



west virginia department of environmental protection

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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.: R13-2876
Plant ID No.: 107-00158
Applicant: Fontaine Modification Company (Fontaine)
Facility Name: Williamstown, WV Facility
Location: Wood County
NAICS Code: 336211 - Motor Vehicle Body Manufacturer
Application Type: Construction
Received Date: March 2, 2011
Engineer Assigned: John Legg
Fee Amount: \$1,000.00
Date Received: March 14, 2011
Complete Date: June 28, 2011
Due Date: September 28, 2011
Applicant Ad Date: March 8, 2011
Newspaper: *The Parkersburg News and Sentinel*
UTM's: Easting: 459.3 km Northing: 4,360.6 km Zone: 17
Description: Construction of a paint booth.

DESCRIPTION OF PROCESS

Fontaine is located across the street from the Hino Truck Plant. The trucks Fontaine will be painting are brand new truck from the Hino Truck Plant. Fontaine will be painting over the truck's white finish, not stripping and sanding off the white finish, and painting fiberglass extensions they attach to the cab of the truck.

The following article came from the internet:

Hino Trucks expands product offering through strengthened relationship with Fontaine Modification

September 21, 2009

Novi, Michigan – Hino Trucks and Fontaine Modification Company announced today that Fontaine will open a dedicated modification center in Williamstown, WV, to support Hino’s West Virginia based truck assembly plant.

"Having Fontaine as an extension of our assembly plant in West Virginia affords us the ability to offer many more options seamlessly to our dealers and customers," stated Bob Petz, Vice President, Logistics Operations for Hino Trucks. "Fontaine Modification has been a great partner to Hino Trucks over the last four years, and we look forward to growing our business mutually through Fontaine’s commitment to supporting our plant in West Virginia with a dedicated facility," added Petz.

The Williamstown modification center will continue to provide Hino Trucks with all current production options, including extended cab, 338 City Tractor, Dual Steer Sit-down and Dual Steer Right Hand Stand up packages. Additionally, Hino Trucks is looking to expand its product offering with the assistance of Fontaine Modification by offering additional paint options, bus chassis, RV chassis and fire rescue chassis packages.

"We see this partnership as a strategic approach to bringing the Hino truck to many of our target markets in a fairly quick manner, while maintaining our high level of quality," noted Glenn Ellis, Vice President, Marketing and Dealer Operations for Hino.

The new modification center is located across the street from Hino’s assembly plant, enabling the seamless integration of modifications into the truck production and delivery process. Fontaine plans to begin transitioning all Hino work from its Springfield, OH, center to Williamstown in November.

"Our new center will be custom-built to meet all of Hino’s modification needs, as well as to provide the exceptionally high level of product quality that Hino customers expect in every truck they buy," said Mark Hampshire, Vice President and General Manager Western Region of Fontaine Modification.

"Hino Trucks is a growing presence in the medium duty truck market, and we are very happy to strengthen this relationship," said Will Trantham, President, Fontaine Modification. "We look forward to using our experience and expertise to help Hino Trucks continue to expand into new markets."

About Hino: Hino Trucks, a Toyota Group Company, assembles, sells and services class 4-7 commercial trucks in the United States and is headquartered in Novi, Michigan. Hino Trucks is the fastest growing medium duty truck nameplate in America and is the recipient of the 2008 J.D. Power and Associates awards for Highest in Customer Satisfaction for Medium Duty Trucks and Medium- Duty Truck Engine and Transmission. For more information, visit Hino Trucks internet home page at

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www.hino.com or follow us on Facebook, Twitter and YouTube.

About Fontaine Modification: Based in Charlotte, N.C., Fontaine Modification is North America's leading provider of truck modifications for OEMs, dealers and fleets. Fontaine uses established shipthru agreements with all major truck manufacturers to streamline the final delivery process to the end-user. The company's modification centers are located conveniently near OEM manufacturing facilities in Garland, Texas; Springfield, Ohio; Hagerstown, Indiana; Charlotte, North Carolina; and Dublin, Virginia. The Charlotte location also houses the company headquarters and Innovation Center for research and development of post-production truck modifications.

