



west virginia department of environmental protection

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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.: R13-3286
Plant ID No.: 013-00005
Applicant: R.P.R. Industries, Inc. (R.P.R.)
Facility Name: Grantsville Facility
Location: PO Box 220, Grantsville, Calhoun County, WV
NAICS Code: 339113 - Surgical Appliance and Supplies Manufacturing
Application Type: Construction
Received Date: December 17, 2015
Engineer Assigned: John Legg
Fee Amount: \$1,000.00
Date Received: December 17, 2015
Complete Date: January 19, 2016
Due Date: April 19, 2016
Applicant Ad Date: December 10, 2015
Newspaper: *The Calhoun Chronicle/Grantsville News*
UTM's: Easting: 430.80 Northing: 4,916,45 Zone: 17N
Description: Construction allowing the use of 1.225 ton/yr of toluene to wipe-down products made from butyl rubber. Manufacturer of life saving devices, life preservers, etc. Facility's anticipated start-up date is February 1, 2016.

SUMMARY

This permit application when approved will allow R.P.R. to use/emit up to 1.225 ton/yr of toluene.

BACKGROUND INFORMATION

The Grantsville facility has been in existence since at least the late 1970's. It was formerly known as Rubber Crafters, Inc. up until approximately 1998. Rubber Crafters, Inc. was never issued an air permit.

Between 1998 and 2000 the name of the company changed to R.P.R. Industries, Inc. The construction application under review here (R13-3286) is the first time R.P.R. has applied for an air permit.

DESCRIPTION OF PROCESS

The following process description came from Attachment G to the permit application:

- Coated fabrics are received into facility.
- The fabric is placed on a cutting table and laid up in multiple layers.
- The pattern is laid on top and marked on the top layer of fabric.
- Following the pattern marking lines, the fabric is cut.
- The stack of cut pieces is then taken to the clicking machine and the top and bottom panels are clicked out.
- Once the clicking is complete, the silk screening procedure is performed and placed on a shelf to dry.
- Once the panels are dried, the manifold is installed, then the oral tube is installed in the same manner.
- The top and bottom panels are placed on the bed of the RF weld machine and sealed.
- Once the life preserver bladders are sealed, they are ready for testing.
- Once the bladders pass test, they are pulled to flatten out, cleaned and packed.
- During the cleaning process, toluene is used to remove excess silk screen ink.
- The bladders are then serialized and lot numbers applied.
- The bladders are then packed in the boxes to ship.

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed/ Modified	Design Capacity	Type & Date of Change	Control Device
1S	1E	Attic Fan Assembly	2016	Not Given	2016	None

SITE INSPECTION

The writer did not conduct a site inspection of the facility for this construction application (R13-3286). However, the facility's location is well know to DAQ Enforcement Personnel who in the past have conducted site inspections on a two year cycle. The last inspection was conducted on January 7, 2015 by James Robertson, DAQ Enforcement Inspector. The facility was given the status code of 30, for "Source in Compliance."

Direction to the site as given in the permit application are as follows:

Take Big Otter exit #40 from I-79 North. Turn left at the bottom of the ramp. Follow Rt. 16 North approximately 33.4 miles to Grantsville. Turn left at the Foodland grocery store towards Northside. Follow the curve, the facility is situated across from Dominion which is on the right, the building is blue and white on the left side of the road, Johnson Street.

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APPLICATION CORRECTIONS

This following information was taken from a January 19, 2016 email from Gene Coccari, DAQ Small Business Assistance Program, to Anita West of R.P.R. (see Attachment 1 to this evaluation):

- R.P.R. only plans to use toluene at their new location. The DAQ can disregard the "MEK" MSDS provided in the application.
- Also, the application was in error in Attachment J, as it listed different amounts of uncontrolled and controlled emissions. As there are no controls, the amount listed at 1.225 ton/yr VOC's should be listed for both controlled and uncontrolled emissions.
- As 1.225 ton/yr of VOC's is the amount listed in R.P.R.'s legal advertisement (12/10/15 issue of The Calhoun Chronicle/Grantsville News), this is the amount to be used in the calculations.
- As Toluene has a density of approximately 7.31 pound per gallon (calculated from the 0.87 specific gravity listed in the MSDS and a density for water of 8.34 lb/gal), and an estimated maximum usage of 27 gallon/month, toluene emissions are estimated as being:

$$\begin{aligned}\text{Toluene Emissions} &= 7.31 \text{ lb/gal} * 27 \text{ gal/mo} * 12 \text{ mo/yr} \\ &= 2,368.44 \text{ lb/yr} \\ &= 1.18 \text{ ton/yr}\end{aligned}$$

- There is also an insignificant amount of benzene (0.03%) in toluene as is calculated below:

$$\begin{aligned}\text{Benzene Emissions} &= 7.31 \text{ lb/gal} * (0.0003) * 27 \text{ gal/mo} * 12 \text{ mo/yr} \\ &= 0.71 \text{ lb/yr} \\ &= 0.0004 \text{ ton/yr}\end{aligned}$$

Anita West responded back to Gene Coccari's email that same day (January 19, 2016) with the follow message:

R.P.R. agrees to Gene Coccari's VOC usage rates and gives permission to the WV DEP to make the necessary corrections to the application so that R.P.R. can move forward with the permit.

