

SOUTHWEST REGIONAL OFFICE

MEMO

**TO** Air Quality Permit File TVOP # 65-00181  
Chestnut Ridge Foam / Latrobe Plant

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**DATE** May 13, 2014

**RE** Review of Title V Operating Permit Renewal Application  
Derry Township, Westmoreland County  
APS# 664533; AUTH # 755223; PF# 263023

### Background

On November 19, 2008, the Department received a Title V Permit renewal application for Chestnut Ridge Foam / Latrobe Plant located in Derry Township, Westmoreland County. The primary function of this plant is to apply fire retardant coatings to polyurethane foam. Chestnut Ridge has complied with the municipal notification requirements contained in 25 Pa. Code §127.413. The Department determined the application Administratively Complete on December 19, 2008. The last authorized operating permit was issued on May 18, 2004 and expired on May 18, 2009. Chestnut Ridge has been operating under 25 Pa Code Section 127.446(c): The terms and conditions of an expired permit are automatically continued pending the issuance of a new permit when the permittee has submitted a timely and complete application and paid the fees required by Subchapter I and the Department is unable, through no fault of the permittee, to issue or deny a new permit before the expiration of the previous permit.

On May 9, 2014, the Department was notified of the Change of Responsible Official and Permit Contact. Mr. George Romanish, VP Operations, will hold the title of Responsible Official Permit Contact Person.

### Authorizations

On March 7, 2008, the Department authorized the Request for Determination (RFD) for a De Minimis Increase resulting from the installation and operation of a 2 x 400,000 Btu gas fired heating unit under 25 Pa Code §127.449. The heating unit is used to heat the conveyed poly molds on the Urethane Line. This is a replacement of the existing oven

burner that was damaged due to a fire incident on the urethane line. No loss of production or emission increase occurred due to the incident.

### **Sources, Control Devices and Emissions**

031 Boiler: is a 11.7 MMBtu/hr natural gas-fired boiler that is used as back-up when Source 032 Boiler is down for annual inspections/maintenance.

032 Boiler: is a 10 MMBtu/hr natural gas-fired boiler that is used to supply steam to the JL Line (Source 108) vulcanizers and vacuum dryers.

Source 101 Dip Line: Polychloroprene latex is delivered to the facility and stored in storage tanks, three 8,000 gallon storage tanks. The latex may be combined in one of the three 1,500 gallon mixing tanks with other materials such as surfactants, filler antioxidants, and/or curing agents before being fed to the dip tank. Urethane foam slabs are fed into the dip machine and impregnated with the polychloroprene latex material. The water is evaporated from the slabs in a natural gas fired oven rated at 4.5 MMBtu/hr. The slabs are then cured in box dryers (Source 107) or vacuum dryers for four to eight hours before being shipped.

Source 102 Ross Line: is the fabrication of foam using a polychloroprene latex material. The polychloroprene latex may be combined in one of the two 1,500 gallon mixing tanks with other materials such as surfactants, filler antioxidants, and/or curing agents before being fed to the foam mixer where air is added to the fabricated foam. The foam is poured on various substrates, mostly a cotton scrim and cured in a natural gas fired oven rated at 6.2 MMBtu/hr. The foam leaves the oven, is trimmed, and cut into sheets or rolled.

Source 103 Lamination Line: is where foam slabs are fed to a booth where an adhesive is applied before being laminated. The adhesive areas are joined together and then laminated through pinch rollers. The laminated product cures for eight to twenty four hours to allow the adhesive material to reach required strength.

Source 104 Urethane Line: is the fabrication of foam molding parts using an isocyanate and resin compound. Both compounds are delivered to the facility in 255 gallon totes. The molds are sprayed with a release agent before pumping the isocyanate and resin components into the mold. The molds are cured in a natural gas fired curing oven rated at 800,000 Btu/hr (2 burners at 400,000 Btu/hr). The parts are de-molded after curing then flexed, trimmed, and boxed.

Source 105 Glue Tables: is the manual application of adhesive to the desired part. Solvents are drawn away from the application area and exhausted through a stack.

Source 106 Waterproofing Process: is the application of waterproofing material to a desired piece of foam by spray application. Typically used on the finished products from the urethane line (Source 104).

Source 107 Box Dryers: are used for drying of foam molds from the Dip Line and J.L. Line. There are six box dryers. Each box dryer consists of four drying compartments/doors and two 400,000 Btu/hr natural gas burners.

Source 108 JL Line: is the fabrication of foam using a polychloroprene latex material. The polychloroprene latex may be combined with other materials such as surfactants, filler antioxidants, and/or curing agents before being fed to the foam mixer where air is added to the fabricated foam. The foam is poured into different shaped pans, pre-cured by heat lamps, de-molded, loaded on racks, and placed inside one of the four vulcanizers for additional curing for a specific time. The vulcanizer is a pressure vessel that is pressurized by steam from Source 032. The foam is then either placed into the vacuum ovens or the box ovens (Source 107) for the final curing process.

Source 109 Foam I-Polyurethane Bun/Molder: is the fabrication of polyurethane foam. Toluene Diisocyanate (TDI) is mixed with polyol, water and various other ingredients in a mixer. The mixture is transferred to the Foam I chamber where the reaction takes place, expanding in the mold and forming a foam slab. This process is rarely used due to the high cost to manufacture the polyurethane foam compared to buying the foam pre-made. This process consists of a 6,000 gallon TDI storage tank with a vapor recovery system. Chestnut Ridge is required to maintain a Risk Management Plan due to the use and storage of TDI.