Fontaine is a Marmon Highway Technologies (MHT) company. MHT companies support the transportation industry worldwide with a wide range of high-quality products and services. MHT companies are members of The Marmon Group, an international association of more than 125 independent business units. The Marmon Group is a Berkshire Hathaway Company. For more information about Fontaine Modification, visit www.fontainemod.com or call 800.FONTAINE (800.366.8246).

For More Information:

Glenn Ellis, Vice President
Marketing and Dealer Operations
Hino Motors Sales U.S.A., Inc.
248-699-9300

The following process description came from Appendix G of the permit application:

Fontaine modifies heavy-duty trucks and chassis at its Williamstown facility. Modifications may include outfitting trucks for specialized service applications. Such applications include all-wheel drive, right side and dual steering columns, alternate fuel capability, refuse collection, and many other specialty applications. This work involves assembly, welding, and, with the addition of the Paint Booth, specialty painting operations.

Trucks are moved into the booth, painted, cured and then removed. Particulate emissions occur during the painting cycle, along with HAPs and VOC. Particulate emissions are expected to return to zero quickly once the painting has stopped. VOC, including some VHAP, will continue to be emitted for a short duration but decrease rapidly upon the completion of the cure cycle. Cycle time is several hours per truck. At this point, the facility envisions painting about 3 trucks per week using approximately 2 to 3 gallons per truck. Maximum production will be 3 trucks per day.

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Table 2: Information on Fontaine's (Williamstown Facility) Paint Booth.	
Name/Type/Model	Make: Blowtherm Model: 6X7.5 DF (Concept XL Spray Booth side exhaust down draft) Mfg date: 7/2002 Cure 2.5 M Btu Input Exhaust Rate: 31,000 ft ³ /min
Maximum Amount of Proposed Process Materials Charged	Three trucks per day
Type Emissions	Particulate, VOC, and HAP during spray paint cycle
Projected Operating Schedule	8 hours/day; 5 days/week; 52 weeks/yr
Filter	Located along bottom two sides of booth. There are two rows of filters per each side of the paint booth 16 filters per each row - 4 rows total. Each filter is 2' x 2'. Total filter area of 256 ft ² .

SITE INSPECTION

The writer and Rebecca Johnson, Enforcement Inspector, visited Fontaine's Williamstown facility on June 28, 2011. The facility is relatively remote. It was once owned an 84 Lumber Company retail outlet. The paint booth had been constructed, but was not in operation at the time of the visit. Directions to the facility as given in the permit application are as follows:

Take I-77 North. Take WV 14 exit toward Williamstown. Turn left at WV 14 S (Co. Route 3/2 Ed District Rd). Continue to follow WV 14S approximately 1.4 miles. Turn left at WV 14S, W 3rd Street. Continue to follow W. Virginia 14S. Fontaine Modification will be on the right, approximately 1.6 miles, just past (southwest) the Hino Truck Plant.

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ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

VOC emissions are estimated at 11.7 lb/hr and 4.2 ton/yr. This estimate is based on consuming paint at a rate of 200 gal/mo (2,400 gal/yr) and an average VOC content of 3.5 lb VOC/gal over 720 hours. Annual emissions are based on operating 2,080 hr/yr (8 hr/day for 5 day/wk for 52 wk/yr).

Particulate Matter (PM) emissions are estimated 20.25 lb/hr and 11.1 ton/yr before controls, and 0.20 lb/hr and 0.11 ton/yr after controls based on a 99% PM removal efficiency in the paint booth dry filter.

REGULATORY APPLICABILITY

WV: 45CSR7 To Prevent and Control Particulate Air Pollution from Manufacturing Process Operations

The following sections of Rule 7 were cited in the permit as being applicable:

- §45-7-3.1. 20% opacity limit;
- §45-7-3.7. No visible emissions from storage structures;
- §45-7-4.1. PM emissions can't exceed amounts given in Table 45-7A);
- §45-7-5.1. System needed to control fugitive emissions from process or storage structures;
- §45-7-5.2. PM control of plant premises and plant owned/leased/controlled access roads;
- §45-7-8.1. Stack testing;
- §45-7-8.2. Right to conduct other tests;
- §45-7-9.1. Unavoidable malfunction of equipment.

