



WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY
 601 57th Street, SE
 Charleston, WV 25304
 (304) 926-0475
www.dep.wv.gov/daq

**APPLICATION FOR NSR PERMIT
 AND
 TITLE V PERMIT REVISION
 (OPTIONAL)**

PLEASE CHECK ALL THAT APPLY TO NSR (45CSR13) (IF KNOWN):

- CONSTRUCTION MODIFICATION RELOCATION
 CLASS I ADMINISTRATIVE UPDATE TEMPORARY
 CLASS II ADMINISTRATIVE UPDATE AFTER-THE-FACT

PLEASE CHECK TYPE OF 45CSR30 (TITLE V) REVISION (IF ANY):

- ADMINISTRATIVE AMENDMENT MINOR MODIFICATION
 SIGNIFICANT MODIFICATION

IF ANY BOX ABOVE IS CHECKED, INCLUDE TITLE V REVISION INFORMATION AS ATTACHMENT S TO THIS APPLICATION

FOR TITLE V FACILITIES ONLY: Please refer to "Title V Revision Guidance" in order to determine your Title V Revision options (Appendix A, "Title V Permit Revision Flowchart") and ability to operate with the changes requested in this Permit Application.

Section I. General

1. Name of applicant (as registered with the WV Secretary of State's Office): TRAMCO Services, Inc.		2. Federal Employer ID No. (FEIN): 55-0778377	
3. Name of facility (if different from above):		4. The applicant is the: <input type="checkbox"/> OWNER <input type="checkbox"/> OPERATOR <input checked="" type="checkbox"/> BOTH	
5A. Applicant's mailing address: PO Box 770 Williamson, WV 25661		5B. Facility's present physical address: Same as mailing address	
6. West Virginia Business Registration. Is the applicant a resident of the State of West Virginia? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO - If YES, provide a copy of the Certificate of Incorporation/Organization/Limited Partnership (one page) including any name change amendments or other Business Registration Certificate as Attachment A . - If NO, provide a copy of the Certificate of Authority/Authority of L.L.C./Registration (one page) including any name change amendments or other Business Certificate as Attachment A .			
7. If applicant is a subsidiary corporation, please provide the name of parent corporation:			
8. Does the applicant own, lease, have an option to buy or otherwise have control of the proposed site? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO - If YES, please explain: own - If NO, you are not eligible for a permit for this source.			
9. Type of plant or facility (stationary source) to be constructed, modified, relocated, administratively updated or temporarily permitted (e.g., coal preparation plant, primary crusher, etc.): Electric motor rebuild		10. North American Industry Classification System (NAICS) code for the facility: 335312 (SIC - 7694)	
11A. DAQ Plant ID No. (for existing facilities only): -		11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only): none	

MAY 26 2015

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

<p>12A.</p> <ul style="list-style-type: none"> For Modifications, Administrative Updates or Temporary permits at an existing facility, please provide directions to the <i>present location</i> of the facility from the nearest state road; For Construction or Relocation permits, please provide directions to the <i>proposed new site location</i> from the nearest state road. Include a MAP as Attachment B. <p>I-64 west to Oakwood Road exit. Turn right onto US 119 and follow it to Harris Hollow Road and turn left onto old US Rt. 119. On old US 119, continue north to a right turn onto Buffalo Creek Road. The facility is on the left, approximately 2.4 miles from turn onto Buffalo Creek Road.</p>		
12.B. New site address (if applicable):	12C. Nearest city or town: Williamson	12D. County: Mingo
12.E. UTM Northing (KM): 4174.322	12F. UTM Easting (KM): 389.134	12G. UTM Zone: 17S
13. Briefly describe the proposed change(s) at the facility: Air permit for existing facility operations		
14A. Provide the date of anticipated installation or change: / / – If this is an After-The-Fact permit application, provide the date upon which the proposed change did happen: 1/1/1970		14B. Date of anticipated Start-Up if a permit is granted:
14C. Provide a Schedule of the planned Installation of/Change to and Start-Up of each of the units proposed in this permit application as Attachment C (if more than one unit is involved).		
15. Provide maximum projected Operating Schedule of activity/activities outlined in this application: Hours Per Day 16 Days Per Week 5.5 Weeks Per Year 50		
16. Is demolition or physical renovation at an existing facility involved? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
17. Risk Management Plans. If this facility is subject to 112(r) of the 1990 CAAA, or will become subject due to proposed changes (for applicability help see www.epa.gov/ceppo), submit your Risk Management Plan (RMP) to U. S. EPA Region III.		
18. Regulatory Discussion. List all Federal and State air pollution control regulations that you believe are applicable to the proposed process (<i>if known</i>). A list of possible applicable requirements is also included in Attachment S of this application (Title V Permit Revision Information). Discuss applicability and proposed demonstration(s) of compliance (<i>if known</i>). Provide this information as Attachment D .		
Section II. Additional attachments and supporting documents.		
19. Include a check payable to WVDEP – Division of Air Quality with the appropriate application fee (per 45CSR22 and 45CSR13).		
20. Include a Table of Contents as the first page of your application package.		
21. Provide a Plot Plan , e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is or is to be located as Attachment E (Refer to Plot Plan Guidance) . – Indicate the location of the nearest occupied structure (e.g. church, school, business, residence).		
22. Provide a Detailed Process Flow Diagram(s) showing each proposed or modified emissions unit, emission point and control device as Attachment F .		
23. Provide a Process Description as Attachment G . – Also describe and quantify to the extent possible all changes made to the facility since the last permit review (if applicable).		
All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.		

24. Provide **Material Safety Data Sheets (MSDS)** for all materials processed, used or produced as **Attachment H**.
 – For chemical processes, provide a MSDS for each compound emitted to the air.

25. Fill out the **Emission Units Table** and provide it as **Attachment I**.

26. Fill out the **Emission Points Data Summary Sheet (Table 1 and Table 2)** and provide it as **Attachment J**.

27. Fill out the **Fugitive Emissions Data Summary Sheet** and provide it as **Attachment K**.

28. Check all applicable **Emissions Unit Data Sheets** listed below:

<input type="checkbox"/> Bulk Liquid Transfer Operations	<input type="checkbox"/> Haul Road Emissions	<input type="checkbox"/> Quarry
<input type="checkbox"/> Chemical Processes	<input type="checkbox"/> Hot Mix Asphalt Plant	<input type="checkbox"/> Solid Materials Sizing, Handling and Storage Facilities
<input type="checkbox"/> Concrete Batch Plant	<input type="checkbox"/> Incinerator	<input type="checkbox"/> Storage Tanks
<input type="checkbox"/> Grey Iron and Steel Foundry	<input type="checkbox"/> Indirect Heat Exchanger	

General Emission Unit, specify drying ovens, bake ovens, generators

Fill out and provide the **Emissions Unit Data Sheet(s)** as **Attachment L**.

29. Check all applicable **Air Pollution Control Device Sheets** listed below:

<input type="checkbox"/> Absorption Systems	<input type="checkbox"/> Baghouse	<input type="checkbox"/> Flare
<input type="checkbox"/> Adsorption Systems	<input type="checkbox"/> Condenser	<input type="checkbox"/> Mechanical Collector
<input type="checkbox"/> Afterburner	<input type="checkbox"/> Electrostatic Precipitator	<input type="checkbox"/> Wet Collecting System

Other Collectors, specify

NONE

Fill out and provide the **Air Pollution Control Device Sheet(s)** as **Attachment M**.

30. Provide all **Supporting Emissions Calculations** as **Attachment N**, or attach the calculations directly to the forms listed in Items 28 through 31.

31. **Monitoring, Recordkeeping, Reporting and Testing Plans.** Attach proposed monitoring, recordkeeping, reporting and testing plans in order to demonstrate compliance with the proposed emissions limits and operating parameters in this permit application. Provide this information as **Attachment O**.

➤ Please be aware that all permits must be practically enforceable whether or not the applicant chooses to propose such measures. Additionally, the DAQ may not be able to accept all measures proposed by the applicant. If none of these plans are proposed by the applicant, DAQ will develop such plans and include them in the permit.

32. **Public Notice.** At the time that the application is submitted, place a **Class I Legal Advertisement** in a newspaper of general circulation in the area where the source is or will be located (See 45CSR§13-8.3 through 45CSR§13-8.5 and **Example Legal Advertisement** for details). Please submit the **Affidavit of Publication** as **Attachment P** immediately upon receipt.

33. **Business Confidentiality Claims.** Does this application include confidential information (per 45CSR31)?

YES NO

➤ If **YES**, identify each segment of information on each page that is submitted as confidential and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's **"Precautionary Notice – Claims of Confidentiality"** guidance found in the **General Instructions** as **Attachment Q**.

Section III. Certification of Information

34. **Authority/Delegation of Authority.** Only required when someone other than the responsible official signs the application. Check applicable **Authority Form** below:

<input checked="" type="checkbox"/> Authority of Corporation or Other Business Entity	<input type="checkbox"/> Authority of Partnership
<input type="checkbox"/> Authority of Governmental Agency	<input type="checkbox"/> Authority of Limited Partnership

Submit completed and signed **Authority Form** as **Attachment R**.

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

35A. Certification of Information. To certify this permit application, a Responsible Official (per 45CSR§13-2.22 and 45CSR§30-2.28) or Authorized Representative shall check the appropriate box and sign below.

Certification of Truth, Accuracy, and Completeness

I, the undersigned **Responsible Official** / **Authorized Representative**, hereby certify that all information contained in this application and any supporting documents appended hereto, is true, accurate, and complete based on information and belief after reasonable inquiry I further agree to assume responsibility for the construction, modification and/or relocation and operation of the stationary source described herein in accordance with this application and any amendments thereto, as well as the Department of Environmental Protection, Division of Air Quality permit issued in accordance with this application, along with all applicable rules and regulations of the West Virginia Division of Air Quality and W.Va. Code § 22-5-1 et seq. (State Air Pollution Control Act). If the business or agency changes its Responsible Official or Authorized Representative, the Director of the Division of Air Quality will be notified in writing within 30 days of the official change.

