



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF AIR POLLUTION CONTROL
WILLIAM R. SNODGRASS TENNESSEE TOWER
312 ROSA L. PARKS AVENUE, 15TH FLR.
NASHVILLE, TN 37243-1531

CERTIFIED MAIL 7007 0220 0004 1449 9333
RETURN RECEIPT REQUESTED

August 12, 2013

Shawn Bryant, Manager, S. H. and Env.
Denso Manufacturing
2400 Denso Drive
Athens, Tennessee 37303

Re: Denso Manufacturing
54-0158-G6 / 457440

Dear Mr. Bryant:

This correspondence is in response to your letter dated July 24, 2013 requesting an insignificant activity determination. The information which you provided has undergone a preliminary review by the permit program.

It has been determined that the GDI-3 fabrication process involving metalworking steps and fabricating machines for fuel injectors, described in your letter, would constitute an *insignificant activity* or *insignificant emissions unit*, as defined in part 1200-03-09-.04(2)(a)3. of the Tennessee Air Pollution Control Regulations. Specifically, the operation would result in potential emissions from the source of less than five (5) tons per year of each air contaminant and each regulated air pollutant that is not a hazardous air pollutant, and less than 1,000 pounds per year of each hazardous air pollutant.

For new sources, subparagraph 1200-03-09-.04(4)(a) of the Tennessee Air Pollution Control Regulations requires that the request for designation as an insignificant emissions unit be made at least thirty (30) days prior to the estimated starting date of construction. Your letter is accepted as the required notification. All applicable air pollution regulations must still be met by your facility.

Please note that Condition E-2 of permit 457440 states that this facility has taken limits to stay below the Title V threshold levels for VOC (below 100 tons) and combined HAPs (below 25 tons). The maximum potential emissions for the new metalworking and machining units as specified in your letter of July 24, 2013 are:

VOC: 0.76 tons per year

HAP (HCl): 0.45 tons per year

Although the process units emitting these pollutants are considered to be "insignificant" these potential emissions need to be included in the annual emissions summaries to verify that the plantwide emissions thresholds have not been exceeded. Therefore, you have the option of adding the above specified amounts to the emissions calculations

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required by Conditions E-8 and E-15 to determine the plantwide emissions levels, or you may keep records of the actual amounts of these pollutants, based on plant usage rates. These values must be included with the next annual conditional major emissions calculation submittal as required by Condition E-8 of permit 457440.

If you have any questions concerning this correspondence, please contact Robert Benjamin at 615.532.0564 or Robert.Benjamin@tn.gov.

Sincerely,



Randall Thompson, Chief
Middle Tennessee Permit Program

RT/rjb

cc: Chattanooga EFO
Main File – 54-0158-G6
Smog Log

Memorandum

To: MAIN FILES -- 54-0158-G6
From: Robert Benjamin
Date: Wednesday, August 07, 2013
Re: Request from Denso Manuf. For GFI-3, Fabrication of Fuel Injectors as Insignificant

Denso Manufacturing in Athens (54-0158) has requested in a letter dated July 24, 2013 to include a new process consisting of metalworking steps and machines for fabrication of fuel injectors. An FAS coating is applied to the injectors and then baked in an oven. Company provided emissions calculations for oil mist and coating at maximum production and combined uncontrolled emissions show: VOC = 0.76 TPY; HCL = 0.45 TPY & PM2.5 = 0.35 TPY. Ethanol and HCL are emitted from the FAS coating and HCL was thought a HAP by the company, however, HCL is a "regulated pollutant." Company collected data to determine mist emissions factors for the lathe and grinding processes. The mist sampling point was before the oil mist collectors, i.e., the controls.

The request for FAS coating usage is based on the maximum of 23 gallons per month. This request uses "insignificant unit" definition in Rule 1200-03-09-.04(2)(a)3. for exemption. There are no controls used for the PM emissions. Due to insignificant emissions, no controls or compliance are required. CAM does not apply to this operation due to no PM controls being involved. This insignificant change request is approved.

Robert Bj.

DENSO

DENSO MANUFACTURING ATHENS TENNESSEE, INC.
2400 Denso Drive
Athens, Tennessee 37303
Tel: (423) 746-0000 Fax: (423) 746-1090

July 24, 2013

Tennessee Air Pollution Control Division
Attn: The Technical Secretary
9th Floor, L & C Annex
401 Church Street
Nashville, TN 37243-1531

RE: Permit # 457440P, Source Number 54-0158: Insignificant Activity Request

Dear Mr. Secretary:

DENSO Manufacturing Athens, Tennessee, Inc. (DMAT) is pleased to announce the expansion of Plant 701.

The GDI-3 fabrication process consists of numerous metalworking steps and machines for the fabrication of fuel injectors, as illustrated by the attached flow chart. The final step prior to assembly and inspection is the application of an FAS coating. The FAS coating is a proprietary mixture that is prepared at the point of application. The coating is applied and then baked in a 200°C oven. The components of that coating have been provided in the accompanying emissions calculations documentation.

The processes are as follows:

1. Body grinding (6 grinders)
2. Needle grinding (7 grinders)
3. Holder cutting (5 lathes, 2 grinders)
4. Connector grinding (1 grinder)
5. Fluid grinding (3 grinders)
6. FAS coating

As illustrated by the attached flow diagram, the various components are fabricated in the process independently then processed either directly to assembly or to FAS coating. All machines that utilize oil in the process or generate pollutants shall be equipped with oil mist collectors.

The proposed processes will have five emission points as detailed in the flow diagram, with the exception of the fluid grinding process. The fluid grinding process is a closed loop system that will collect and return the viscor calibration fluid to the process for reuse. Any air emission from the fluid grinding oil mist collector is released into the building.


In accordance with 1200-03-09-04(2)3, DENSO requests that this line be designated as an "insignificant activity".

The attached emissions calculations at maximum production illustrates a combined uncontrolled total of: VOC = 0.76 (T/YR), HAPs = 0.45 (T/YR), PM 2.5 = 0.35 (T/YR). The emission factors for the emissions resulting from the lathe and grinding processes are illustrated in the attached calculations. These emission factors were developed from the direct sampling of similar metalworking processes prior to oil mist collection, in this facility. The factors are based upon hours of production. This is a very conservative calculation in that it is assumed that all cutting oils released by the oil mist collector result in PM 2.5 and VOC. The emissions from the FAS coating process were based upon material inventory, with the assumption that all of the VOC and HAP components in the coating mixture will result in emissions.

Construction on this process is scheduled to begin August 26, 2013.

DMAT appreciates the Department's assistance in this matter. If you have any questions please contact Mr. Shawn Bryant at (423) 649-1803 or at shawn_bryant@denso-diam.com.

Sincerely,



Shawn Bryant
Manager, Safety Health and Environment

Enclosures (9)