



ARKANSAS ENERGY & ENVIRONMENT

Sarah Huckabee Sanders
GOVERNOR

Shane E. Khoury
SECRETARY

April 30, 2025

Shelby County Health Department
ATTN: Air Pollution Control Section, Major Sources Branch
1826 Sycamore View Road
Memphis, TN 38134

RE: Draft Permit for CTC Property, LLC (# 01156-01PC)

Dr. Taylor,

The Arkansas Department of Energy and Environment, Division of Environmental Quality (DEQ) submits the attached comments on behalf of the State of Arkansas regarding draft permit # 01156-01PC for CTC Property, LLC.

If you have questions, please contact DEQ's Office of Air Quality Associate Director Demetria Kimbrough, MPH, at 501-682-0927 or by email at demetria.kimbrough@arkansas.gov. Thank you for your consideration of Arkansas' submission.

Sincerely,

A handwritten signature in blue ink, appearing to be 'SK' followed by a stylized flourish.

Shane Khoury
Secretary, Arkansas Department of Energy and Environment

Introduction

Shelby County Health Department has made available for public inspection and comment a new facility draft permit #01156-01PC for CTC Property LLC, that will be located within a delineated 2008 8-hour ozone maintenance area. Crittenden County, Arkansas, is included in the TN-MS-AR Metropolitan Statistical Area (MSA) for maintenance of the 2008 8-hour ozone NAAQS, thus Arkansas is a stakeholder with respect to draft permit #01156-01PC and the Arkansas Department of Energy and Environment, Division of Environmental Quality (DEQ), submits the following comments on record. DEQ requests that Shelby County consider the more stringent evaluation standard, Lowest Available Emission Rate (LAER) for this permit rather than the currently proposed Best Available Control Technology (BACT). LAER is better suited for areas in nonattainment such as the data indicates for Shelby County.

Background

In 2012, the U.S. Environmental Protection Agency (EPA) designated the TN-MS-AR MSA as being in nonattainment for the 2008 8-hour ozone National Ambient Air Quality Standard (NAAQS). Staff at Arkansas Department of Energy and Environment (E&E) and the Arkansas Department of Transportation (ARDOT) have worked with air quality and transportation department staff from Mississippi and Tennessee (including Shelby County Health Department) to first re-attain the standard in 2015, and then to maintain the standard through 2036. Two separate 10-year maintenance plans addressing a combined timeframe from 2015 through 2036 have been developed by each state to meet federal requirements for the area's maintenance classification, requiring intense collaborative data analyses and problem-solving workgroup sessions between state partners to develop support for the plans. The three states developed an inventory of the four largest source sectors (point, nonpoint, onroad, and nonroad) contributing to area emissions of nitrogen oxides (NO_x) and volatile organic compounds (VOCs), which are the main precursors of ozone formation. Arkansas has developed forward-looking emissions projections through 2036, to demonstrate that the Crittenden County portion of the MSA would continue to meet the 2008 8-hour ozone standard due to downward trending NO_x and VOC emissions in that County.

To summarize, findings from the three states' most recent collaborative analyses demonstrate that Design Value (DV) monitor readings for ozone have increased in the MSA. While many factors (e.g., meteorology, biogenic emissions, anthropogenic transported emissions, anthropogenic local emissions) and many source sectors contribute to an increase in an ozone DV, only a very limited number of factors and sectors, namely point sources, can effectively be controlled by state agencies to reduce DVs. The point source controls are implemented through permitting decisions and corresponding regulations. When comparing the three states' NO_x and VOC onroad mobile source, nonroad mobile source, nonpoint area source, and point source inventories, it is estimated that the point source sector's emissions comprise only about 25% of the NO_x and less than 5% of the VOC emissions.

Arkansas' Crittenden County NO_x and VOC inventory is one of three maintenance area inventories. Analyses of monitor-impacted contributions have suggested that Tennessee is about 4-5 times the contributor to monitored DVs compared to Mississippi and Arkansas (Table 1). Additionally, Tennessee has significantly more point source NO_x emissions than Mississippi and Arkansas (Table 2).