Compliance Certification

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

SIGNATURE _____



(Please use blue ink)

DATE: _____

5-19-15

(Please use blue ink)

35B. Printed name of signee: Scott Sheppard

35C. Title: Vice President

35D. E-mail: shep@solutionk.com

35E. Phone: 304-926-2650

35F. FAX:

36A. Printed name of contact person (if different from above):

36B. Title:

36C. E-mail:

36D. Phone:

36E. FAX:

PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Attachment A: Business Certificate | <input type="checkbox"/> Attachment K: Fugitive Emissions Data Summary Sheet |
| <input checked="" type="checkbox"/> Attachment B: Map(s) | <input checked="" type="checkbox"/> Attachment L: Emissions Unit Data Sheet(s) |
| <input type="checkbox"/> Attachment C: Installation and Start Up Schedule | <input type="checkbox"/> Attachment M: Air Pollution Control Device Sheet(s) |
| <input checked="" type="checkbox"/> Attachment D: Regulatory Discussion | <input checked="" type="checkbox"/> Attachment N: Supporting Emissions Calculations |
| <input checked="" type="checkbox"/> Attachment E: Plot Plan | <input checked="" type="checkbox"/> Attachment O: Monitoring/Recordkeeping/Reporting/Testing Plans |
| <input checked="" type="checkbox"/> Attachment F: Detailed Process Flow Diagram(s) | <input checked="" type="checkbox"/> Attachment P: Public Notice |
| <input checked="" type="checkbox"/> Attachment G: Process Description | <input type="checkbox"/> Attachment Q: Business Confidential Claims |
| <input checked="" type="checkbox"/> Attachment H: Material Safety Data Sheets (MSDS) | <input checked="" type="checkbox"/> Attachment R: Authority Forms |
| <input checked="" type="checkbox"/> Attachment I: Emission Units Table | <input type="checkbox"/> Attachment S: Title V Permit Revision Information |
| <input checked="" type="checkbox"/> Attachment J: Emission Points Data Summary Sheet | <input checked="" type="checkbox"/> Application Fee |

Please mail an original and three (3) copies of the complete permit application with the signature(s) to the DAQ, Permitting Section, at the address listed on the first page of this application. Please DO NOT fax permit applications.

FOR AGENCY USE ONLY – IF THIS IS A TITLE V SOURCE:

- Forward 1 copy of the application to the Title V Permitting Group and:
- For Title V Administrative Amendments:
 - NSR permit writer should notify Title V permit writer of draft permit,
- For Title V Minor Modifications:
 - Title V permit writer should send appropriate notification to EPA and affected states within 5 days of receipt,
 - NSR permit writer should notify Title V permit writer of draft permit.
- For Title V Significant Modifications processed in parallel with NSR Permit revision:
 - NSR permit writer should notify a Title V permit writer of draft permit,
 - Public notice should reference both 45CSR13 and Title V permits,
 - EPA has 45 day review period of a draft permit.

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

Attachment A

Business Certificate

Posted Original

**WEST VIRGINIA
STATE TAX DEPARTMENT
BUSINESS REGISTRATION
CERTIFICATE**

ISSUED TO:
**TRAMCO SERVICES INC
RT 14
CHATTAROY, WV 25667**

BUSINESS REGISTRATION ACCOUNT NUMBER: **1046-9893**

This certificate is issued on: **06/9/2010**

*This certificate is issued by
the West Virginia State Tax Commissioner
in accordance with W. Va. Code § 11-12.*

*The person or organization identified on this certificate is registered
to conduct business in the State of West Virginia at the location above.*

This certificate is not transferrable and must be displayed at the location for which issued.

This certificate shall be permanent until cessation of the business for which the certificate of registration was granted or until it is suspended, revoked or cancelled by the Tax Commissioner.

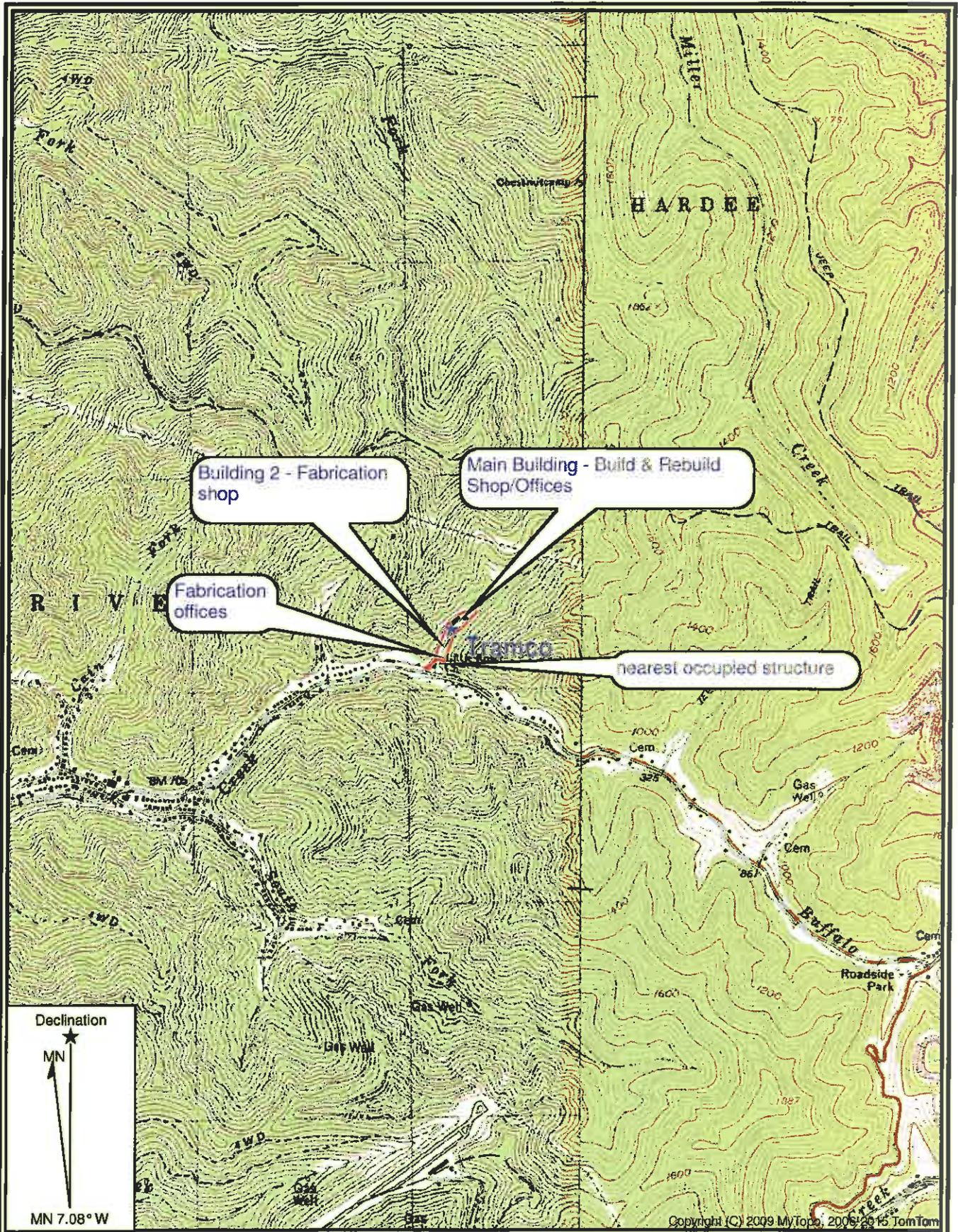
Change in name or change of location shall be considered a cessation of the business and a new certificate shall be required.

TRAVELING/STREET VENDORS: Must carry a copy of this certificate in every vehicle operated by them.
CONTRACTORS, DRILLING OPERATORS, TIMBER/LOGGING OPERATIONS: Must have a copy of this certificate displayed at every job site within West Virginia.

