer Thinner	7.14	74.93%	0.0%	74.93%	0.0%	0.00%	0.0045	2.000	5.35	5.35	0.05	1.16	0.21	0.04	N/A	45%	99.00%
Paint Gun Cleaner	6.90	90.00%	0.0%	90.00%	0.0%	0.00%	0.0020	2.000	6.21	6.21	0.02	0.60	0.11	0.01	N/A	45%	99.00%
<b>PB-GC</b>																	
Neutral Base 9454X064	10.15	10.75%	0.0%	10.75%	0.0%	62.73%	0.0120	2.000	1.09	1.09	0.03	0.63	0.11	0.10	1.74	90%	99.00%
Base White 944W005	10.87	8.94%	0.0%	8.94%	0.0%	59.17%	0.0775	2.000	0.97	0.97	0.15	3.62	0.66	0.67	1.64	90%	99.00%
CADOX L-50a Clear	8.35	99.50%	0.0%	99.50%	0.0%	0.00%	0.0030	2.000	8.31	8.31	0.05	1.20	0.22	0.00	N/A	90%	99.00%
Patchaid	8.81	17.70%	0.0%	17.70%	0.0%	45.09%	0.0005	2.000	1.56	1.56	0.00	0.04	0.01	0.00	3.46	90%	99.00%
Acrylic Lacquer Thinner	7.14	74.93%	0.0%	74.93%	0.0%	0.00%	0.0045	2.000	5.35	5.35	0.05	1.16	0.21	0.01	N/A	90%	99.00%
Paint Gun Cleaner	6.90	90.00%	0.0%	90.00%	0.0%	0.00%	0.0020	2.000	6.21	6.21	0.02	0.60	0.11	0.00	N/A	90%	99.00%

**Uncontrolled Emissions:   0.51           12.35           2.25           1.27**  
**Controlled Emissions:    0.51           12.35           2.25           0.01**

**Note:**

Only PB-SA or PB-GC is operated at one time, however the worst case scenario of both processes being operated at the same time was used to determine permit level applicability.

**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)
- Uncontrolled Emissions = Worst Coating + Sum of all solvents used
- Controlled Emissions (Particulate) = Worst Coating + Sum of all solvents used \* (1 - Particulate Control Efficiency)

Appendix A: Emission Calculations

HAP Emission Calculations  
From the Paint Booth

Company Name: National Utility Equipment Co.  
Address City IN Zip: 4532 Allen Martin Drive, Fort Wayne, IN 46806  
Permit Number: 003-26922-00372  
PH ID: 003-00372  
Permit Reviewer: Jason R. Krawczyk  
Date: September 29, 2008

