

Active Energy Frequently Asked Questions (FAQs)

1. What was the process used to review this permit application?

As is the case for all air permit applications, the application review process starts with a thorough review of the application forms, including the process description and process flow diagrams. From this review, the DAQ reviewing engineer obtains an understanding of the physical and chemical processes involved, as well as knowledge of the types of process machinery and pollution controls to be employed.

The DAQ engineer determines from the submitted application information the emission rates of air pollutants that are to be emitted from the process, both before and after emission controls are used. The permit classification is determined from this information (Title V, Synthetic Minor, or Small.) The review of emissions includes criteria pollutants (Particulates, SO₂, CO, NO_x, and VOC) as well as Hazardous Air Pollutants (HAPs) and Toxic Air Pollutants (TAPs). The reviewing engineer evaluates the submitted emission rates based on several factors including DAQ in-house data for similar industries/process (when available) and researching the industry/process in other states and reviewing their data (when applicable and available).

From the knowledge of the process and air pollution controls and the types and amounts of air pollutants emitted, the DAQ engineer determines which NC State and Federal rules apply to the facility operations. After the applicable rules are determined, appropriate permit conditions are developed which may include operational limitations, monitoring requirements for maintaining minimum operating parameters, requirements for periodic inspection and maintenance of process equipment and control devices, and recordkeeping and periodic reporting requirements. Source testing may also be required after the facility begins operation in order to verify emission rates submitted in the permit application. If the TAP emission rates exceed the Toxics Permitted Emission Rates (TPERs) found in 15A NCAC 02D .0711, then an air dispersion modeling demonstration may be required to demonstrate compliance with Acceptable Ambient Level (AAL) air pollutant concentrations at the facility property boundaries as specified in 15A NCAC 02D .1104.

The DAQ determines noticing requirements for draft permits based on our 15A NCAC 2Q .0306 rule. The Active Energy permit application and draft permit did not meet the public participation criteria under 15A NCAC 2Q .0306 (a)(2)-(12). However, the Director decided under 15A NCAC 2Q .0306 (a)(1) to provide a public notice for comments. The Director also requested that the Department's Environmental Justice Coordinator perform an environmental justice analysis. The DAQ uses the draft environmental justice results to better inform our outreach activities. Comments received during the public notice period assist with the final drafting of the permit. If there are technical issues raised in the comments regarding applicable rules, estimated emissions, or other issues with the application or draft permit, the DAQ can address comments in deciding the appropriate final action to take on the application.

2. How do we determine what rules apply to the facility?

The engineer employs his/her knowledge of the proposed facility and various State and Federal rules to determine whether any given rule applies, based upon the types and amounts of pollutants emitted from the proposed processes, and the types of equipment utilized.

3. How were emission estimates determined?

Emission estimates were made based on stated process throughput rates and emission factors submitted by the applicant. Emission factors were reviewed by the review engineer to determine whether the factors appeared to be applicable based on knowledge of the process involved. Since no specific source test data was available for the Active Energy process, the review engineer consulted the air permitting section of the Alabama Department of Environmental Management to obtain public information about a black wood pellet facility located in Selma, AL. From that conversation, it was determined that the Selma facility process was considerably different from the Active Energy process. Therefore, emission factors from recent source testing of another NC wood pellet manufacturer were used as being very conservative estimates of emissions from the Active Energy process. Using these emission factors, which likely overstate potential emissions, is the safest manner in which to categorize a new source/facility with no existing source test data. These estimates will be checked based on source test verification to determine actual emissions.

4. How will emission estimates used in the permitting process be verified?

Source testing will be required after startup to verify the volatile organic compound (VOC) emission factors used in the permitting process. If emission factors are significantly different from the initial estimates, the permit may be re-opened and modified to reflect the new information.

5. How will additional issues or concerns brought to light as a result of source testing results be addressed?

If source testing reveals that actual emissions are significantly different than estimated emissions, DAQ may require additional source testing. If the classification or applicable limits/restrictions need modification, DAQ may require the applicant to apply for a permit modification and appropriate enforcement action may be taken.

6. Was modeling performed for TAPs?

The estimated emission rates of the eight TAPs expected to be emitted by this facility were below the Toxic Air Pollutant Permitting Emission Rates (TPERs), and therefore air dispersion modeling was not required.

7. Did you reach out to other facilities?

It was determined that another “black” pellet manufacturing facility was operating in Selma, Alabama (Zilkha Biomass). The air permitting staff at the Alabama Department of Environmental Management were consulted regarding that facility. It was determined from that conversation that the process at the Zilkha Biomass facility was considerably different from the Active Energy process. Because the Zilkha process is so different from the Active Energy process, the CO and other applicable pollutant emission factors are not likely representative of the Active Energy process.

8. What are the expected air emissions from this proposed facility compared with existing Robeson County air emissions?

Pollutant	AERP Expected Actual Air Emissions (tons per year)	Robeson County Total Air Emissions CY 2016 (tons per year)
Fine Particulate Matter PM2.5	0.05	656
Sulfur Dioxide (SO2)	0.05	86
Carbon Monoxide	7.91	18,437
Volatile Organic Compounds	23.63	4,139
Nitrogen Oxides (NOx)	9.41	3,348
Toxic / Hazardous Air Pollutants (acetaldehyde highest)	2.48	797 (CY 2014)

The expected actual emissions from this facility, as listed in the table above, shows VOC as the pollutant with the expected largest emissions. Emissions from each of the listed pollutants are less than a 1% increase in that pollutant’s total emissions in Robeson County. The county-wide emissions data include Point, NonPoint, Mobile (OnRoad & NonRoad), and Fire Events from calendar year 2016 for criteria pollutants and calendar year 2014 for TAP/HAP data.

9. Does the facility plan to expand in the future?

The DAQ is reviewing the current permit application that has been submitted. If in the future, this facility, or any other facility chooses to expand, additional permit applications would be required if there are increases in equipment and emissions. DAQ permitting evaluation would include all projects as required under the Clean Air Act, federal and state rules.