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Attachment B

Site Location Map



Map Name: WILLIAMSON
 State Name: WV
 Print Date: 04/09/15

Scale: 1 inch = 2,000 ft.
 Horizontal Datum: NAD83
 Date Photo Revised: N/A

Date Published: 1992

APPLICABLE REGULATIONS

45CSR 22 – Operating Fee

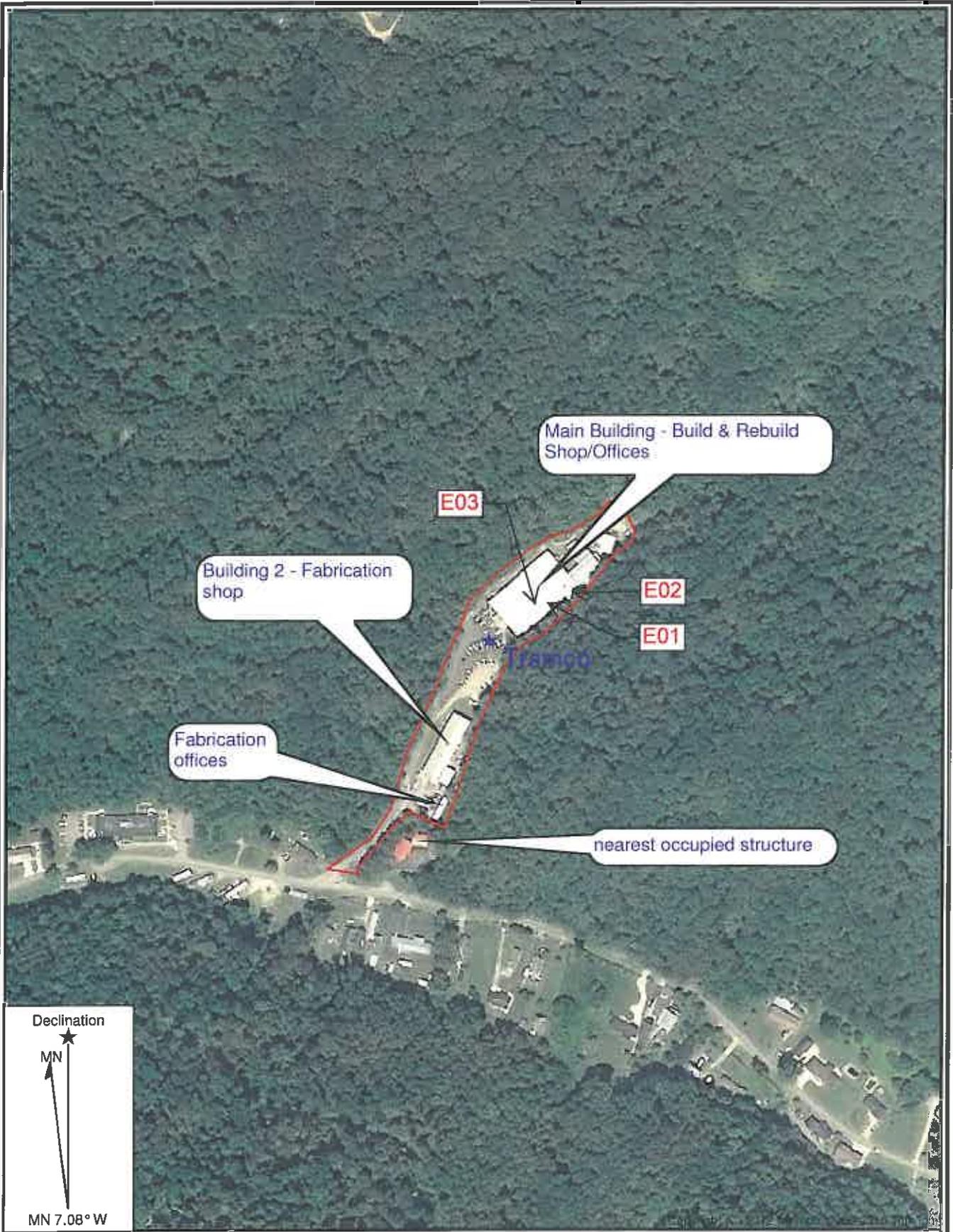
45CSR 15 – Asbestos

45 CSR 13 - Permits for Construction

45 CSR 6 – Open Burning

45 CSR 4 - Odor

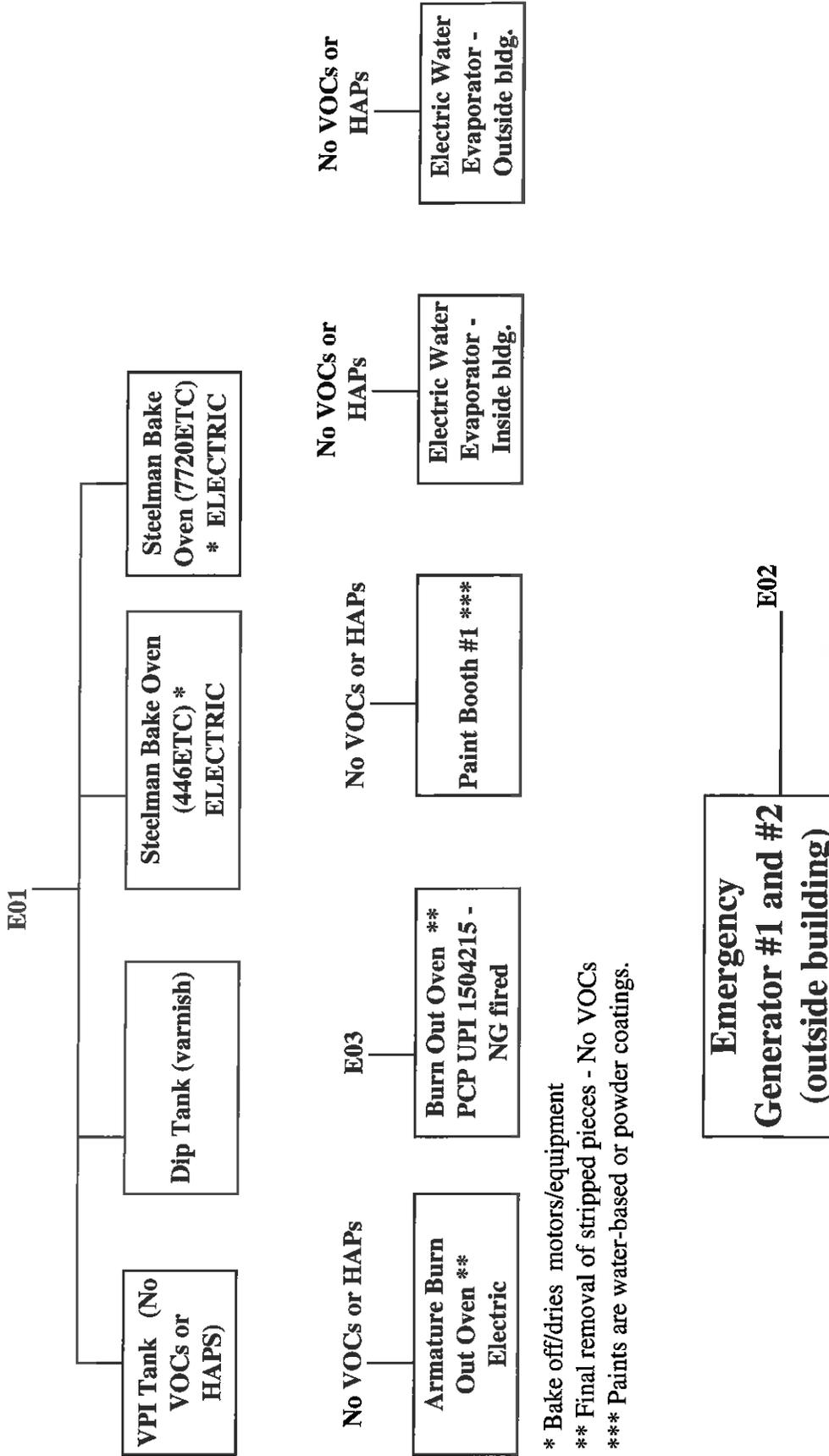
**Attachment E and F
Plot Plan (Emission Points) and Process
Flow Diagram**



Map Name: WILLIAMSON NE, WV K' Scale: 1 inch = 333 ft.
State Name: WV Horizontal Datum: NAD83
Print Date: 04/09/15 Date Photo Revised: Unknown

Date Published: Aug 1, 2011

TRAMCO Services, Inc.
Main Building Air Emission Points
(Electric Motor Build & Rebuild Shop)



* Bake off/dries motors/equipment
 ** Final removal of stripped pieces - No VOCs
 *** Paints are water-based or powder coatings.

**TRAMCO Services, Inc.
Fabrication Shop Air Emission Points**

No VOCs or HAPs



Paint Booth #2 ***

***** Paints are water-based or powder coatings.**

Attachment G

Process Description

PROCESS DESCRIPTION

Tramco Services provides Industry leading service for your company's needs. A few of services include:

- A.C. and D.C. electric motor repair
- Machine department.
- Fabrication department
- Equipment rebuild shop
- Complete inventory of new parts
- On site vibration analysis
- Laser alignment

VPI (Vacuum Pressure Impregnation) System insures quality treatment of electrical motor windings. Vacuum Pressure Impregnation is a process that is a step above the conventional vacuum system. VPI includes pressure in addition to vacuum, thus assuring good penetration of the varnish in the coil. The result is improved mechanical strength, electrical properties and thermal performance. This means improved heat transfer by eliminating air/gas pockets and makes it impossible for moisture or other contamination to degrade the system. The solid void-free structure reduces the possibility of internal corona damage on high-voltage machines. VPI minimizes coil movement, slots are completely filled, and by the use of suitable fibers laminated structures and bracing materials a solid reinforced end winding structure is obtained. This ensures improved reliability and long service life. The core wire is completely filled and sealed. This eliminates problems due to loose cores and provides positive protection against migration of moisture and other contamination through the core.

Process: Motors or equipment are cleaned, broken down, and then placed in burn out ovens to remove insulation and other solid materials. Bale ovens remove any remaining water. Refurbished motors and equipment are placed in the dip tank, or VPI tank, for processing. The equipment is then dried in the drying ovens. The equipment may or may not be painted water-based paints or powder coatings in paint booths (no VOCs or HAPS). The equipment is left to air dry in the paint booth prior to transport to the warehouse.

Operational usage based upon 1 shift, 5.5 days/wk and 50 weeks/year:

- Dip Tank (varnish) – 1,600 hrs/yr
 - VPI Tank (no VOCs or HAPS) – 1,600 hrs/yr
 - Drying ovens – 1,600 hrs/yr each
 - Paint Booth #1 – 1,600 hours/year (no VOCs or HAPS)
 - Paint Booth #2 – 800 hours/year (no VOCs or HAPS)
- Paint booths use powder coatings or water-based paints

Attachment H MSDSs

**Varnish Dip Tank & drying ovens –
BC-346-A**

**VPI Tanks & drying ovens – Permafill #
74041 epoxy resin (no VOCs or HAPs)**

Sprayon Degreaser (S00703)

Paint Booth (NO VOCs or HAPs)

- **Water-based paints**
- **Powder Coating**

MATERIAL SAFETY DATA SHEET

John C Dolph (a **VonRoll** Company)

HI THERM®

BC-346-A

Clear Baking Varnish

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufacturer Name: John C Dolph (a Von Roll Company)

Address: 320 New Road, Monmouth Junction, New Jersey 08852

Business Phone: 732-329-2333

Business Fax: 732-329-1143

CHEMTREC: For transportation emergencies 703-527-3887 (US call 800-424-9300)

24-Hour Emergency: 518-395-3310

Manufacturer MSDS Creation Date: 09/2004

Manufacturer MSDS Revision Date: 06/2013

SECTION 2: COMPOSITION, INFORMATION ON INGREDIENTS

Chemical Name	CAS#	% Weight	OSHA PEL	ACGIH TLV
Aliphatic Petroleum Distillates	64742-89-8	20-40	300 ppm	300 ppm
Chemical Name Xylene	CAS# 1330-20-7	% Weight 10-25	OSHA PEL 100 ppm (TWA)	ACGIH TLV 100 ppm (TWA) 150 ppm (STEL)
Chemical Name Ethyl benzene	CAS# 100-41-4	% Weight <5	OSHA PEL 100 ppm (TWA)	ACGIH TLV 100 ppm (TWA) 125 ppm (STEL)

SECTION 3: HAZARDS IDENTIFICATION

Emergency Overview:

Flammable. Irritant. Suspect carcinogen.

Applies to All Ingredients:

Route of Exposure:

Eyes, Skin, Inhalation, and Ingestion.

Potential Health Effects:

Eye Contact:

Can cause severe irritation, redness, tearing, blurred vision, burns, and blindness.

Skin Contact:

Can cause severe irritation and burns. Prolonged and repeated exposures can cause defatting and dermatitis.

Inhalation:

Excessive inhalation of vapors can cause nasal and respiratory irritation, dizziness, weakness, fatigue, nausea and headache. High concentrations may result in narcosis. (Central Nervous System depression)

Ingestion:

Can cause gastrointestinal irritation, nausea, vomiting and diarrhea. Aspiration of material into lungs can cause chemical pneumonitis, which can be fatal.

Chronic Health Effects:

Chronic exposure may cause damage to the Central Nervous System, Respiratory System, Lungs, Eyes, Skin, Gastrointestinal Tract, Liver, Spleen and Kidneys.

Target Organs:

Liver, Kidney, CNS, eyes, skin, Respiratory System, and digestive tract

SECTION 4: FIRST AID MEASURES

Eye Contact:

Immediately flush eyes with plenty of water for at least 20 minutes. Assure adequate flushing of the eyes by separating the eyelids with fingers. Get immediate medical attention if irritation persists, or symptoms of overexposure become apparent.

Skin Contact:

Immediately wash skin with plenty of water and soap for at least 20 minutes, while removing contaminated clothing and shoes. Get medical attention especially if irritation develops, persists, or symptoms of overexposure become apparent.

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Keep warm. Get immediate medical attention.

Ingestion:

If swallowed, call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. Do not induce vomiting unless instructed by medical personnel. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

Fire:

Flammable Liquid. Can release vapors that form explosive mixtures at temperatures at or above the flash point. Vapor can form an explosive mixture in air. Vapor can travel to a source of ignition and flash back.

Flash Point:

54°F (12°C)

Upper Flammable or Explosive Limit:

Not Established

Lower Flammable or Explosive Limit:

Not Established

Auto Ignition Temperature:

Not Established

Extinguishing Media:

In the event of a fire involving this material, alone or in combination with other materials, use dry chemicals, carbon dioxide, universal foam extinguishing media or water fog.

