

Public Meeting

concerning

Fundamental Data LLC

Ridgeline Facility

June 30, 2025

**WVDEP - Division of Air Quality
Public Meeting**

Presentation Outline

- **Introduction**
- **Permitting Process**
- **Project Overview**
- **DAQ Documents**
- **What Happens Next?**
- **Summary and Contact Information**

National Air Quality Strategy:

Permitting in Context

Clean Air Act: EPA Mandate to
Protect Public Health and Welfare

Science

National Ambient Air Quality
Standards (NAAQS)

*State & Federal
Rulemaking*

State (SIP) and Federal Air Quality
Rules

*New Source
Permitting Process*

Specific Facility Requirements
(NSR Air Permit)

Inspections

Compliance with Permit and Air
Quality Rules

NAAQS

NAAQS: National Ambient Air Quality Standards

- ***Primary Standards***
 - **Protect Public Health**

- ***Secondary Standards***
 - **Protect Public Welfare**

- **Criteria Pollutants: Carbon Monoxide (CO), Lead, Nitrogen Oxides (NO_x), Ozone (O₃), Particulate Matter (PM₁₀ and PM_{2.5}) and Sulfur Dioxide (SO₂)**

- **Hazardous Air Pollutants (HAPs) do not have any national standards**
 - **Regulated under 45 CFR 61 and 63 (NESHAP and MACT programs)**

- **Counties designated as meeting (attainment) or not meeting (non-attainment) these standards**

- **Tucker County classified as in attainment with each of the above pollutants**

Permitting Programs

- **New Source Review Permits**
 - **Minor Source Program (45CSR13)**
 - **Major Source in Attainment Areas (45CSR14)**
 - **“Prevention of Significant Deterioration” (PSD)**
 - **Major Source in Non-Attainment Areas (45CSR19)**
- **Post-Construction Operating Permit Program**
 - **Title V Process**
 - **Major Source (Permit) vs. Minor Source (No Permit)**
 - **45CSR30**

Minor Source Permitting Program

- **Applicable to new “minor sources” of air pollution**
 - Definition of major/minor is dependent on source type and location
 - “Fossil Fuel-fired Steam Electric Plants of More than 250 Million Btu/hr Heat Input”: 100 tons/year threshold (per pollutant – not GHGs)
 - Administered under West Virginia Legislative Rule 45CSR13
- **45CSR13 Permitting Process: What it does do:**
 - Determine/enforce compliance with state/federal air quality rules and regulations
 - Determine/enforce compliance with facility’s air emissions
 - Provide framework of public notification/participation
- **45CSR13 Permitting Process: What it does not do:**
 - Require a full Environmental Impact Statement (EIS)
 - Address Greenhouse Gases (GHGs)
 - Require a cumulative impact analysis that includes nearby sources
 - Take into consideration any other important but non-air quality benefits/impacts such as jobs, property values, traffic, zoning, national energy issues, economics of project, infrastructure, archaeology, etc.

Summary of DAQ Review

- **Fundamental Data LLC (FD) Application (R13-3713) Submitted: March 18, 2025**
- **Application submitted as a minor source (45CSR13)**
- **FD Legal Advertisement: March 26, 2025**
 - **Comments/Public Meeting Requests Received**
- **DAQ Public Advertisement: June 18, 2025**
 - **Preliminary Review Complete: Draft Permit/Fact Sheet Available**
 - **Preliminary Determination**
 - **30-Day Comment Period**

Non-AQ Issues

- **DAQ does not have control over**
 - **Zoning Issues**
 - **Job Creation**
 - **Economic viability of project**
 - **Strategic energy issues**
 - **Non-AQ environmental impacts**
 - **Noise pollution**
 - **Light pollution**
 - **Tourism**
 - **Road Traffic**
 - **Nuisance Issues**
 - **Water Issues**
- **Contact local officials**