The permittee should be able to meet all the above requirements.

WV: 45CSR13 Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits, and Procedures for Evaluation

A 45CSR13 permit was needed because Fontaine's paint booth is a stationary source with the potential of emitting 6 lb//hr and 10.0 ton/yr of VOC and PM emissions if limitations and controls are not put into place.

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WV: 45CSR21 To Control the Emission of Volatile Organic Compounds from Facilities Engaging in the Manufacture, Mixing, Storage, Use, or Application of Volatile Organic Compounds in Putnam County, Kanawha County, Cabell County, Wayne County, or Wood County; with the Application of Reasonably Available Control Technology

No section was thought to be applicable to Fontaine’s paint booth.

Federal: No federal regulations apply.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

Fonaine provided MSDS in the permit application for the varies thinners, coating, paints, etc. to be used at their facility.

Table 1: Fontaine Furnished Five (5) DuPont Performance Coatings Material Safety Data Sheets (MSDSs) in Permit Application 2876.	
1	Lacquer Thinners and Cleaning Solvents
2	Isoyanate Activators, Hardners, and Additives
3	Primers: Enamel, Chromate, Corlar®, Variprime® and Sealers
4	Centari® 5000 Acrylic Urethane Enamel and DuPont™ Excel™
5	Low VOC Primers, Thinners, Basemakers and Clears

Hazardous Air Pollutants (HAPs) are found in varying concentrations in the different coating, paints, thinner, etc. Known HAPs were tabulated in the table given in Section 4.1.4. of the permit. This table is shown below:

Hazardous Air Pollutant (HAP)	CAS #
Antimony Pentoxide	7440360
Cumene	98828

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Hazardous Air Pollutant (HAP)	CAS #
Ethylbenzene	100-41-4
Ethylene Glycol Monobutyl Ether Acetate	111762
Formaldehyde	50000
Methyl Alcohol	67561
Methy Isobutyl Ketone	108101
N-Hexane	110543
Nickel Oxide	
Toluene	108-88-3
Xylene	1330207
Zinc Chromate	
1,6-Hexamethylene	822-06-0
2,2,4-Trimethylpentane	

Per Section 4.1.4.c. of R13-2876, a 12-month rolling total must be used to determine that an individual HAP does not exceed 10 ton/yr.

AIR QUALITY IMPACT ANALYSIS

No modeling study was performed for the proposed construction.

MONITORING OF OPERATIONS

- Per Section 4.1.4.a., the identity of any new coating containing a HAP(s) not listed in the table in Section 4.1.4. must be identified to the Director in writing within thirty (30) days of using the coating. An MSDS sheet for the coating must also be supplied.
- Per Section 4.1.4.c., a 12-month rolling total must be used to determine that an individual HAP does not exceed 10 ton/yr.

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- To determine if the VOC and PM limits given in Section 4.1.2. and 4.1.3. are met, the permittee will need to monitor and record:
 - name and id number of each coating applied.
 - number of hours used to apply each coating.
 - date applied and amount of each coating applied, and
 - amount of each coating disposed of a waste.

Using the above information, an annual combined VOC emission rate is to be calculated based on paint and solvent usage using a rolling total for any continuous span of 12 months.

- To determine if the PM limits in Section 4.1.3. are met, the permittee is to maintain records showing that the dry filters were change out.

CHANGES TO PERMIT R13-2876

This permit is new, so there were no changes made to a existing permit.

RECOMMENDATION TO DIRECTOR

Permit application R13-2876 submitted by Fontaine has been reviewed and was determined by this engineer to meet all applicable requirements. It is therefore recommended that the resulting permit, R13-2876, be approved.

John Legg
Permit Writer

August 4, 2011

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