Hazardous Combustion Byproducts:

Oxides of carbon irritating fumes and gases, and other hydrocarbons.

Fire Fighting Instructions:

Evacuate area and fight fire from a safe distance. Containers can build up pressure if exposed to heat (fire). Use water spray to cool fire-exposed containers. DO NOT extinguish a fire resulting from the flow of this flammable liquid until the flow of liquid is effectively shut off. Explosive vapor-air mixture could form after the initial fire is extinguished. Use water spray to disperse vapors if a spill or leak has not ignited. Water runoff can cause environmental damage. Dike and collect water used to fight fire. See Section 13 for disposal considerations.

Protective Equipment:

Wear self-contained breathing apparatus pressure-demand, NIOSH (approved or equivalent) and full protective gear.

Special Properties:

This material may polymerize (react) when its container is exposed to heat (as during a fire). This polymerization increases pressure inside a closed container and may result in the violent rupture of the container. Heat from a fire can generate flammable vapor. Vapor can travel to a source of ignition and flash back.

NFPA

Health: 3
Flammability: 3
Instability: 1
Other: NONE

SECTION 6: ACCIDENTIAL RELEASE MEASURES

Spill Cleanup Measures:

Remove all sources of ignition. Absorb spill with dry inert material (e.g., dry sand or earth), then place in a chemical waste container. Clean up spills immediately observing precautions in the protective equipment section.

Environmental Precautions:

Contain liquid to prevent contamination of soil, surface water or ground water. Avoid runoff into storm sewers and ditches, which lead to waterways. Do not flush to sewer.

Spill/Release Reporting:

Immediately notify authorities of any reportable spill as may be required pursuant to regulations. See Section 15 for applicable CERCLA reportable quantities.

SECTION 7: HANDLING and STORAGE

Handling:

This product should be handled only by, or under the close supervision of, those properly qualified in the handling and use of potentially hazardous chemicals, who should take into account the fire, health and chemical hazard data. Use with adequate ventilation. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. "Empty" containers retain product residue (liquid and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. Containers may explode and cause injury or death. Empty drums or containers should be completely drained, properly bunged and promptly returned to a drum reconditioner, or properly disposed of.

Storage:

Store in a cool, dry, well ventilated area away from sources of heat and incompatible substances. Keep container tightly closed when not in use. Consult manufacturer for shelf life.

Hygiene Practices:

Wash thoroughly after handling. Avoid contact with eyes and skin. Avoid inhaling vapor or mist.

SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:

Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended and or regulated exposure limits. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets

OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.

Skin Protection Description:

Wear suitable protective clothing to prevent contact with skin.

Hand Protection Description:

Wear appropriate protective gloves such as neoprene or viton. Consult glove manufacturers for glove permeability data.

Eye/Face Protection:

Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.

Protective Clothing/Body Protection:

If splashing is likely, wear impervious clothing and boots to prevent repeated or prolonged skin contact. Consult your supplier of personal protective equipment for additional instructions on proper usage.

Respiratory Protection:

A NIOSH approved air-purifying respirator with an appropriate cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited to airborne concentrations that are typically within 10 times the exposure limit. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirators use.

Other Protective:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State/Appearance:

Liquid

Color:

Clear/Amber

Odor:

Aromatic

pH:

No data.

Decomposition Temperature:

No data.

Vapor Pressure:

No data.

Vapor Density:

No data.

Boiling Point:

No data.

Freezing Point:

No data.

Solubility in Water:

<2%

Specific Gravity:

0.90-0.95

Percent Volatile:

45-55%

VOC's:
430 g/l (3.56 #/gal)
Viscosity:
150-320 cps
Molecular Weight:
Mixture
Flashpoint:
54°F (12°C)
Auto Ignition Temp:
Not Established
Upper Flammable Explosive Limit:
Not Established
Lower Flammable Explosive Limit:
Not Established

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability:
Stable at normal temperatures and storage conditions.
Conditions to Avoid:
Flames, heat, sparks and high temperatures and pressures. Oxidizing conditions.
Freezing conditions.
Incompatibilities with Other Materials:
Strong oxidizers, strong alkalis, and strong acids.
Hazardous Polymerization:
Will not occur.
Hazardous Decomposition Products:
When heated to decomposition it emits acrid smoke & irritating fumes. Combustion byproducts include carbon dioxide, carbon monoxide, and various hydrocarbons.

SECTION 11: TOXICOLOGICAL INFORMATION

Xylene:

Eye Effect:
Eye - rabbit: 5 mg/24H; severe irritation
Eye - rabbit: 87 mg; mild irritation (RTECS)
Skin Effects:
Skin - rabbit LD₅₀: >1700 mg/kg data for xylene (RTECS)
Ingestion Effects:
Oral - rat LD₅₀: 4300 mg/kg (RTECS)
Inhalation Effects:
Inhalation - rat LC₅₀: 5000 ppm/4H (RTECS)
Inhalation - human TCl₀: 200 ppm (RTECS)
Carcinogenicity:
IARC-3 Carcinogen - Unclassifiable as to Carcinogenicity in Humans
Mutagenicity:
Mutation data reported (Sax)
Reproductive Toxicity:
Reproductive effects (RTECS)
Irritation:
Skin - rabbit: 100%; moderate irritation
Other Toxicological Information:
Intraperitoneal - rat LD₅₀: 2459 mg/kg
Subcutaneous - rat LD₅₀: 1700 mg/kg

Ethyl benzene:

Eye Effect:

Eye - rabbit: 500 mg; severe irritation. (RTECS)

Skin Effects:

No data reported in the cited references as of the revision date.

Ingestion Effects:

Oral - rat LD₅₀: 3500 mg/kg (RTECS)

Inhalation Effects:

Inhalation - rat LCLo: 4000 ppm/4H (RTECS)

Inhalation - human TCLo: 100 ppm/8H (RTECS)

Carcinogenicity:

IARC-2B Carcinogen - Possibly Carcinogenic to Humans

Mutagenicity:

Human mutation data reported (RTECS)

Reproductive Toxicity:

Reproductive effects (RTECS)

Irritation:

Skin - rabbit: 15 mg/24H; open; mild irritation (RTECS)

Other Toxicological Information:

Intraperitoneal - mouse LD₅₀: 2624 uL/kg

Aliphatic Petroleum Distillates:

Acute Health Effects:

The toxicological and physiological properties of this material have not been investigated. Use appropriate procedures and precautions to prevent or minimize exposure to the skin, eyes or respiratory system.

Carcinogenicity:

Not listed by the National Toxicology Program (NTP) Annual Report on Carcinogens or by the International Agency for Research on Cancer (IARC) Monographs, or by the Occupational Safety and Health Administration (OSHA).

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity:

Xylene: LC₅₀ (fathead minnow), 42 mg / l / 96 hr; 46 mg / l / 1 hr at 18-22 deg. C, in a static bioassay, LD₅₀ (goldfish), 13 mg / l / 24 hr, LC₅₀ (rainbow trout), 13.5 mg / l / 96 hr

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal:

Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines, by a licensed disposal company.

SECTION 14: TRANSPORT INFORMATION

DOT Shipping Name:

PAINT

DOT UN Number:

UN1263

DOT Hazard Class: 3

DOT Packing Group: II

Marine Pollutant: NONE

SECTION 15: REGULATORY INFORMATION

All ingredients

TSCA 8(b): Inventory Status
Listed or Exempt

Ethyl benzene:

Section 302 Extremely Hazardous Substances (RQ):

1000 pounds (454 kg)

Section 312 Hazard Category:

Acute: Yes

Chronic: Yes

Fire: Yes

State:

Ethyl benzene can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, and Massachusetts.

Xylene:

Section 302 Extremely Hazardous Substances (RQ):

100 pounds (45.4 kg)

Section 312 Hazard Category:

Acute: Yes

Chronic: Yes

Fire: Yes

State:

Xylene can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, and Massachusetts.

Aliphatic Petroleum Distillates:

Section 312 Hazard Category:

Acute: Yes

Fire: Yes

State:

Aliphatic petroleum distillates can be found on the following state right to know lists: California, New Jersey, and Pennsylvania.

SECTION 16: ADDITIONAL INFORMATION

HMIS

Health: *3

Fire Hazard: 3

Physical Hazard: 1

Disclaimer:

While John C Dolph (a Von Roll Company) believes the data set forth herein are accurate as of the date hereof, it is furnished without warranty of any kind and specially disclaims all liability for reliance on the information provided. The data is furnished solely for your consideration, investigation and verification.

resin

Permafil® 74041

- ▶ High performance epoxy resin
- ▶ High thixotropic index; good penetration and retention
- ▶ Excellent chemical resistance; ideal for harsh environments
- ▶ High film build, single process
- ▶ Excellent bridging and gap filling characteristics
- ▶ Excellent bond strength
- ▶ UL system recognition up to 200°C
- ▶ High flash point; used in VPI or dip tank applications
- ▶ Low Volatility/Reduced Odor; reduces OSHA and EPA concerns

General description

Permafil® 74041 is an extremely versatile, single component catalyzed epoxy resin for use in electric motor insulation systems up to 8kV or as an over dip for environmental protection. Its stable nature, good film formation, and ease of use, along with its good electrical properties, make it an excellent choice for many different applications.

Application

Permafil® 74041 is very resistant to most chemicals and has very low moisture absorption. It is widely used in both OEM and motor repair facilities where its properties make it ideal for marine, chemical, paper mill and hermetic applications. Its thixotropic nature results in an excellent retention in the coil as well as an average .003" to .004" build on the surface of the device. Although normally used in VPI process equipment, it is stable under normal conditions at room temperature and can be used in standard dip tank equipment. 74041 epoxy resin is often used in conjunction with our Mica Mat Ø77986 mica tape in systems for mercury voltage motors up to 7.2kV design.

	Value	Test norm
Weight		
Total weight	lbs/gal. (kg)	9.2 (4.2)
Mechanical properties		
Bond Strength (Helical Coil) MW-35 @ 25°C	lbs(N)	42 (186) ASTM D-2519
Bond Strength (Helical Coil) MW-35 @ 130°C	lbs(N)	10 (44) ASTM D-2519
Bond Strength (Helical Coil) MW-35 @ 155°C	lbs(N)	7 (31) ASTM D-2519
Bond Strength (Helical Coil) MW-35 @ 180°C	lbs(N)	5 (22) ASTM D-2519
Electrical properties		
Dielectric strength, Short Time	V/mil(kV/m)	>2000 (78.7) ASTM D-115
Dissipation factor @ 25°C tg delta	%	.28 ASTD-M1000
Physical properties		
Flash point		>210°F (99°C) Pensky Martins Closed Cup
Film build on steel (avg.)	mils (mm)	3.5 (0.09)
Volatile content	lbs/gal. (kg)	1.1 (0.50) ASTM D-6053
Gel time (Sunshine) @ 150°C	minutes	10-12
Specific Gravity 77°F(25°C)		1.11
Thixotropic Index		3-4
Viscosity (Brookfield) 77°F (25°C) 20 rpm	cps	2000-3000
Viscosity (Brookfield) 77°F (25°C) 2.5 rpm	cps	4000-8000

Processing

Permafil® 74041 resin can be used in conventional or automated dip and bake process and in VI or VPI equipment. For suggested cycle times and process specifics, please contact Von Roll Isola USA, Inc.