FD Project Overview

- Thomas, Tucker County: Combustion Turbine (CT) Power Facility
- CT Power Facility
 - CTs use natural gas as primary fuel source with diesel as backup
 - Permit application *does not* include a data center
 - Permit application *is not* definitive on ultimate end power user
 - Aggregate MDHI of CTs – 5,650 MMBtu/hr (NG), 4,503 MMBtu/hr (diesel)
 - CTs utilize selective catalytic reduction (SCR) and oxidation catalyst for NOx and CO emissions reduction
 - 3 Diesel Storage Tanks (10 MM gallons each)
 - Diesel Truck Unloading (15 MM gallons annually)
- All individual pollutant emissions (excluding GHGs) below 100 tons/year
- Detailed information in the permit application and Engineering Evaluation/Fact Sheet

FD Project Overview *(cont.)*

- **Non-disclosure of the end power user is not cause for denial of the permit**
- **How the end power is used will affect the Acid Rain Permit or Title V Permit status**
 - **These permitting processes are independent of the 45 CSR 13 permit process**
 - **Potential requirements outlined in draft permit condition 4.1.19**
- **House Bill 2014**
 - **Known as the “Power Generation and Consumption Act of 2025” established the Certified Microgrid Program**
 - **This bill has no effect on the 45 CSR 13 permitting process**

FD Facility Location

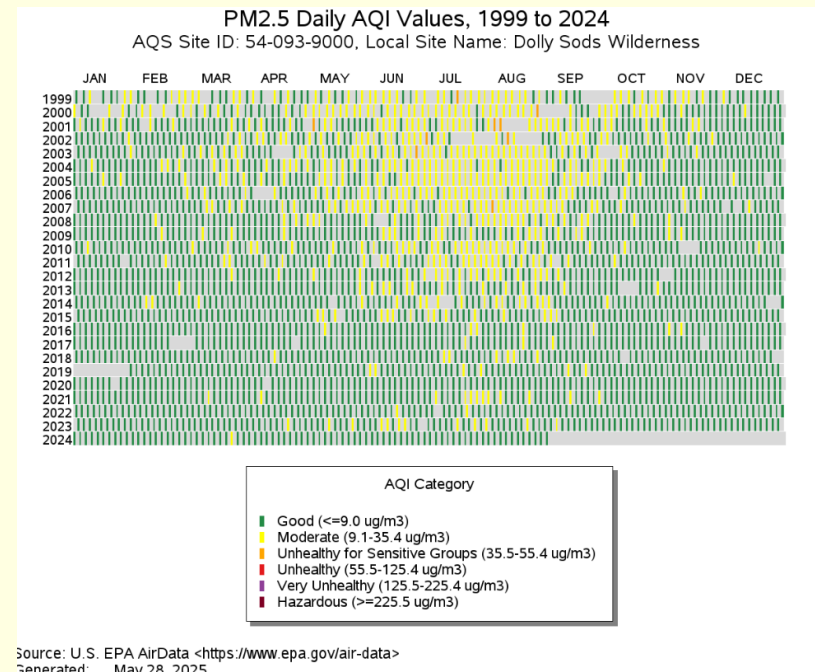


Ambient AQ of Tucker County

- **Clean Air Act (CAA) requires EPA to establish National Ambient Air Quality Standards (NAAQS) for pollutants**
 - **NAAQS for NO_x, CO, O₃, PM₁₀, PM_{2.5}, SO₂, Pb**
 - **Primary Standards to protect public health, including sensitive populations**
 - **Secondary Standards to protect public welfare including visibility, animals, crops, vegetation, buildings**
- **Tucker County is classified as “attainment”**
- **Two air monitoring sites located in Tucker County**
 - **Dolly Sods Wilderness Area – PM_{2.5}**
 - **Parsons – O₃**

Ambient AQ of Tucker County (*cont.*)