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % 2-Butpxuethyl acetate	Weight % Cobalt 2- Ethylhexonate	Weight % Cobalt Neodecanonate	Weight % Ethyl Benzene	Weight % Hexamethylene Disocyanate	Weight % Methanol	Weight % Methyl Isobutyl Ketone	Weight % Methyl Methacrylate	Weight % Methylene Chloride	Weight % Nickel Antimony Titanate	Weight % Perchloro- ethylene	Weight % Styrene	Weight % Toluene	Weight % 1,1,1Trichloro ethane	Weight % Xylene
<b>PB-SA</b>																		
Gray Primer RS4202	10.47	0.0010	2.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	24.00%	0.00%	0.00%
Primer CP-041A	9.38	0.0010	2.00	0.00%	0.00%	0.00%	0.80%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	22.00%	0.00%	4.00%
Primer 988	6.68	0.0060	2.00	0.00%	0.00%	0.00%	0.90%	0.00%	0.00%	18.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%	0.00%	5.00%
Red Oxide Primer	10.40	0.0004	2.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	24.00%	0.00%	0.00%
White GC-2030PS	11.69	0.0040	2.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Paint GC-40685	11.47	0.0010	2.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Acryl Enamel F8-W2030	8.50	0.0010	2.00	3.50%	0.00%	0.00%	5.50%	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	0.00%	0.00%	8.50%	0.00%	32.50%
Clearcoat CC950	8.41	0.0004	2.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Hardener GH-1091	8.92	0.0015	2.00	0.00%	0.00%	0.00%	0.00%	0.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Hardener UH80	9.03	0.0001	2.00	0.00%	0.00%	0.00%	0.00%	0.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Hardener UH904	9.03	0.0001	2.00	0.00%	0.00%	0.00%	0.10%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accelerator GA-1097	8.13	0.0005	2.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Activator V6-V79	9.04	0.0001	2.00	0.00%	0.00%	0.00%	2.00%	0.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%
Reducer US-4	7.31	0.0010	2.00	12.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
V3K780 Leveler	7.34	0.0001	2.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Acrylic Lacquer Thinner	7.14	0.0045	2.00	0.00%	0.00%	0.00%	0.00%	0.00%	22.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	55.00%	0.00%	17.50%
Paint Gun Cleaner	6.90	0.0020	2.00	0.00%	0.00%	0.00%	15.00%	0.00%	2.00%	30.00%	0.00%	0.55%	0.00%	0.55%	0.00%	45.00%	0.55%	7.50%
<b>PB-GC</b>																		
Neutral Base 9454X064	10.15	0.0120	2.00	0.00%	0.23%	0.00%	0.00%	0.00%	0.00%	0.00%	3.75%	0.00%	0.00%	0.00%	7.00%	0.00%	0.00%	0.00%
Base White 944W005	10.87	0.0075	2.00	0.00%	0.16%	0.00%	0.00%	0.00%	0.00%	0.00%	3.75%	0.00%	0.00%	0.00%	5.19%	0.00%	0.00%	0.00%
CADOX L-50a Clear	8.35	0.0030	2.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Patchaid	8.81	0.0005	2.00	0.00%	0.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	17.70%	0.00%	0.00%	0.00%
Acrylic Lacquer Thinner	7.14	0.0045	2.00	0.00%	0.00%	0.00%	0.00%	0.00%	22.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	55.00%	0.00%	17.50%
Paint Gun Cleaner	6.90	0.0020	2.00	0.00%	0.00%	0.00%	15.00%	0.00%	2.00%	30.00%	0.00%	0.55%	0.00%	0.55%	0.00%	45.00%	0.55%	7.50%

Material	2-Butpxuethyl acetate (ton/yr)	Cobalt 2- Ethylhexonate (ton/yr)	Cobalt Neodecanonate (ton/yr)	Ethyl Benzene (ton/yr)	Hexamethylene Disocyanate (ton/yr)	Methanol (ton/yr)	Methyl Isobutyl Ketone (ton/yr)	Methyl Methacrylate (ton/yr)	Methylene Chloride (ton/yr)	Nickel Antimony Titanate (ton/yr)	Perchloro- ethylene (ton/yr)	Styrene (ton/yr)	Toluene (ton/yr)	1,1,1Trichloro ethane (ton/yr)	Xylene (ton/yr)
<b>PB-SA</b>															
Gray Primer RS4202	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
Primer CP-041A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
Primer 988	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.02
Red Oxide Primer	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
White GC-2030PS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paint GC-40685	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Acryl Enamel F8-W2030	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.02
Clearcoat CC950	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hardener GH-1091	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hardener UH80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hardener UH904	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accelerator GA-1097	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Activator V6-V79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Reducer US-4	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V3K780 Leveler	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Acrylic Lacquer Thinner	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.05
Paint Gun Cleaner	0.00	0.00	0.00	0.02	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.01
<b>PB-GC</b>															
Neutral Base 9454X064	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.07	0.00	0.00	0.00
Base White 944W005	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.38	0.00	0.00	0.00
CADOX L-50a Clear	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Patchaid	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
Acrylic Lacquer Thinner	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.05
Paint Gun Cleaner	0.00	0.00	0.00	0.02	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.01
<b>Total Potential Emissions:</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.13</b>	<b>0.14</b>	<b>0.32</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.46</b>	<b>0.48</b>	<b>0.00</b>	<b>0.16</b>

HAP Total: 1.77  
Worst Single HAP: 0.48 Toluene

Note: Only PB-SA or PB-GC is operated at one time, however the worst case scenario of both processes being operated at the same time was used to determine permit level applicability.