Suggested Cure Cycle: 4-5 hours at 320°F (160°C). Chemical resistance can be improved by longer cure times.

(These times apply to small units. For larger equipment, the time for the part to reach the desired curing temperature should be added to these suggested cure times.)

Storage Conditions

Permafil® 74041 resin can be expected to stay within its specified gel time limits when stored for up to 12 months at 77°F (25°C). In normal use, shelf life is indefinite with adequate addition of fresh material. For process purposes in VPI equipment, the suggested storage temperature is 55°F (20°C).

Von Roll Isola USA, Inc.
Schenectady, NY 1230, USA
www.vonroll.com

74041

MSA 381E 29-11-2005



Order Data

Permafil® 74041 resin is available pre-catalyzed in 55-gallon drums or uncatalyzed in 5 and 55-gallon containers from Von Roll Isola USA, Inc. or from authorized VRI distributors. For the name of your distributor or for more information on this product, contact Von Roll Isola USA, Inc., One West Campbell Road, Schenectady, New York 12306

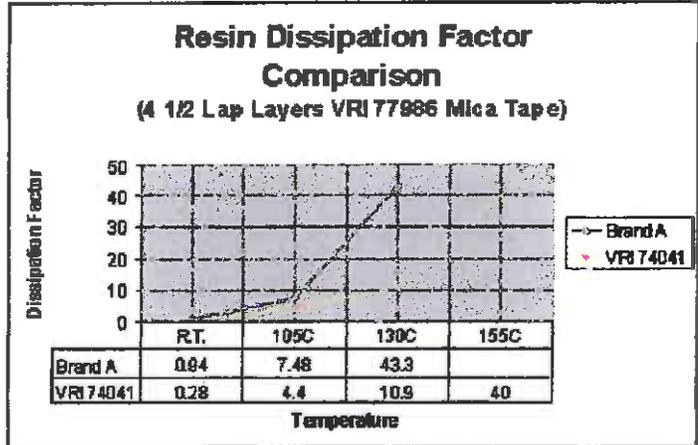
Standards

The properties shown in this data sheet are typical values only, and should not be used as a basis for preparing specifications. Contact our Customer Service department, (518) 344-7100 for assistance in preparation of specifications for your specific system application.

Health and safety

Material Safety Data Sheets defining the known hazards and describing safety precautions appropriate for this product are available upon request from Von Roll Isola USA, Inc., One West Campbell Road, Schenectady, New York 12306 (518) 344-7100. Similar information sheets for solvents and other chemicals used with this product may be obtained from the appropriate supplier and used accordingly.

Electrical Characteristics



Average helical coil bond strength after 168 hour immersion

R.T.	155°C	R.T.	155°C	R.T.	155°C	R.T.	155°C
Control		20% Sodium Sulfate		30% Hydrochloric Acid		20% Potassium Chloride	
66.7	7.6	28.7	7.6	55	8.5	35.6	9.1
Stock Acetic		White Liquor		Black Liquor		Green Liquor	
36.6	6.8	31.7	6.8	43.3	7.8	29.3	6
30% Sulfuric Acid		20% Ammonium Nitrate		20% Ammonium Sulfate		10% Sodium Chloride	
37.3	7.4	69.8	7.3	62.6	7.6	62.3	6.3
20% Muriate of Potash		6% Boric Acid		15% Potassium Sulfate			
34.7	8	42.8	7.4	46.1	7.6		

Specifications

The properties shown in this data sheet are typical values only, and should not be used as a basis for preparing specifications. Contact our Customer Service department, (518) 344-7100 for assistance in preparation of specifications for your specific system application.

The product properties set forth in this data sheet are based on the results of testing of typical material produced by the affiliated companies of Von Roll Holding Ltd. (underneath referred as Von Roll). Some variation in product properties is typical. Comments or suggestions relating to any subject other than product properties are offered only to call the end-user's or other person's attention to considerations which may be relevant in the independent determination of the use and/or manner of use of product. Von Roll does not claim or warrant that the use of its product will have the results described in this data sheet or that the information provided is complete, accurate or useful. The user should test the product to determine its properties and its suitability for the intended use. Von Roll expressly disclaims any liability for any damage, harm, injury, cost or expense to any person resulting directly or indirectly from that person's reliance on any information contained in this data sheet. Nothing contained in this data sheet constitutes representation or warranty as to any matter whatsoever. Von Roll makes no warranties whatsoever in this data sheet, expressed or implied, including any implied warranty of fitness for a particular use or purpose. Von Roll shall in no event be liable for incidental, exemplary, punitive or consequential damages.



Von Roll Isola USA, Inc.
Schenectady, NY 1230, USA
www.vonroll.com



74041

KBA 3891E 29-11-2005

MATERIAL SAFETY DATA SHEET**vonRoll ISOLA USA, INC.**REVISION DATE: 09/29/2005
DATE OF PRINTING: 09/29/2005
PREPARED BY: D. M. MELLONREVISION NUMBER: 2
SUPERSEDES MSDS DATED: 08/01/2001**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**MANUFACTURED BY:
VON ROLL ISOLA USA, INC.1 W. CAMPBELL RD
SCHENECTADY, NY 12306
BUSINESS: (518) 344-7100
EMERGENCY: (518) 395-3310PRODUCT ID: **74041**
CHEMICAL FAMILY: INSULATING VARNISH
CHEMICAL NAME: CATALYZED EPOXY RESIN
FORMULA: MIXTURE
SYNONYMS: NONE**2. COMPOSITION/INFORMATION ON INGREDIENTS**

HAZARDOUS PRODUCT COMPOSITION/CAS NUMBER	APPROX. WEIGHT PERCENT	ACGIH 8 HR. TWA	ACGIH UNIT	OSHA PEL-TWA	OSHA UNIT
Bisphenol A- Epichlorohydrin Polymer 25068-38-6	30 - 60	NA	PPM	NA	PPM
p-tert-Butylphenyl Glycidyl Ether 3101-60-8	30 - 60	NA	PPM	NA	PPM
Trade Secret Component TS000001	1 - 5	NA	PPM	NA	PPM

3. HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW:** Refer to other MSDS sections for detailed information.**EFFECTS FROM ACUTE EXPOSURE:****INGESTION:** Harmful if swallowed.**SKIN CONTACT:** Contains a component which is a known or suspected

PRODUCT CODE: 74041 74041

skin sensitizer. May cause an allergic skin reaction. May cause a rash and itching of the skin. May cause moderate skin irritation.

INHALATION: Causes irritation of the mouth, nose, and throat. May cause allergic respiratory reaction. Vapors that are toxic as well as irritating to the respiratory tract may be produced upon heating this material.

EYE CONTACT: May cause moderate eye irritation.

AGGRAVATED CONDITIONS: Respiratory. Dermal ailments. Eye ailments.

SUBCHRONIC (TARGET ORGAN) EFFECTS: Dermatitis. Respiratory ailments.

CARCINOGENICITY COMMENT: This product or one of its ingredients present 0.1% or more is listed as a carcinogen or potential carcinogen by NTP, IARC or OSHA.

CARCINOGENICITY: Mixtures of Diglycidyl ether of Bisphenol A based epoxy resins: Produced a weak carcinogenic effect in a two year skin painting study on mice. Based on this data and other studies which have not shown a cancer causing relationship, these epoxy resins should be considered a Category 3 Carcinogen (possible risk of irreversible effects). Skin contact should be limited and any contamination removed immediately.

ROUTES OF ENTRY: Dermal - skin. Eyes. Inhalation.

OTHER: None known.

4. FIRST AID MEASURES

INGESTION: Do not induce vomiting. Slowly dilute with 1-3 glasses of water and seek medical attention. Never give anything by mouth to an unconscious person.

SKIN CONTACT: Remove contaminated clothing and launder before reuse. Wash with soap and water. Get medical attention if irritation persists.

INHALATION: If inhaled, remove to fresh air. If not breathing give artificial respiration using a barrier device. If breathing is difficult give oxygen. Get medical attention.

EYE CONTACT: In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.

NOTES TO PHYSICIAN: None known.

PRODUCT CODE: 74041 74041

5. FIRE FIGHTING MEASURES

FLASH POINT (F): >230 (C): >110

FLASH POINT METHOD: Pensky-Martens Closed Cup (PMCC)

IGNITION TEMP (F): Unknown (C): Unknown

OSHA FLAMMABILITY CLASSIFICATION: Combustible Liquid, Class III B

FLAMMABLE LIMITS IN AIR - LOWER (%): Not Determined

FLAMMABLE LIMITS IN AIR - UPPER (%): Not Determined

SENSITIVITY TO MECHANICAL IMPACT (Y/N): No

SENSITIVITY TO STATIC DISCHARGE: Sensitivity to static discharge is not expected.

EXTINGUISHING MEDIA: Carbon dioxide. Dry chemical. Foam. Water mist.

FIRE FIGHTING PROCEDURES: Positive pressure, self-contained breathing apparatus. Polymerization may take place during a fire due to elevated temperature where closed containers could violently rupture. Evacuate area and fight fire from a safe distance. Toxic vapors are emitted in a fire condition.

6. ACCIDENTAL RELEASE MEASURES

ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
Wipe, scrape or soak up in an inert material and put in a container for disposal. Wear proper protective equipment as specified in the protective equipment section. Remove sources of ignition. Warn other workers of spill. Increase area ventilation. Persons not trained should evacuate area.

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:
Recommended storage in original container at temperature below 30 C (85 F). Avoid contact with skin and eyes. Use only in a well ventilated area. Keep container closed when not in use to prevent contact with acidic, basic or oxidizing materials. Keep away from food and smoking materials. Wash hands before eating and smoking.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Exhaust ventilation. Showers. Eyewash stations. Use in

PRODUCT CODE: 74041 74041

a well ventilated area.

RESPIRATORY PROTECTION: Use in a well ventilated area. Use approved NIOSH respiratory protection if TLV exceeded, or over exposure is likely.

GLOVES: Rubber gloves.

EYE PROTECTION: Monogoggles.

OTHER PERSONAL PROTECTION DATA: Wear clean, body-covering clothing.

VENTILATION: Use only in well ventilated area. Mechanical ventilation.