Table 1: TN-MS-AR MSA Annual Ozone Contributions

Ozone Contribution (ppb)		
AR	MS	TN
12.32	14.80	59.91

Table 2: Ozone Maintenance Area Point Source Facilities and Emissions

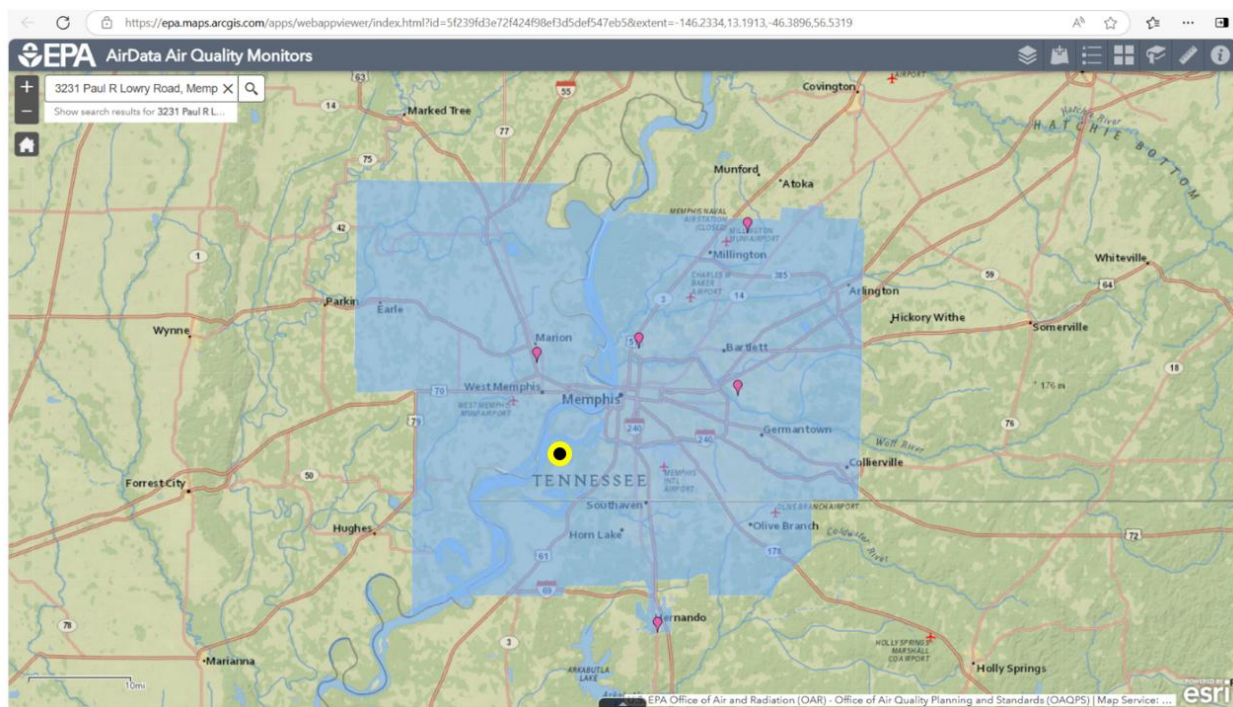
State	Number of Point Sources	NO_x Emissions (TPY)	VOC Emissions (TPY)
Tennessee	13	1,720	1,000
Mississippi	1	180	19
Arkansas	1	3	100

If NO_x or VOC emissions increase in one sector in this MSA an offset compensatory reduction in another sector needs to occur to prevent an increase in ozone DVs leading to exceedances of the NAAQS. The MSA is considered “NO_x-limited,” meaning that NO_x emissions from point sources in the MSA have greater impact than VOCs on area ozone formation. Adding the proposed 87.14 tons per year of NO_x can have significant impact on the MSA, as monitored ozone values in the area are trending toward nonattainment.

Discussion

According to the public notice issued by Shelby County Health Department, “the impact to ambient air quality resulting from these construction and/or modification projects is not expected to be significant,” and the facility is therefore categorized as a synthetic minor source. However, based on previous analyses in the TN-MS-AR MSA, it is likely that any increase in NO_x emissions will only add to already exceeding ozone DVs at MSA monitors. The controlling monitor in the TN-MS-AR MSA is located at Shelby Farms, approximately 15 miles to the east-northeast of the planned facility, which is the predominant direction of wind-driven pollutant transport (Figure 1).

Figure 1: Map of TN-MS-AR Maintenance Area Monitors (red flags) and Facility Siting (yellow circle)



Shelby County Health Department includes in the permit application evaluation a requirement that the facility include BACT – a requirement that is typically reserved for new major sources or major modifications at existing source in areas that are classified “attainment” or “unclassifiable” as these pertain to the NAAQS. As stated, BACT is being required because “Shelby County is currently in violation of the 8-hour ozone standard and is awaiting designation as nonattainment.” While BACT is appropriate for areas in attainment, areas of nonattainment apply New Source Review (NSR) requirements, which include emission offsets and the installation of control equipment that produces the LAER. In the TN-MS-AR MSA, NSR requirements and demonstrations would be more appropriate for any draft permit being evaluated.

Conclusion

BACT is applied for areas in attainment of the NAAQS. Though this area has not yet been designated nonattainment for the ozone NAAQS, most recent DV calculations are greater than the 2015 ozone NAAQS without the addition of these proposed emissions from a new stationary source. DEQ requests an air quality assessment to quantify the effects of this proposed facility on area ozone. Additionally, DEQ suggests that NSR requirements are applied to include emissions offsets and the installation of control equipment that produces the LAER