Methodology:  
HAPS emission rate (tons/yr) = Density (lb/gal) \* Gal of Material (gal/unit) \* Maximum (unit/hr) \* Weight % HAP \* 8760 hrs/yr \* 1 ton/2000 lbs

**Appendix A: Emissions Calculations  
VOC and Particulate  
From Fiberglass Equipment Manufacturing**

**Company Name:** National Utility Equipment Co.  
**Address City IN Zip:** 4532 Allen Martin Drive, Fort Wayne, IN 46806  
**Permit Number:** 003-26922-00372  
**Pit ID:** 003-00372  
**Reviewer:** Jason R. Krawczyk  
**Date:** September 29, 2008

Material	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	Particulate Control Efficiency
<b>FM-01</b>																	
Brown Enamel 948NT197	10.32	8.20%	0.0%	8.20%	0.0%	58.90%	0.0140	1.000	0.85	0.85	0.01	0.28	0.05	0.00	1.44	100%	99.00%
COR61-AA-260W	9.64	5.65%	0.0%	5.65%	0.0%	69.00%	0.5710	1.000	0.54	0.54	0.31	7.46	1.36	0.00	0.79	100%	99.00%
CADOX D-50 Clear	8.35	99.50%	0.0%	99.50%	0.0%	0.00%	0.0040	1.000	8.31	8.31	0.03	0.80	0.15	0.00	N/A	100%	99.00%
HG Green Tooling	9.03	10.75%	0.0%	10.75%	0.0%	56.12%	0.0020	1.000	0.97	0.97	0.00	0.05	0.01	0.00	1.73	100%	99.00%
Mold Release & Stripper	7.18	97.54%	0.0%	97.54%	0.0%	2.46%	0.0020	1.000	7.00	7.00	0.01	0.34	0.06	0.00	284.69	100%	99.00%
Mold Prep- Hi-L Liquid Wax	7.18	85.55%	0.0%	85.55%	0.0%	14.45%	0.0020	1.000	6.14	6.14	0.01	0.29	0.05	0.00	42.51	100%	99.00%
MA 320 Adhesive	7.68	5.43%	0.0%	5.43%	0.0%	94.57%	0.0010	1.000	0.42	0.42	0.00	0.01	0.00	0.00	0.44	100%	99.00%
MA 550 White Activator	12.16	0.00%	0.0%	0.00%	0.0%	99.00%	0.0000	1.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	99.00%
Acrylic Lacquer Thinner	7.14	74.93%	0.0%	74.93%	0.0%	0.00%	0.0060	1.000	5.35	5.35	0.03	0.77	0.14	0.00	N/A	100%	99.00%

**Uncontrolled Emissions:      0.42            10.00            1.83            0.00**

**Controlled Emissions:      0.42            10.00            1.83            0.00**

**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)
- Uncontrolled Emissions = Worst Coating + Sum of all solvents used
- Controlled Emissions (Particulate) = Worst Coating + Sum of all solvents used \* (1 - Particulate Control Efficiency)

**Appendix A: Emission Calculations**  
**HAP Emission Calculations**  
**From the Fiberglass Equipment Manufacturing**

**Company Name:** National Utility Equipment Co.  
**Address City IN Zip:** 4532 Allen Martin Drive, Fort Wayne, IN 46806  
**Permit Number:** 003-26922-00372  
**Plt ID:** 003-00372  
**Permit Reviewer:** Jason R. Krawczyk  
**Date:** September 29, 2008

