

## **ENGINEERING ANALYSIS**

JW HOLDINGS, INC.

Facility No. 310-0026

On April 1, 2025, the Department received an application from JW Holdings, Inc.- Sejin America (JW Holdings), located in Dadeville, Alabama. JW Holdings currently has an existing building, Building No. 1, that has plastic injection molding machines to manufacture automotive parts and some assembly operations. JW Holdings also has another existing building, Building No. 2, that has plastic injection molding machines to manufacture automotive parts, and some assembly operations constructed about 2012. The initial operations received a permit exemption from the Department in 2007. JW Holdings proposes constructing an expansion at Building No. 2 and applying for a Synthetic Minor Operating Permit (SMOP) for a plastic automobile parts manufacturing facility. This would be considered a Greenfield site for this operation since no painting has occurred or other notable amount of criteria pollutants have been emitted from this facility in the past. An initial site inspection was performed on April 2, 2025.

### **Proposed Operations**

The facility has injection molding machines to manufacture plastic automobile parts (spoilers). VOC emissions from the plastic injection molding will be negligible. The part will then proceed to the painting process. The painting process will consist of an air blow booth, wiping area, preheating area, plasma flame booth, robotic primer booth, robotic color booth, robotic clearcoat booth, and drying oven. These booths will use particulate (PM) filters to remove the majority of the PM from the air. These booths and oven will vent to a pre-filter assembly to remove remaining PM before going to the other control devices located in series. The exhaust stream then goes to a carbon bed concentrator assembly where the volatile organic compounds (VOCs) and hazardous air pollutants (HAPs) will be concentrated. The majority of the exhaust with low levels of VOCs/HAPs from the condenser will vent to the atmosphere via the RTO stack after being treated by the concentrator. After the concentrator, the concentrated slipstream will then continue to a regenerative thermal oxidizer (RTO) where the VOCs/HAPs will be destroyed. The treated exhaust will vent to the atmosphere.

### **Emissions**

The table below lists the predicted revised emissions for the paint booths. The potential uncontrolled emissions for VOCs and HAPs are calculated based on the maximum of 720,000 spoilers painted per year. Normal facility operations are expected to take place with the painting operation are 2600 hours/year with the rest of the plant operations operating up to 6240 hours/year. JW Holdings does not request any limitations on hours of operation to limit potential emissions below applicable thresholds.

**Potential Emissions in TPY:**

	Without Controls 8760 hours/yr	With Controls	Requested Limits
Total VOCs	888	40.0	95.0
Xylene	178	8.0	9.0
Total HAPs	456	20.5	23.0
NOx	1.2		
CO	1.0		
PM	39.2	2.0	
PM10	39.2	2.0	
PM2.5	39.2	2.0	

**Applicable Regulations**

JW Holdings has requested a Synthetic Minor Operating Permit (SMOP) with facility wide limits of 95 TPY of total VOCs, 23 TPY for any combination of HAPs, and 9 TPY for any individual HAP emissions, in order to avoid being a major source for Title V and possible MACT applicability. No area source MACTs apply to this source.

JW Holdings will be required to test the Paint Booths with Concentrator /RTO control devices after start-up. The destruction efficiency and a minimum operational temperature will be established at that time based upon test parameters. Future operations of the Paint Booth with Concentrator /RTO will comply with this minimum temperature and recordkeeping requirements.

**NESHAPS/NSPS/PSD**

The National Emissions Standards for Hazardous Air Pollutants (NESHAPS) for the Surface Coating of Plastic Parts and Products Operations (PPPP) is not applicable because the facility accepted limits to keep their HAP potential emissions below the major source threshold.

This proposed project is not subject to any New Source Performance Standards (NSPS) according to ADEM Admin Code R. 335-3-10-.02. A Prevention of Significant Deterioration (PSD) review is not necessary since this facility has requested emission limits for VOCs that are less than the PSD Major Source Thresholds.

**Monitoring of Emissions**

Monthly emissions of VOCs and HAPs will be determined from material usage and reported quarterly.

**Recommendations**

Based on the above information, I recommend that the attached Synthetic Minor Operating Permit (310-0026-X001) to be issued to JW Holdings, pending public comment.

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Chemical Branch  
Air Division

April 10, 2025  
Date