9. PHYSICAL AND CHEMICAL PROPERTIES

COMPONENT INFORMATION:

HAZARDOUS PRODUCT COMPOSITION/CAS NUMBER	APPROX. WEIGHT PERCENT	BOILING POINT (F):	BOILING POINT (C):	VAPOR PRESSURE @ 20 C (mmHg):	VAPOR DENSITY (AIR=1):
Bisphenol A-Epichlorohydrin Polymer 25068-38-6	30 - 60	> 500	> 260	< 0.03	NOT DETERMINED
p-tert-Butylphenyl Glycidyl Ether 3101-60-8	30 - 60	NOT DETERMINED	NOT DETERMINED	< 1	NOT DETERMINED
Trade Secret Component TS000001	1 - 5	NOT DETERMINED	NOT DETERMINED	<0.001	NOT DETERMINED

PRODUCT INFORMATION:

BOILING POINT (F): NOT DETERMINED **(C):** NOT DETERMINED

FREEZING POINT (F): NOT DETERMINED **(C):** NOT DETERMINED

MELTING POINT (F): NOT DETERMINED **(C):** NOT DETERMINED

PHYSICAL STATE: LIQUID

DESCRIPTION: MILKY

ODOR: MILD EPOXY

ODOR THRESHOLD (PPM): UNKNOWN

% VOLATILE BY WEIGHT: NOT DETERMINED

EVAPORATION RATE (BUTYL ACETATE = 1): NOT DETERMINED

VAPOR PRESSURE (mmHg @ 20 C): NOT DETERMINED

PRODUCT CODE: 74041 74041

COUNTRY REGISTRATION

TSCA INVENTORY STATUS: The ingredients of this product are either listed on the TSCA inventory or are not subject to the notification requirements (exempt).

CANADIAN INVENTORY: The ingredients of this product are listed on the Domestic Substance List, Non-Domestic Substance List or are exempt.

EINECS: This product, and all its components, complies with EINECS.

REGULATORY INFORMATION: CA/MA/NJ/PA RIGHT-TO-KNOW

HAZARDOUS PRODUCT COMPOSITION/CAS NUMBER	APPROX. WEIGHT PERCENT	CALIFORNIA PROPOSITION 65	MASSACHUSETTS RIGHT-TO-KNOW	NEW JERSEY RIGHT-TO-KNOW	PENNSYLVANIA RIGHT-TO-KNOW
Bisphenol A-Epichlorohydrin Polymer 25068-38-6	30 - 60	NOT LISTED	NOT LISTED	NOT LISTED	NOT LISTED
p-tert-Butylphenyl Glycidyl Ether 3101-60-8	30 - 60	NOT LISTED	NOT LISTED	NOT LISTED	NOT LISTED
Trade Secret Component TS000001	1 - 5	NOT LISTED	NOT LISTED	NOT LISTED	NOT LISTED

SARA 302 EXTREMELY HAZARDOUS SUBSTANCES LIST: No components of this product are listed as extremely hazardous substances in 40 CFR Part 355 and are present at levels which could require reporting and emergency planning.

SARA (311, 312) HAZARD CLASS: ACUTE HEALTH HAZARD

SARA 313 CHEMICALS: This product contains toxic chemical(s) listed below which is(are) subject to the reporting requirements of Section 313 of Title III of SARA and 40 CFR Part 372.

NONE - This product does not contain chemicals at levels with require reporting under the statue.

WHMIS (CANADA):

WHMIS HAZARD CLASS: D2B TOXIC MATERIALS
F DANGEROUSLY REACTIVE MATERIAL

WHMIS TRADE SECRET: NONE

PRODUCT CODE: 74041 74041

VAPOR DENSITY (AIR=1): NOT DETERMINED

SPECIFIC GRAVITY @ 25 C (WATER = 1): 1.09

ACID/ALKALINITY (MEG/G): NOT DETERMINED

pH: NOT DETERMINED

SOLUBILITY IN WATER DESCRIPTION: NEGLIGIBLE

SOLUBILITY IN ORGANIC SOLVENT (STATE SOLVENT): NOT DETERMINED

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable.

HAZARDOUS POLYMERIZATION: May occur.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide. Carbon dioxide. Hydrogen chloride. Oxides of nitrogen. Aldehydes. Organic acid vapors. Aliphatic hydrocarbons.

MATERIALS TO AVOID: Avoid contact with acidic, basic or oxidizing agents. Do not expose to amines.

CONDITIONS TO AVOID: Keep away from heat, sparks and flame. Temperatures above 85 F.

11. TOXICOLOGICAL INFORMATION

COMPONENT INFORMATION:

Bisphenol A-Epichlorohydrin Polymer 25068-38-6

ACUTE ORAL LD50 (MG/KG): >1,000 (RAT)

ACUTE DERMAL LD50 (MG/KG): >20 ML / MG (RABBIT)

ACUTE INHALATION: NO DEATHS: SATURATED AIR / 8H (RAT)

OTHER: Eye and skin irritant.

p-tert-Butylphenyl Glycidyl Ether 3101-60-8

ACUTE ORAL LD50 (MG/KG): >10,000 (RAT)

ACUTE DERMAL LD50 (MG/KG): NOT DETERMINED

ACUTE INHALATION: NOT DETERMINED

OTHER: Eye and skin irritant.

Trade Secret Component TS000001

ACUTE ORAL LD50 (MG/KG): >5,000 (RAT)

ACUTE DERMAL LD50 (MG/KG): >2,500 (RAT)

ACUTE INHALATION: NOT DETERMINED

OTHER: Non-irritating to skin (rbt). Non-irritating to eyes (rbt).

PRODUCT CODE: 74041 74041

MATERIAL SAFETY DATA SHEET

S00703
03 00

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER	DATE OF PREPARATION	HMIS CODES	
S00703	21-APR-08	Health	2*
		Flammability	0
		Reactivity	0

PRODUCT NAME
SPRAYON Electric Motor Degreaser & Safety Solvent

MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
Consumer Group - Industrial
Cleveland, OH 44115

TELEPHONE NUMBERS and WEBSITES
Product Information
(800) 251-2486
Regulatory Information
(216) 566-2902 www.paintdocs.com
Medical Emergency
(216) 566-2917
Transportation Emergency for Chemical Emergency ONLY (spill, leak,
(800) 424-9300 fire, exposure, or accident)

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS	VAPOR PRESSURE
98	127-18-4	Tetrachloroethylene		
		ACGIH TLV	25 ppm	18 mm
		ACGIH TLV	100 ppm STEL	
		OSHA PEL	25 ppm	
2	124-38-9	Carbon Dioxide		
		ACGIH TLV	5000 ppm	760 mm
		OSHA PEL	5000 ppm	

Section 3 -- HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.

EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.

SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.

In a confined area vapors in high concentration may cause headache, nausea or dizziness.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

Continued on page 2

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

Section 4 -- FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes.
Get medical attention.

SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.

INHALATION: If affected, remove from exposure. Restore breathing.
Keep warm and quiet.

INGESTION: Do not induce vomiting.
Get medical attention immediately.

Section 5 -- FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL
Not Applicable	N.A.	N.A.

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.
Remove with inert absorbent.

Section 7 -- HANDLING AND STORAGE

STORAGE CATEGORY

Not Available

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Contents under pressure. Do not puncture, incinerate, or expose to temperature above 120F. Heat from sunlight, radiators, stoves, hot water, and other heat sources could cause container to burst. Do not take internally. Keep out of the reach of children.

Continued on page 3

 Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits.

Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

PROTECTIVE GLOVES

None required for normal application of aerosol products where minimal skin contact is expected. For long or repeated contact, wear chemical resistant gloves.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

 Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	13.17 lb/gal	1578 g/l
SPECIFIC GRAVITY	1.58	
BOILING POINT	<0 - 252 F	<-18 - 122 C
MELTING POINT	Not Available	
VOLATILE VOLUME	100 %	
EVAPORATION RATE	Faster than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)		
Volatile Weight	0.00%	Less Water and Federally Exempt Solvents

 Section 10 -- STABILITY AND REACTIVITY

STABILITY -- Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide, Hydrogen Chloride

HAZARDOUS POLYMERIZATION

Will not occur

 Section 11 -- TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Tetrachloroethylene, listed by NTP and IARC as an animal carcinogen and by OSHA as a potential human carcinogen, produced liver tumors and leukemia in rats and lung tumors in mice. Human epidemiological evidence is conflicting and inconclusive.

Continued on page 4

TOXICOLOGY DATA

CAS No.	Ingredient Name				
127-18-4	Tetrachloroethylene	LC50	RAT	4HR	Not Available
		LD50	RAT		2630 mg/kg
124-38-9	Carbon Dioxide	LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

Section 12 -- ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

Section 13 -- DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Do not incinerate. Depressurize container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

This product contains tetrachloroethylene, a highly volatile solvent which is a toxic waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. In normal use this chemical will quickly evaporate, however grease or other residue removed by this product may contain sufficient tetrachloroethylene to be classified as a toxic waste.

Section 14 -- TRANSPORT INFORMATION

US Ground (DOT)

May be classed as Consumer Commodity, ORM-D
UN1950, AEROSOLS, 2.2, LIMITED QUANTITY, (ERG#126)

Canada (TDG)

May be classed as Consumer Commodity, ORM-D
UN1950, AEROSOLS, CLASS 2.2, LIMITED QUANTITY, (ERG#126)

IMO

May be shipped as Limited Quantity
UN1950, AEROSOLS, CLASS 2.2, LIMITED QUANTITY, MARINE POLLUTANT,
(PERCHLOROETHYLENE), EmS F-D, S-U

Section 15 -- REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
127-18-4	Tetrachloroethylene	98	

Continued on page 5

CALIFORNIA PROPOSITION 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

Section 16 -- OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

Attachment I

Emission Units Table

Attachment I

Emission Units Table

(includes all emission units and air pollution control devices
that will be part of this permit application review, regardless of permitting status)

Emission Unit ID ¹	Emission Point ID ²	Emission Unit Description	Year Installed/ Modified	Design Capacity	Type ³ and Date of Change	Control Device ⁴
1S	E01	VPI Tank (pressurized)	mid-1990s		new	none
2S	E01	Dip Tank (varnish) *	mid-1980s		new	none
3S	E02	Generator #1 (used 1 hr/month) - Detroit Diesel #71637305	2002		new	none
4S	E02	Generator #2 (NOT IN USE) - Detroit Diesel #71637305	2002		new	none
	E01	ELECTRIC Bake Oven (Steelman 446ETC)	1977		new	none
	E01	ELECTRIC Bake Oven (Steelman 7720ETC)	Mid 1990s		new	none
	NA	ELECTRIC Burn Out Oven (Armature 331-E)	1980		new	none
5S	E03	NG fired Burn Out Oven (PCP IPI1504215)	1997		new	afterburner

¹ For Emission Units (or Sources) use the following numbering system: 1S, 2S, 3S,... or other appropriate designation.

² For Emission Points use the following numbering system: 1E, 2E, 3E, ... or other appropriate designation.

³ New, modification, removal

⁴ For Control Devices use the following numbering system: 1C, 2C, 3C,... or other appropriate designation.

