

**Plain Language Summary for Initial New Source Review (NSR)
Application for Pending NSR Permit Number 176189**

The following summary is provided for this pending air permit application being reviewed by the Texas Commission on Environmental Quality, as required by 30 Texas Administrative Code Chapter 39. The information provided in this summary may change during the technical review of the application.

Braven Environmental – Texarkana I, LLC (CN606257194) has submitted an initial minor NSR application for an air permit to authorize emissions from a proposed plastics pyrolysis facility (RN111963336) to be located near the town of Hooks, Bowie County, Texas. The facility will process waste plastics to produce organic liquid and solid products.

When issued, the minor NSR permit will authorize the construction of the facility in two phases: Phase 1 will involve construction of one train of 6 pyrolysis reactors, a distillation unit, and associated utility and support equipment (e.g. small boiler and hot oil heater, a cooling tower, a package wastewater treatment unit, storage silos, various product storage tanks, truck loading, and emergency-use engines for fire protection and electricity generation). Phase 2 will involve three additional trains of 6 reactors each and additional associated utility and support vessels and equipment. In addition, railcar loading will be added in Phase 2 as well as a cogeneration unit containing a gas turbine generator for generating electricity to be used solely by the facility.

Braven Environmental – Texarkana I, LLC has provided in the application the pollutants and amounts that will be emitted for each emissions unit. The following table provides the total amount of each pollutant proposed to be emitted from all emission units of Phase 2 (entire buildout) for each year of operation.

Pollutant	Proposed Emissions (tons per year)
Volatile Organic Compounds (VOC)	77.5
Oxides of Nitrogen (NOx)	92.8
Carbon Monoxide (CO)	77.4
Particulate Matter (PM)	62.6
PM less than 10 microns in Diameter (PM ₁₀)	29.7
PM less than 2.5 microns in Diameter (PM _{2.5})	15.2
Sulfur Dioxide (SO ₂)	2.7
Ammonia (NH ₃)	3.3
Hazardous Air Pollutants (HAP)	19.7
Carbon Dioxide equivalent (CO ₂ e)	1,749,317.5

The emissions units at the proposed facility will be controlled using Best Available Control Technology (BACT). For example, the boiler and hot oil heater will use low-NOx burner technology. The cogen gas turbine will use Selective Catalytic Reduction (SCR) to reduce NOx emissions by at least 95% and oxidation catalyst to reduce CO by at least 70% and VOC by at least 50%. The silos storing solid material will use baghouse filters with an outlet PM grain loading of 0.01 gr/dscf. The cooling water tower will utilize drift eliminators to reduce PM, and Braven will conduct monthly water monitoring for minimizing VOC. The site will implement TCEQ’s stringent 28MID program for Leak Detection and Repair (LDAR) of process piping. The product storage tanks will either be vertical fixed roof tanks with overhead vapor controlled by an enclosed ground flare with a VOC control efficiency of at least 99.9%, or they will have internal floating roof design. The ground flare will also control the tanks when they are degassed and refilled for maintenance. The two emergency-use engines will not operate for more than 100 hours per year and will be EPA-certified for emissions. Finally, railcar and truck loading will be controlled by the ground flare.