Chestnut Ridge reported actual emissions for the 2013 calendar year AIMs report as followed: 6.62 tons VOC, 3.04 tons NOx, 0.6 tons CO, 0.01 tpy SOx, 0.02 tons PM/PM<sub>10</sub>, and 0.012 tpy HAPs. Based on AP-42 emissions factors and RACT limits, the facility has the potential to emit: 166.0 tons VOC, 18.0 tons NOx, 14.8 tons CO, and less than 1.0 tpy for all other criteria pollutants. No emergency generators on-site.

## **Regulatory**

### ***40 CFR 63 Subpart III—National Emission Standards for Hazardous Air Pollutants for Flexible Polyurethane Foam Production***

In accordance with 40 CFR §63.1290, the provisions of this subpart apply to each new and existing flexible polyurethane foam or rebond foam process that meets produces flexible polyurethane or rebond foam and is located at a plant site that is a major source, as defined in §63.2 of subpart A. Chestnut Ridge is not a major source of HAPs; therefore this subpart does not apply.

### ***40 CFR 63 Subpart DDDDD – Industrial, Commercial and Institutional Boilers and Process Heaters***

This rule applies to certain boilers and process heaters of various sizes and fuel types at facilities that are major for HAPs. Chestnut Ridge is not a major source of HAPs; therefore the requirements of this subpart do not apply.

**40 CFR 63 Subpart JJJJJ - Industrial, Commercial and Institutional Boilers**

This rule applies to certain boilers of various sizes and fuel types at facilities that are not major for HAPs. All boilers at the Chestnut Ridge are fired exclusively on natural gas. In accordance with 40 CFR § 63.11195(e), natural gas boilers are not subject to this rule; therefore, the requirements of this subpart do not apply.

**40 CFR Part 63, Subpart OOOOOO-National Emission Standards for Hazardous Air Pollutants for Flexible Polyurethane Foam Production and Fabrication Area Sources**

This subpart was last updated on March 26, 2008 and applies to owner or operators that produce flexible polyurethane foam or rebond foam, and flexible polyurethane foam fabrication facilities. *Flexible polyurethane foam* means a flexible cellular polymer containing urea and carbamate linkages in the chain backbone produced by reacting a diisocyanate, polyol, and water. Flexible polyurethane foams are open-celled, permit the passage of air through the foam, and possess the strength and flexibility to allow repeated distortion or compression under stress with essentially complete recovery upon removal of the stress. *Rebond foam* means the foam resulting from a process of adhering small particles of foam (usually scrap or recycled foam) together to make a usable cushioning product. Various adhesives and bonding processes are used. A typical application for rebond foam is for carpet underlay. *Flexible polyurethane foam fabrication facility* means a facility where pieces of flexible polyurethane foam are cut, bonded, and/or laminated together or to other substrates. This subpart incorporates requirements from Subpart III for Flexible Polyurethane Foam Production Standards for molded flexible polyurethane foam production for major sources. The applicable requirements of Subpart OOOOOO have been incorporated into the proposed TV operating permit by reference.

**40 CFR Part 98 Subparts A, C- Mandatory Greenhouse Gas Reporting**

This part was promulgated on October 30, 2009. Per 40 CFR Section 98.2(a), the Greenhouse Gas (GHG) reporting requirements and related monitoring, recordkeeping, and reporting requirements of this part apply to the owners and operators of any facility that is located in the United States and that meets the requirements of either paragraph (a)(1), (a)(2), or (a)(3) of this section.

However, public comments to the Greenhouse Gas Mandatory Reporting Rule (GHG MRR) questioned the requirements of this rule to meet current definitions of “applicable requirement” at 40 CFR 70.2 and 71.2. The commentators requested that USEPA confirm their interpretation of the regulations. The EPA provided the following response: “As currently written, the definition of “applicable requirement” in 40 CFR 70.2 and 71.2 does not include a monitoring rule such as today’s action, which is promulgated under CAA sections 114(a)(1) and 208.” The preamble of the final version of the GHG MRR, located at 74 Fed Reg 209, pp. 56287-56288, states that the GHG MRR is not considered an “applicable requirement” under the Title V Operating Permit program. Therefore, this Subpart, while it may be an obligation for Chestnut Ridge, is not considered an applicable requirement for this Title V Operating Permit.

**The Greenhouse Gas Tailoring Rule** was issued in May 2010. This rule establishes a process for conducting Prevention of Significant Deterioration (PSD) reviews, including

Best Available Control Technology (BACT) determinations for control of greenhouse gases (GHG) when a new source or a modification to an existing source results in emissions of GHGs in excess of certain thresholds. Since May, 2010, there have not been any modifications to Chestnut Ridge facility that triggered a GHG PSD review.

### **Compliance**

On May 11, 2009, the Department investigated a dust complaint received on April 15, 2009 due to a white dust cover employee's vehicles. Chestnut Ridge gathered samples that were analyzed by a lab. Due to the high calcium content and pH level, the lab believed the dust to be concrete dust. At the time of the incident, the company had a third party contactor on-site performing repairs to the concrete block wall. The complaint was closed out and no enforcement action was taken.

### **Conclusions and Recommendations**

The proposed Title V Operating Permit renewal will be submitted to Chestnut Ridge for their review with the requirements to post a notice into the newspaper for three separate days. The Notice of Intent to Issue the permit will be published in the Pa. Bulletin for a 30 day comment period. The proposed operating permit renewal and memo will also be submitted to EPA for a 45 day comment period. Arrangements will be made to give the inspector for this facility the opportunity to review the proposed TV Operating Permit renewal.

On April 9, 2013, a compliance inspection was performed by Mr. Phil Sapala, Air Quality Specialist. Mr. Sapala did not note any violations at the time of his inspection. It is my recommendation that the Title V Operating Permit renewal Chestnut Ridge/ Latrobe Plant 65-00181, be issued.