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Cobalt 2- Ethylhexonate	Weight % Cobalt Neodecanoate	Weight % Methanol	Weight % Methyl Methacrylate	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethylhexonat e (ton/yr)	Neodecano ate (ton/yr)	Methanol (ton/yr)	Methacrylat e (ton/yr)	Styrene (ton/yr)	Toluene (ton/yr)	Xylene (ton/yr)
<b>FM-01</b>																	
Brown Enamel 948NT197	10.32	0.0140	1.00	0.20%	0.00%	0.00%	3.75%	4.45%	0.00%	0.00%	0.00	0.00	0.00	0.02	0.03	0.00	0.00
COR61-AA-260W	9.64	0.5710	1.00	0.00%	0.00%	0.00%	0.00%	3.65%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.88	0.00	0.00
CADOX D-50 Clear	8.35	0.0040	1.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HG Green Tooling	9.03	0.0020	1.00	0.07%	0.06%	0.00%	3.75%	7.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.01	0.00	0.00
Mold Release & Stripper	7.18	0.0020	1.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mold Prep- Hi-L Liquid Wax	7.18	0.0020	1.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MA 320 Adhesive	7.68	0.0010	1.00	0.00%	0.00%	0.00%	5.43%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MA 550 White Activator	12.16	0.0000	1.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Acrylic Lacquer Thinner	7.14	0.0060	1.00	0.00%	0.00%	22.50%	0.00%	0.00%	55.00%	17.50%	0.00	0.00	0.04	0.00	0.00	0.10	0.03

**Total Potential Emissions:**                    0.00           0.00           0.04           0.03           0.91           0.10           0.03

**HAP Total:**                    1.12  
**Worst Single HAP:**           0.91 Styrene

**Methodology:**

HAPS emission rate (tons/yr) = Density (lb/gal) \* Gal of Material (gal/unit) \* Maximum (unit/hr) \* Weight % HAP \* 8760 hrs/yr \* 1 ton/2000 lbs

**Appendix A: Emissions Calculations  
Particulate Emissions  
From Fiberglass Equipment Sanding**

**Company Name:** National Utility Equipment Co.  
**Address City IN Zip:** 4532 Allen Martin Drive, Fort Wayne, IN 46806  
**Permit Number:** 003-26922-00372  
**Plt ID:** 003-00372  
**Reviewer:** Jason R. Krawczyk  
**Date:** September 29, 2008

Emission Unit	Dust Collected (cu ft/month)	Density of Fiberglass (lb/cu ft)	Void Fraction (%)	Max. Operating Hours (hr)	Actual Operating Hours (hr)	PM / PM10 / PM2.5 Emissions (lbs/yr)	PM / PM10 / PM2.5 Emissions (ton/yr)	Control Efficiency
<b>FM-02</b>								
Fiberglass Sanding	7.35	95.04	40%	6570	1500	22251.80	11.13	99.00%

**Uncontrolled Emissions: 11.13 (ton/yr)**

**Controlled Emissions: 0.11 (ton/yr)**

**326 IAC 6-3-2(e) Calculations**

Process Material	Max. Process Weight Rate	326 IAC 6-3-2(e) Allowable Emission Rate
	(ton/hr)	(lbs/hr)
Boom	0.145	1.12
Bucket	0.082	0.76
Bucket Cover	0.168	1.24

**Note:**

Fiberglass Equipment Sanding operations are limited to 6570 hours of operation because of fiberglass gelcoat and curing times

**Methodology:**

Uncontrolled Emissions (lbs/hr) = Dust Collected (cu ft/month) \* Density of Fiberglass (lb/cu ft) \* 12 months \* (1-Void Fraction (%)) / Control Efficiency (%) \* (Max. Operating Hours (hr) / Actual Operating Hours (hr))

Uncontrolled Emissions (ton/yr) = Uncontrolled Emissions (lbs/hr) / 2000 tons

Controlled Emissions (ton/yr) = Uncontrolled Emissions \* (1- Control Efficiency)