Attachment J
Emission Points Data Summary Sheet

Attachment I
Emission Units Table
(includes all emission units and air pollution control devices
that will be part of this permit application review, regardless of permitting status)

Emission Unit ID ¹	Emission Point ID ²	Emission Unit Description	Year Installed/ Modified	Design Capacity	Type ³ and Date of Change	Control Device ⁴
1S	E01	VPI Tank (pressurized)	mid-1990s		new	none
2S	E01	Dip Tank (varnish) *	mid-1980s		new	none
3S	E02	Generator #1 (used 1 hr/month) - Detroit Diesel #71637305	2002		new	none
4S	E02	Generator #2 (NOT IN USE) - Detroit Diesel #71637305	2002		new	none
	E01	ELECTRIC Bake Oven (Steelman 446ETC)	1977		new	none
	E01	ELECTRIC Bake Oven (Steelman 7720ETC)	Mid 1990s		new	none
	NA	ELECTRIC Burn Out Oven (Armature 331-E)	1980		new	none
5S	E03	NG fired Burn Out Oven (PCP IPI1504215)	1997		new	afterburner

¹ For Emission Units (or Sources) use the following numbering system: 1S, 2S, 3S,... or other appropriate designation.
² For Emission Points use the following numbering system: 1E, 2E, 3E, ... or other appropriate designation.
³ New, modification, removal
⁴ For Control Devices use the following numbering system: 1C, 2C, 3C,... or other appropriate designation.

Attachment K
Fugitive Emission Points Data Summary
Sheet

Attachment K

FUGITIVE EMISSIONS DATA SUMMARY SHEET

The FUGITIVE EMISSIONS SUMMARY SHEET provides a summation of fugitive emissions. Fugitive emissions are those emissions which could not reasonably pass through a stack, chimney, vent or other functionally equivalent opening. Note that uncaptured process emissions are not typically considered to be fugitive, and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET.

Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions).

APPLICATION FORMS CHECKLIST - FUGITIVE EMISSIONS
1.) Will there be haul road activities? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, then complete the HAUL ROAD EMISSIONS UNIT DATA SHEET.
2.) Will there be Storage Piles? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete Table 1 of the NONMETALLIC MINERALS PROCESSING EMISSIONS UNIT DATA SHEET.
3.) Will there be Liquid Loading/Unloading Operations? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the BULK LIQUID TRANSFER OPERATIONS EMISSIONS UNIT DATA SHEET.
4.) Will there be emissions of air pollutants from Wastewater Treatment Evaporation? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET.
5.) Will there be Equipment Leaks (e.g. leaks from pumps, compressors, in-line process valves, pressure relief devices, open-ended valves, sampling connections, flanges, agitators, cooling towers, etc.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the LEAK SOURCE DATA SHEET section of the CHEMICAL PROCESSES EMISSIONS UNIT DATA SHEET.
6.) Will there be General Clean-up VOC Operations? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET.
7.) Will there be any other activities that generate fugitive emissions? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET or the most appropriate form.
If you answered "NO" to all of the items above, it is not necessary to complete the following table, "Fugitive Emissions Summary."

Attachment L
Emission Unit Data Sheet

EQUIPMENT LIST FORM

Type Change, if any (New, Modification, or Removal)	Date of Change	Emissions Unit (Source)		Air Pollution Control Device		Emission Point	
		ID No. ¹	Source	ID No. ²	Device Type	ID No. ³	Emission Type ⁴
New	1990s	1S	VPI tank & 2 drying ovens		None	E01	direct vent
New	1990s	2S	Dip Tank		None	E01	direct vent
New	2002	3S	Emergency generator #1		none	E02	direct vent
Out of service	2002	4S	Emergency generator #2		None	E02	direct vent
New	1997	5S	Burn Out Oven (PCP)	5C	afterburner	E03	Direct vent

Include **all** process equipment that will be part of this permit application review, including previously unpermitted emissions units (sources) and air pollution control devices.

¹ Number as 1s, 2s, 3s . . . or other appropriate designation. Must match process flow diagram.
² Number as 1c, 2c, 3c . . . or other appropriate designation. Must match process flow diagram.
³ Number as 1e, 2e, 3e . . . or other appropriate designation. Must match process flow diagram.
⁴ Please add descriptors such as upward vertical stack, downward vertical stack, horizontal stack, relief vent, rain cap, etc.

**EMISSIONS UNIT DATA SHEET
GENERAL**

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*):

<p>1. Name or type and model of proposed affected source:</p> <p>Building sources (Dip Tank, VPI pressurized tank, two electric drying ovens, one electric burn out oven, and one NG-fired burn out oven). Source information and emission calculations are provided in Attachments J and N. Process descriptions of sources are provided in Attachment G. These forms were not completed for each source.</p>
<p>2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.</p>
<p>3. Name(s) and maximum amount of proposed process material(s) charged per hour:</p> <p>See Process description (Appendix G).</p>
<p>4. Name(s) and maximum amount of proposed material(s) produced per hour:</p> <p>N/A</p>
<p>5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:</p> <p>N/A</p>

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):			
(a) Type and amount in appropriate units of fuel(s) to be burned:			
N/A			
(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:			
(c) Theoretical combustion air requirement (ACF/unit of fuel):			
@		°F and	psia.
(d) Percent excess air:			
(e) Type and BTU/hr of burners and all other firing equipment planned to be used:			
(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:			
(g) Proposed maximum design heat input:			× 10 ⁶ BTU/hr.
7. Projected operating schedule:			
Hours/Day	8	Days/Week	5.5
		Weeks/Year	50

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

		@	°F and	psia
a.	NO _x	0.04	lb/hr	grains/ACF
b.	SO ₂	0.001	lb/hr	grains/ACF
c.	CO	0.10	lb/hr	grains/ACF
d.	PM ₁₀	1.48	lb/hr	grains/ACF
e.	Hydrocarbons		lb/hr	grains/ACF
f.	VOCs	0.33	lb/hr	grains/ACF
g.	Pb		lb/hr	grains/ACF
h.	Specify other(s)			
	Ethylbenzene	0.28		
	Xylenes	0.14	lb/hr	grains/ACF
	Tetrachloroethylene	1.96	lb/hr	grains/ACF
			lb/hr	grains/ACF
			lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
 Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING

RECORDKEEPING

Log of hours for each drying oven

REPORTING

TESTING

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

EMISSIONS UNIT DATA SHEET GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*):

<p>1. Name or type and model of proposed affected source:</p> <p>Emergency generator #1. (Emergency generator #2 is not in service). Source information and emission calculations are provided in Attachments J and N. Process descriptions of sources are provided in Attachment G. These forms were not completed for each source.</p>
<p>2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.</p>
<p>3. Name(s) and maximum amount of proposed process material(s) charged per hour:</p> <p>N/A.</p>
<p>4. Name(s) and maximum amount of proposed material(s) produced per hour:</p> <p>N/A</p>
<p>5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:</p> <p>N/A</p>

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable): (a) Type and amount in appropriate units of fuel(s) to be burned: Diesel fuel at 20 gallons/hour			
(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:			
(c) Theoretical combustion air requirement (ACF/unit of fuel): <div style="display: flex; justify-content: space-around; align-items: center;"> @ °F and psia. </div>			
(d) Percent excess air:			
(e) Type and BTU/hr of burners and all other firing equipment planned to be used:			
(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:			
(g) Proposed maximum design heat input: × 10⁶ BTU/hr.			
7. Projected operating schedule:			
Hours/Day	1 hr/month, <500 hrs/yr	Days/Week	Weeks/Year

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@	°F and	psia
a. NO _x	18.29 lb/hr	grains/ACF
b. SO ₂	1.21 lb/hr	grains/ACF
c. CO	3.94 lb/hr	grains/ACF
d. PM ₁₀	1.30 lb/hr	grains/ACF
e. Hydrocarbons	lb/hr	grains/ACF
f. VOCs	lb/hr	grains/ACF
g. Pb	lb/hr	grains/ACF
h. Specify other(s)		
	lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
 Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING

RECORDKEEPING

Log of fuel used in gallons and hours operated.

REPORTING

TESTING

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

Summary of Air Emission Calculations
TRAMCO Services, Inc.
Chatterroy, WV Facility

HAP	Process	PTE Emissions, tons/yr	PTE Emissions, #/hr
Total PM-10	Emergency Generator #1	0.32	1.30
Total PM-10	Building units	1.26	1.48
<i>Total PM₁₀ =</i>		<i>1.58</i>	<i>2.78</i>
PM	Emergency Generator #1	0.67	2.73
PM	Building units	2.54	3.09
<i>Total PM =</i>		<i>3.21</i>	<i>5.82</i>
NO _x (uncontrolled)	Emergency Generator #1	4.57	18.29
NO _x (uncontrolled)	Building units	0.17	0.04
<i>Total NO_x =</i>		<i>4.74</i>	<i>18.33</i>
SO ₂	Emergency Generator #1	0.30	1.21
SO ₂	Building units	0.01	0.001
<i>Total SO₂ =</i>		<i>0.31</i>	<i>1.21</i>
CO	Emergency Generator #1	0.99	3.94
CO	Building units	0.44	0.10
<i>Total CO =</i>		<i>1.43</i>	<i>4.04</i>
TOC	Emergency Generator #1	0.36	1.46
VOCs	Building units	1.46	0.33
Ethylbenzene	Building units	1.25	0.28
Xylene	Building units	0.62	0.14
Tetrachloroethylene	Building units	8.60	1.96
Total HAPS		10.5	2.40
Total TAPS		0.004	0.017
Formaldehyde		0.001	0.005
Regulatory limits		10	6

Emergency generator usage is restricted to 500 hours/year per the regulation.
 Emergency Generator #1 is only used 1 hour/month. Generator #2 is not in service.

**Actual and Revised Potential to Emit Operational Hours
TRAMCO Services, Inc.
Chatteroy, WV Facility**

Operation	# of Units	Projected Business hours in 2014 *	Operation	Unit Operation, hrs/yr	Potential hrs/yr	Revised Potential hrs/yr **	Capacity Factor, %
VPI tank - no HAPs	1	2,200	4 days/week	1,600	8,760	6,371	0.18
Varnish DIP Tank	1	2,200	4 days/week	1,600	8,760	6,371	0.18
Drying Oven for VPI Tank (1)	1	2,200	4 days/week	1,600	8,760	6,371	0.18
PCP Burn Oven (2) - No HAPs	1	2,200	3 days/week	1,200	8,760	4,778	0.14
Armature Burn Oven (2) - No HAPs	1	2,200	2 days/week	800	8,760	3,185	0.09
Bake-off Oven Main (3) - No HAPs	1	2,200	3 days/week	1,200	8,760	4,778	0.14
Bake-off Oven #2 (3) - No HAPs	1	2,200	0.5 days/week	200	8,760	796	0.02
Paint Booth 1 - No VOCs or HAPs	1	2,200	4 days/week	1,600	8,760	6,371	0.18
Paint Booth 2 - No VOCs or HAPs	1	2,200	2 days/week	800	8,760	3,185	0.09
Water Evaporator Main - No VOCs or HAPs	1	2,200	5 days/week	2,000	8,760	7,964	0.23
Water Evaporator #2 - No VOCs or HAPs	1	2,200	4 days/week	1,600	8,760	6,371	0.18
Average						0.15	

Parts sprayed in paint booth, air dry in paint booth

- (1) Drying/Bake Ovens in Main building - dry parts from VPI and Dip Tanks.
- (2) Burn oven - only residual insulation/wire burned; no VOCs or particulates (heat)
- (3) Bake-off oven - only water from parts (heat)

Process with VOCs or HAPs

*: Operation will be 1 shifts (8 hrs/day, 5.5 days/wk) and 50 weeks/yr or 2,200 hrs/yr

** Based on unit operation and business hours.

Operational Capacity Factors ranges from 2 % to 19 %. An average of 15 % capacity was used in PTE calculations.

