

Technical Support Document
Air Quality Construction Permit
Permit No. SYN-ON-55009R0004-2014-01

This document sets forth the legal and factual basis for permit conditions, with references to applicable statutory and regulatory provisions, including provisions under the federal Minor New Source Review Program in Indian Country, 40 C.F.R. §§ 49.151 - 49.161.

1.0 GENERAL INFORMATION

(A). Applicant and Stationary Source Information

Owner	Facility (SIC Code: 2434)
Prestige Custom Cabinetry & Millwork, Inc. 476 Packerland Drive Green Bay, Wisconsin 54303	Prestige Custom Cabinetry & Millwork, Inc. 476 Packerland Drive Green Bay, Wisconsin 54303

(B). Contact Information

Permit Contact: Mike Mashl
476 Packerland Drive
Green Bay, Wisconsin 54303

(C). Background and Facility Description

1. Background

Prestige Custom Cabinetry & Millwork, Inc. (Prestige) manufactures custom wooden cabinetry at its facility located at 476 Packerland Drive in Green Bay, Wisconsin (Facility). The manufacturing process at the Facility includes cutting, sanding, routing various hard and soft woods for the construction of cabinetry (P04). All particulate matter (PM) generated from the manufacturing process is controlled by a baghouse (C04), which is then vented to the atmosphere through a stack (S04). Cabinet components are assembled using mechanical fasteners and no volatile organic compound (VOC) containing adhesives. Prestige's Facility contains three spray booths (P01, P02, and P03B), where Prestige applies solvent and water based stains, paints, topcoats, and sealers to wood cabinets. The stains are generally applied by hand using rags. All other coatings are applied using high volume low pressure (HVLP) spray guns. The PM from overspray is controlled with wall filters (C01, C02, and C03B) and then vented to three stacks (S01, S02, and S03B), one for each spray booth. The coated parts are then transferred to a dry-off oven (P05) combusting only natural gas, with a maximum hourly British thermal unit (BTU) rating of 150,000 BTUs.

On September 22, 2014, Prestige submitted an updated permit application including its new company name (Prestige Custom Cabinetry & Millwork, Inc.), removing one spray booth and associated equipment (P03), replacing a spray booth (P03B), and adding a drying oven (P05).

2. Facility Emissions:

Table 1. Total Facility Potential to Emit (PTE) and Actual Emissions Summary

	PM tpy	PM ₁₀ tpy	PM _{2.5} tpy	VOC tpy	Single HAP tpy	All HAPs tpy
Total Facility Potential Emissions	4.65	2.89	0.52	370	<10	<25
Total Facility Actual Emissions (2012)	0.473	0.139	0.040	6.26	1	2

3. Emission factors and Potential to Emit:

Emission factors used to calculate the VOC PTE pollutants were primarily taken from chemical material safety and data sheets (MSDS) for the products Prestige utilizes in its manufacturing process. Each respective manufacturer's MSDS contains information on the density; VOC content, solids content, and percent volatility for its product. The PTE for the Facility without controls or restrictions was determined by calculating the maximum use of product with the highest VOC solids/HAP content per spray booth for all three spray booths combined in tons per year (tpy). The Facility PTE for VOCs is based on the following assumptions without controls or restrictions; 8760 hours of annual operation, HVLP guns transfer efficiency is 70% for coating cabinets, and 16% of the total PM/PM₁₀ from paint booths is PM_{2.5}. Prestige's permit will limit its allowable emissions of VOCs at 45 tpy. Prestige will assure compliance with the 45 tpy limit through record keeping and reporting of the amounts of stains, paints, topcoats, and sealers applied to the cabinets using both HVLP spray guns and by hand using rags.

The emissions from the woodworking process at the Facility are controlled by a baghouse. The Facility calculates the emissions associated with its Woodworking process of PM, PM₁₀, and PM_{2.5} based on the throughput estimations and density of the collected dust from the trailers providing the raw materials. The estimated percentage of PM, PM₁₀, and PM_{2.5} was based on information obtained from the July 15, 1998, "Estimating Emissions From Generation and Combustion of "Waste" Wood" and the July 2007 Woodworking Emission Calculator published by the North Carolina Department of Natural Resources. Prestige also conducted a stack test on March 6, 2007, which showed total PM emissions of 0.3 lbs/hr. The total potential uncontrolled emissions were based on the actual sawdust generated multiplied by the ratio of actual hours to maximum hours of operation and using a safety factor of 1.2. Prestige permit will limit its allowable emissions of PM, PM₁₀, and PM_{2.5} to 10 tpy.

(D). Area Classification

The Facility is located on fee land, within the exterior boundaries of the Oneida Tribe of Indians of Wisconsin (Oneida Nation) reservation. EPA is responsible for issuing and enforcing any air quality permits for this source until such time as the Tribe or State has EPA approval to do so.

The Facility is located in Brown County, Green Bay, Wisconsin, which is designated in attainment with National Ambient Air Quality Standards for all criteria pollutants. The Forest County Potawatomi non-Federal Class I area is within approximately 100 kilometers of the Facility.