326 IAC 6-3-2(e) Allowable = 4.10(Process Weight Rate)^0.67

**Appendix A: Emissions Calculations**  
**Particulate Emissions**  
**From Abrasive Shot Blasting**

**Company Name:** National Utility Equipment Co.  
**Address City IN Zip:** 4532 Allen Martin Drive, Fort Wayne, IN 46806  
**Permit Number:** 003-26922-00372  
**Plt ID:** 003-00372  
**Reviewer:** Jason R. Krawczyk  
**Date:** September 29, 2008

Emission Unit	PM Emission Factor (lb/ton)	PM10 Emission Factor (lb/ton)	PM2.5 Emission Factor (lb/ton)	Abrasive Blast Usage (lb/yr)	PM Emissions (lb/yr)	PM10 Emissions (lb/yr)	PM2.5 Emissions (lb/yr)	PM Emissions (ton/yr)	PM10 Emissions (ton/yr)	PM2.5 Emissions (ton/yr)	Control Efficiency
<b>AB-01</b>											
Shot Blasting	0.30	0.075	0.008	8760.00	1.31	0.33	0.04	0.00	0.00	0.00	95.00%

**Uncontrolled Emissions:           0.00       0.00       0.00**

**Controlled Emissions:           0.00       0.00       0.00**

**Methodology:**

Emissions (lb/yr) = Emission Factor (lb/ton) \* Abrasive Blast Usage (lb/yr) / 2,000lbs

Uncontrolled Emissions (ton/yr) = Emission Factor (lb/ton) \* Abrasive Blast Usage (lb/yr) / 2,000lbs \* 1 ton / 2,000lbs

Controlled Emissions (ton/yr) = Uncontrolled Emissions (ton/yr) \* (1-Control Efficiency)

**Appendix A: Emissions Calculations  
VOC and Particulate  
From Vehicle Equipment Service and Maintenance**

**Company Name:** National Utility Equipment Co.  
**Address City IN Zip:** 4532 Allen Martin Drive, Fort Wayne, IN 46806  
**Permit Number:** 003-26922-00372  
**Pit ID:** 003-00372  
**Reviewer:** Jason R. Krawczyk  
**Date:** September 29, 2008

Material	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
<b>SM-01</b>																
Epoxy 494	9.51	17.77%	0.0%	17.77%	0.0%	82.18%	0.0150	1.000	1.69	1.69	0.03	0.61	0.11	0.00	2.06	100%
Activator 7075 (22671)	6.80	8.90%	0.0%	8.90%	0.0%	0.00%	0.0010	1.000	0.61	0.61	0.00	0.01	0.00	0.00	N/A	100%
Brake Cleaner	6.34	100.00%	0.0%	100.00%	0.0%	0.00%	0.0040	1.000	6.34	6.34	0.03	0.61	0.11	0.00	N/A	100%

**Potential Emissions:      0.05                      1.23                      0.22                      0.00**

**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)

**Appendix A: Emission Calculations**  
**HAP Emission Calculations**

**Company Name:** National Utility Equipment Co.  
**Address City IN Zip:** 4532 Allen Martin Drive, Fort Wayne, IN 46806  
**Permit Number:** 003-26922-00372  
**Pit ID:** 003-00372  
**Permit Reviewer:** Jason R. Krawczyk  
**Date:** September 29, 2008

Material	Density	Gallons of Material	Maximum	Weight %	Weight %	Methanol	Styrene
	(Lb/Gal)	(gal/unit)	(unit/hour)	Methanol	Styrene	(ton/yr)	(ton/yr)
<b>SM-01</b>							
Epoxy 494	9.51	0.0150	1.00	0.00%	15.00%	0.00	0.09
Activator 7075 (22671)	6.80	0.0010	1.00	0.00%	0.00%	0.00	0.00
Brake Cleaner	6.34	0.0040	1.00	20.00%	0.00%	0.02	0.00