Emissions for Emergency Generator #1
 TRAMCO Services, Inc.
 Chatteroy, WV Facility

	Emission Factor, AP42 #/MMBTU	Conversion Factor, MMBTU/hp-hr	Emission in #/hp-hr	hp	hours/yr	ton/#	Emissions, PPH (6 pph limit)	Emissions, TPY (10 tpy limit)
NO _x			3.10E-02	590	500	0.0005	18.29	4.57
PM ₁₀			2.20E-03	590	500	0.0005	1.30	0.32
CO			6.68E-03	590	500	0.0005	3.94	0.99
CO ₂			1.15E+00	590	500	0.0005	678.5	169.63
SO ₂			2.05E-03	590	500	0.0005	1.21	0.30
TOC			2.47E-03	590	500	0.0005	1.46	0.36
1,3-Butadiene * T	3.91E-05	0.007	2.74E-07	590	500	0.0005	1.61E-04	4.04E-05
Acenaphthene *	1.42E-06	0.007	9.94E-09	590	500	0.0005	5.86E-06	1.47E-06
Acenaphthylene *	5.06E-06	0.007	3.54E-08	590	500	0.0005	2.09E-05	5.22E-06
Acetaldehyde *	7.67E-04	0.007	5.37E-06	590	500	0.0005	3.17E-03	7.92E-04
Acrolein *	9.25E-05	0.007	6.48E-07	590	500	0.0005	3.82E-04	9.55E-05
Anthracene *	1.87E-06	0.007	1.31E-08	590	500	0.0005	7.72E-06	1.93E-06
Benzene * T	9.33E-04	0.007	6.53E-06	590	500	0.0005	3.85E-03	9.63E-04
Benzo(a)anthracene *	1.68E-06	0.007	1.18E-08	590	500	0.0005	6.94E-06	1.73E-06
Benzo(a)pyrene *	1.88E-07	0.007	1.32E-09	590	500	0.0005	7.76E-07	1.94E-07
Benzo(b)fluoranthene *	9.91E-08	0.007	6.94E-10	590	500	0.0005	4.09E-07	1.02E-07
Benzo(k)fluoranthene *	1.55E-07	0.007	1.09E-09	590	500	0.0005	6.40E-07	1.60E-07
Benzo(g,h,i)perylene *	4.89E-07	0.007	3.42E-09	590	500	0.0005	2.02E-06	5.05E-07
Chrysene *	3.53E-07	0.007	2.47E-09	590	500	0.0005	1.46E-06	3.64E-07
Dibenzo(a,h)anthracene *	5.83E-07	0.007	4.08E-09	590	500	0.0005	2.41E-06	6.02E-07
Fluoranthene *	7.61E-06	0.007	5.33E-08	590	500	0.0005	3.14E-05	7.86E-06
Fluorene *	2.92E-05	0.007	2.04E-07	590	500	0.0005	1.21E-04	3.01E-05
Formaldehyde * T	1.18E-03	0.007	8.26E-06	590	500	0.0005	4.87E-03	1.22E-03
Indeno(1,2,3-cd)pyrene *	3.75E-07	0.007	2.63E-09	590	500	0.0005	1.55E-06	3.87E-07
Naphthalene *	8.48E-05	0.007	5.94E-07	590	500	0.0005	3.50E-04	8.76E-05
Total PAHs *	1.68E-04	0.007	1.18E-06	590	500	0.0005	6.94E-04	1.73E-04
Phenanthrene *	2.94E-05	0.007	2.06E-07	590	500	0.0005	1.21E-04	3.04E-05
Pyrene *	4.78E-06	0.007	3.35E-08	590	500	0.0005	1.97E-05	4.94E-06
Toluene *	4.09E-04	0.007	2.86E-06	590	500	0.0005	1.69E-03	4.22E-04
Xylenes *	2.85E-04	0.007	2.00E-06	590	500	0.0005	1.18E-03	2.94E-04

* HAPS

T - TAPS

Total TAPS 0.009 0.002

Total HAPS 0.017 0.004

Remaining emission factors are taken from AP-42, Chapter 3.3

Worst Case Scenario is 500 hours/yr for Generator #1.

Detroit Diesel Model 71637305 generators at 440kW (590 HP).

Generator #2 is not in service and Generator #1 is used 1 hour/month.

Major Source levels = 100 TPY

Priority Air Pollutants

CO₂ is not priority air pollutant, but is a GHG component

Actual and Potential VOC Air Emission Calculations
TRAMCO Services, Inc.
Chatteroy, WV Facility

HAP	Product	gal. used/yr	% volatiles by wt.	prod. Wt., #/gal.	#/yr	Actual Uncontrolled, tons/yr	Actual Uncontrolled, #/hr	Capacity Factor, %	Revised PTE, tons/yr	Revised PTE, #/hr
VOCs	BC-346-A	210	0.55	3.56	411.18	0.21	0.05	0.15	1.37	0.31
					<i>Total VOCs =</i>	<i>0.21</i>	<i>0.05</i>		<i>1.37</i>	<i>0.31</i>
Ethylbenzene (HAP)	BC-346-A	210	0.5	3.56	373.80	0.19	0.04	0.15	1.25	0.28
					<i>Total Ethylbenzene =</i>	<i>0.19</i>	<i>0.04</i>		<i>1.25</i>	<i>0.28</i>
Xylenes (HAP)	BC-346-A	210	0.250	3.56	186.90	0.09	0.02	0.15	0.62	0.14
					<i>Total Xylene =</i>	<i>0.09</i>	<i>0.02</i>		<i>0.62</i>	<i>0.14</i>
Tetrachloroethylene (HAP)	Spray-on degreaser (S00703)	200	0.98	13.17	2,581.32	1.29	0.29	0.15	8.60	1.96
					<i>Total Tetrachloroethylene =</i>	<i>1.29</i>	<i>0.29</i>		<i>8.60</i>	<i>1.96</i>
Total HAPS =						10	6		10.47	2.39
Regulatory limit for Total HAPS =						10	6		10	6
Regulatory Limit for Aggregate HAPS =						2.5	2.5		2.5	2.5

Capacity factor is based upon the average actual hours of unit operation (see work hours table)

PM Air Emission Calculations
TRAMCO Services, Inc.
Chatteroy, WV Facility

HAP	Product	gal/yr	% solids	Prod. Wt., #/gal.	Actual Uncontrolled, tons/yr	Actual Uncontrolled, #/hr	Capacity Factor, %	Revised PTE, tons/yr	Revised PTE, #/hr
PM-30	Spray-on degreaser (S00703)	200	0.5	7.366	0.37	0.46	0.15	2.46	3.07

HAP	Product	Conversion Factor	Revised PTE, #/hr	Revised PTE, tons/yr
PM-10	Spray-on degreaser (S00703)	2.1	1.46	1.17

Total PM10 = 1.46
Regulatory limits = 6 10

PM-10 = PM-30/2.1

PCP Burnout Oven PM Emissions

Model CPI 1504215
 Design heat input

0.398 MMBTU/hr

Pollutant	Emission Factor	Emission Factor Units	Emission Rates		Emission Rates	
			#/hr	tons/yr	#/hr	tons/yr
PM ₁₀	0.02	#/hr	0.02	0.09	1.48	1.26
PM	0.02	#/hr	0.02	0.09	3.09	2.54
SO ₂	0.00286	#/MMBTU	0.0011	0.005	0.001	1.17
NO _x	0.1	#/MMBTU	0.0398	0.17	0.04	0.17
CO	0.1	#/hr	0.1	0.44	0.1	0.44
VOCs	0.02	#/hr	0.02	0.09	0.02	0.09
			Facility Totals			
			#/hr	tons/yr	#/hr	tons/yr

Attachment P Public Notice

AIR QUALITY PERMIT NOTICE
Notice of Application

Notice is given that TRAMCO Services, Inc. has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for an After-the-Fact Operating Permit for a machining and repair facility located on Buffalo Creek Road, Chattaroy, Mingo County, West Virginia. The latitude and longitude coordinates are: 37.71098N and -82.25683W.

The applicant estimates the potential to discharge the following Regulated Air Pollutants will be less than:

NO _x	5 TPY
CO	2 TPY
PM	4 TPY
PM ₁₀	2 TPY
SO ₂	1 TPY
HAPS	11TPY
TAPS	0.1 TPY
Formaldehyde	0.1 TPY

Startup of operation began in the 1970s. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street, SE, Charleston, WV 25304, for at least 30 calendar days from the date of publication of this notice.

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, extension 1227, during normal business hours.

Dated this the _____ day of April 2015.

By: TRAMCO Services, Inc.
Scott Sheppard
Vice President
PO Box 770
Williamson, WV 25661

Attachment R

Authority Forms

**Attachment R
AUTHORITY OF CORPORATION
OR OTHER BUSINESS ENTITY (DOMESTIC OR FOREIGN)**

TO: The West Virginia Department of Environmental Protection,
Division of Air Quality

DATE: April 8, 2015

ATTN.: Director

Corporation's / other business entity's Federal Employer I.D. Number 55-0778377

The undersigned hereby files with the West Virginia Department of Environmental Protection, Division of Air Quality, a permit application and hereby certifies that the said name is a trade name which is used in the conduct of an incorporated business or other business entity.

Further, the corporation or the business entity certifies as follows:

(1) Scott Sheppard (is/are) the authorized representative(s) and in that capacity may represent the interest of the corporation or the business entity and may obligate and legally bind the corporation or the business entity.

(2) The corporation or the business entity is authorized to do business in the State of West Virginia.

(3) If the corporation or the business entity changes its authorized representative(s), the corporation or the business entity shall notify the Director of the West Virginia Department of Environmental Protection, Division of Air Quality, immediately upon such change.



President or Other Authorized Officer
(Vice President, Secretary, Treasurer or other
official in charge of a principal business function of
the corporation or the business entity)

(If not the President, then the corporation or the business entity must submit certified minutes or bylaws stating legal authority of other authorized officer to bind the corporation or the business entity).

Secretary

Name of Corporation or business entity