2.0 PROCESS DESCRIPTION

(A). Description of Permit Action

Prestige has requested a tribal minor new source review permit to limit its potential emissions to below Federal Prevention of Significant Deterioration (PSD) thresholds (40 C.F.R. § 52.21).

(B). Table 2. Emission Unit Summary:

The Facility operates the following emission units:

1. Three spray booths to apply stains sealers, paints and topcoats to cabinet surfaces with either a HVLP spray gun or by hand using rags. Each spray booth has a wall panel filter to collect PM and VOC emissions which are then vented to its own stack.
2. A woodworking operations process is used for preparing the kiln dried wood for planning, molding, sanding, and ripping operations, and assembling the wood cabinets. PM from the woodworking operations is controlled by a baghouse.

The curing oven bakes top coatings at low temperatures. The oven is rated at a maximum capacity of 150,000 BTUs/hr and only combusts natural gas. There is no other process related heating.

The Facility burns only natural gas which is used for convenience heating of the offices and manufacturing areas. Boilers used for comfort/convenience heating with a capacity less than 10 mmBTU are exempt from permitting requirements.

(C). Enforcement Issues

The Wisconsin Department of Natural Resources (WDNR) issued a minor revision of a synthetic minor, non-Part 70 air pollution source operation permit (305000410-F01) for the Facility on December 21, 2009. On February 26, 2013, Prestige submitted to EPA a Tribal minor New Source Review (NSR) permit application. On November 19, 2013, Prestige submitted additional permit application information to EPA. On January 16, 2014, EPA deemed the permit application complete. On September 22, 2014, Prestige submitted an updated permit application.

(D). Pollution Control Equipment

All PM generated from the woodworking process is controlled by a baghouse (unit CO4). All coatings that are not applied by hand are applied using HVLP spray guns. The Facility uses one wall panel filter for each spray booth to control the PM and VOCs from overspray (units C01, C02, and C03).

(E). Endangered Species Act

According to U.S. Fish and Wildlife distribution lists, there are no endangered or threatened species or critical habitat present in Brown County. Therefore, further analysis and consultation is not required under Section 7(a) of the Endangered Species Act.

3.0 APPLICABLE REQUIREMENTS

(A). Prevention of Significant Deterioration (PSD)

This source is a major source of VOCs subject to the requirements of 40 C.F.R. § 52.21 based on its potential to emit and the definition of "major source" in 40 C.F.R. § 52.21. While Prestige obtained a synthetic minor permit to install from WDNR in December 2009, that permit is invalid because WDNR is not the permitting authority for Prestige based on the Facility's location within the boundaries of the Oneida Nation. Prestige is thus applying to EPA for an after-the-fact synthetic minor permit under EPA's tribal minor NSR program, codified at 40 C.F.R. § 49.151, *et seq.*

(B). Restrictions on Potential to Emit

Potential to emit is defined in 40 C.F.R. § 52.21 as the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of a source's design if the limitation, or the effect it would have on emissions, is federally enforceable. Prestige has requested that this permit limit the Facility to the following emission rates:

Facility wide synthetic minor limitations:

VOCs:

- The Facility shall not emit more than 45 tpy on a 12 month rolling average; and
- The Facility shall not emit more than 3.71 tons/month on a 12 month rolling average.

HAPs:

- The Facility shall not emit more than 9.9 tpy of any single HAP, and 1,666 lbs/month average (based on a 12 month rolling average).
- The Facility shall not emit more than 24.9 tpy and 4,166 lbs/month average (based on a 12 month rolling average) of combined HAPs.

Unit specific limitations:

- The Facility shall not emit more than 0.25 lbs/hour PM from spray booth unit in Process P01.
- The Facility shall not emit more than 0.25 lbs/hour PM from spray booth unit in Process P02.
- The Facility shall not emit more than 0.25 lbs/hour PM from spray booth unit in Process P03B.
- The Facility shall not emit more than 0.90 lbs/hour PM from wood working unit in Process P04.

PM Controls:

-Particulate matter emissions from the overspray is controlled with panel filters rated by the manufacturer to have a minimum control efficiency of 98%. Prestige shall inspect the filters daily for proper fit, placement and condition, and shall keep records of the daily inspections.

-All of the paints, topcoats, and sealers are to be applied using HVLP spray guns.

-PM from the wood working operations is controlled by a baghouse.

(C). New Source Performance Standards (NSPS)

Not Applicable.

(D). National Emissions Standards for Hazardous Air Pollutants (NESHAP)

Not Applicable. The total actual single HAP emissions (based on 2012 data) are 1.0 tpy and the total actual combined HAP emissions are 2.0 tpy. These HAP emissions are below the 10 tpy threshold for a single HAP and 25 tpy threshold for combined HAP emissions necessary to be subject to the NESHAP. The Facility's potential emissions of any single and combined HAP emissions are limited to below the 10/25 tpy respectively; the significance rates triggering the NESHAP requirements.