**Total Potential Emissions:           0.02           0.09**

**HAP Total:                           0.12**

**Worst Single HAP:               0.09 Styrene**

**Methodology:**

HAPS emission rate (tons/yr) = Density (lb/gal) \* Gal of Material (gal/unit) \* Maximum (unit/hr) \* Weight % HAP \* 8760 hrs/yr \* 1 ton/2000 lbs

**Appendix A: Emissions Calculations**  
**Welding and Thermal Cutting**

**Company Name:** National Utility Equipment Co.  
**Address City IN Zip:** 4532 Allen Martin Drive, Fort Wayne, IN 46806  
**Permit Number:** 003-26922-00372  
**Pit ID:** 003-00372  
**Permit Reviewer:** Jason R. Krawczyk  
**Date:** September 29, 2008

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	EMISSION FACTORS* (lb pollutant/lb electrode)				EMISSIONS (lbs/hr)				HAPS (lbs/hr)
			PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	
WELDING											
Submerged Arc	1	0.12	0.0052000	0.0003160	0.0000001	0.0000001	0.001	0.000	0.000	0.000	0.000
<b>EMISSION TOTALS</b>											
Potential Emissions lbs/hr							0.00				0.00
Potential Emissions lbs/day							0.01				0.00
Potential Emissions tons/year							0.00				0.00

**Methodology:**

\*Emission Factors are default values for carbon steel unless a specific electrode type is noted in the Process column.

\*\*Emission Factor for plasma cutting from American Welding Society (AWS). Trials reported for wet cutting of 8 mm thick mild steel with 3.5 m/min cutting speed (at 0.2 g/min emitted). Therefore, the emission factor for plasma cutting is for 8 mm thick rather than 1 inch, and the maximum metal thickness is not used in calculating the emissions.

Using AWS average values: (0.25 g/min)/(3.6 m/min) x (0.0022 lb/g)/(39.37 in./m) x (1,000 in.) = 0.0039 lb/1,000 in. cut, 8 mm thick

Plasma cutting emissions, lb/hr: (# of stations)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 8 mm thick)

Cutting emissions, lb/hr: (# of stations)(max. metal thickness, in.)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 1" thick)

Welding emissions, lb/hr: (# of stations)(max. lbs of electrode used/hr/station)(emission factor, lb. pollutant/lb. of electrode used)

Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day

Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/year x 1 ton/2,000 lbs

**Appendix A: Emissions Calculations  
VOC and Particulate  
From the Parts Washer**

**Company Name:** National Utility Equipment Co.  
**Address City IN Zip:** 4532 Allen Martin Drive, Fort Wayne, IN 46806  
**Permit Number:** 003-26922-00372  
**Pit ID:** 003-00372  
**Reviewer:** Jason R. Krawczyk  
**Date:** September 29, 2008

Material	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
<b>SM-03</b>																
Parts Washer	6.55	100.00%	0.0%	100.00%	0.0%	0.00%	0.0740	1.000	6.55	6.55	0.48	11.63	2.12	0.00	N/A	100%

**State Potential Emissions**

**Add worst case coating to all solvents**

**2.12**

**0.00**

**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: Emission Calculations**  
**HAP Emission Calculations**  
**From the Parts Washer**

**Company Name:** National Utility Equipment Co.  
**Address City IN Zip:** 4532 Allen Martin Drive, Fort Wayne, IN 46806  
**Permit Number:** 003-26922-00372  
**Plt ID:** 003-00372  
**Permit Reviewer:** Jason R. Krawczyk  
**Date:** September 29, 2008

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Toluene	Toluene (ton/yr)
<b>SM-03</b>					
Parts Washer	6.55	0.0740	1.00	0.10%	0.002

**Total Potential Emissions:      0.002**

**Methodology:**

HAPS emission rate (tons/yr) = Density (lb/gal) \* Gal of Material (gal/unit) \* Maximum (unit/hr) \* Weight % HAP \* 8760 hrs/yr \* 1 ton/2000 lbs