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ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

Attachment J, "Emission Points Data Summary Sheet" was corrected by Gene Coccari. (For further details see above the section entitled: **APPLICATION CORRECTIONS**.) There is one emission point from the facility listed as 1E for the Attic Fan having VOC/toluene emissions of 1.25 lb/hr and 1.225 ton/yr. The annual emission rate is based on operating the facility 10 hr/day, 4 day/wk, 49 wk/yr for a total of 1,590 hr/yr of operation.

REGULATORY APPLICABILITY

45CSR4 - To Prevent and Control the Discharge of Air Pollutants into the Open Air Which Causes or Contributes to an Objectionable Odor or Odors

The facility uses solvents. The facility can not produce objectionable odors that are detectable off-site. This requirement appears in permit R13-3286 as section 3.1.4.

45CSR13 - Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, Permission to Commence Construction, and Procedures for Evaluation

On December 17, 2015, R.P.R. submitted an application for a construction permit and paid the \$1,000.00 application fee. Their legal advertisement had already run in *The Calhoun Chronicle/Grantsville News* on December 11, 2015. On December 17, 2015, the DAQ sent an incomplete email back to the company notifying them that the emission calculations had not been included in their application. On January 19, 2016, Gene Cocarri with DAQ's Small Business Assistance Program (SBAP) submitted calculations and corrections to the permit application which R.P.R.'s Anita West agree to. On February 11, 2016 in an email from the writer, R.P.R.'s application was deemed complete (as of January 19, 2016) and the approved permit was expected to be issued on or around April 19, 2016.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

Two MSDS's, one for Toluene and one for MEK (Methyl Ethyl Keytone) were submitted in Attachment H to the application. Toluene is a Hazardous Air Pollutant (HAP). MEK was a HAP before being de-listed by the EPA.

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R.P.R. responded in a January 19, 2016 email (see above section entitled: **APPLICATION CORRECTIONS**) to disregard the used of MEK at the facility.

- Toluene (CAS-No. 108-88-3); Suncor Product; Concentration 99.7000 - 100.0000%, benzene (CAS-No. 71-43-2) <0.03%; Intended Use - Coatings: Solvent for lacquers and paints. Twelve (12) page MSDS.
- Methyl Ethyl Keytone (MEK) (CAS-No. 78-93-3); ExxonMobil; Concentration 100%; Intended Use: Solvent. Eleven (11) page MSDS.

AIR QUALITY IMPACT ANALYSIS

R.P.R.'s Grantsville, WV facility is consider to be an non-major source. No impact analysis study was conducted for the source.

MONITORING OF OPERATIONS

- 4.1.1. VOC emissions from using toluene as a cleaning solvent shall not exceed 1.25 pounds per hour (lb/hr) and 1.225 tons per year (ton/yr).
- 4.4.4. **VOC/Toluene Cleaning Solvent Usage Rate.** For the purpose of determining compliance with the hourly and annual VOC/toluene emission limitations established in Section 4.1.1. of this permit, the facility shall record:
 - a. Daily - the amount of toluene used;
 - b. Daily - the number of hours toluene was used;
 - c. Daily - the average hourly toluene usage rate (calculated by dividing a. by b.);
 - d. Monthly - the total amount of toluene used during the month; and
 - e. Monthly - the rolling 12-month total toluene total usage rate for the facility [calculated by adding the value for the current calendar month and the values for the previous eleven (11) calendar months.].

The above records shall be maintained on-site for a period of not less than three (3) years and shall be made available to the Director or his duly authorized representative upon request.

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RECOMMENDATION TO DIRECTOR

R.P.R's request for an air permit for the construction and operation of a life-saving device/life preserver manufacturing facility located at 100 Johnson Street, Grantsville, Calhoun County, WV meets the requirements of all applicable rules and therefore should be granted said construction permit (R13-3286).

John Legg
Permit Writer

March 22, 2016

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Attachment 1

**Application Corrections
R.P.R. Industries, Inc.
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