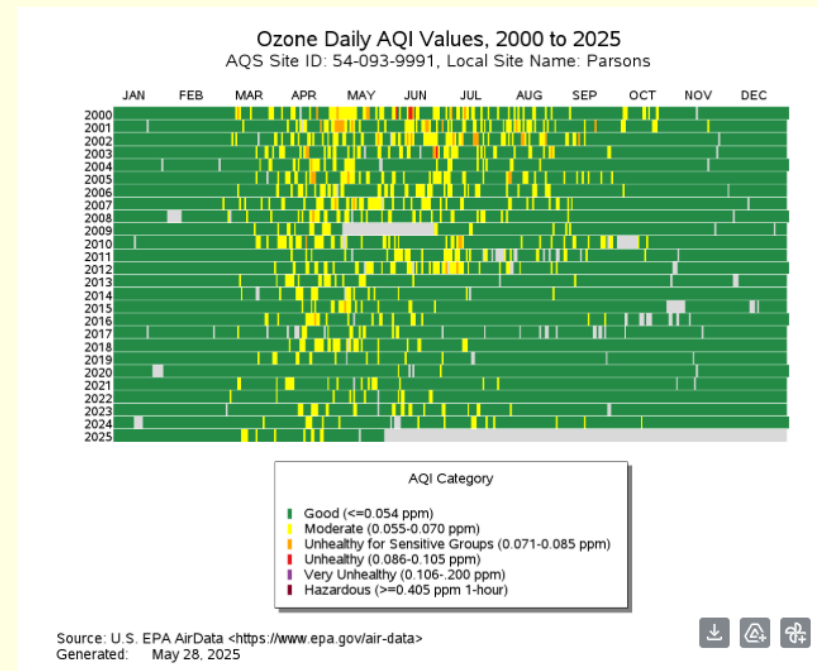
- **Dolly Sods Wilderness Area**
 - **Site is part of the Interagency Monitoring of Protective Visual Environments (IMPROVE) network**
 - **Located approximately 5 miles from Thomas**
 - **PM_{2.5} data available dating back to 1999**
 - **PM_{2.5} values well within the NAAQS limits**



Ambient AQ of Tucker County (*cont.*)

■ Parsons

- Site is part of the Clean Air Status and Trends Network (CASTNET) national monitoring network
- CASTNET site includes dashboard for ozone, nitrogen deposition, and sulfur deposition
- Located approximately 10 miles from Thomas
- Monitored for ozone since 1990
- O₃ values well within the NAAQS limits



Confidential Business Information (CBI)

- **FD's permit application included information that was claimed to be CBI submitted under 45 CSR 31**
- **Application submittal included a CBI and redacted version**
- **CBI contained information on facility configuration and technical information on the combustion turbines and associated control devices**
- **WVDEP review by Office of General Counsel**
- **Letter to FD requesting more information on CBI**
- **Review of FD response determined there were non-confidential alternatives available pursuant to §45-31B-4.1**
- **Non-confidential alternatives include**
 - **Aggregate hours of operation tracking**
 - **Aggregate heat input limitations**
 - **Aggregate emission limits**
 - **Aggregate fuel throughputs**
 - **Fuel categorization**
 - **Emissions monitoring**

What is Being Proposed?

- Facility powered by CTs equipped with heat recovery steam generators (HRSG) which generate steam by using the heat present in the exhaust gas
- HRSGs designed to have no additional firing emissions
- No duct burners required as part of the HRSGs
- CTs equipped with control devices for NOx and CO
- Primary fuel source is natural gas with diesel being used as a backup fuel
- Diesel storage tanks
- Diesel Unloading

What is Being Proposed? *(cont.)*

- **Synthetic Minor Facility**
- **May operate using any combination of natural gas and diesel such that the total hours of operation are restricted as needed to remain under the permitted minor source thresholds**
- **Continuously monitor and maintain records of the total hours of operation for each turbine, including the total amount of hours each turbine uses natural gas as a fuel and the total amount of hours each turbine uses diesel as a fuel**
- **Rolling 12-month monthly emission calculations to ensure their emissions remain below any major source thresholds**
- **Required fuel meters**
- **Required hour meters**
- **Monitor control device operations**
- **CT Testing (NO_x, SO₂, CO)**

Estimate of Emissions

- **CTs**
 - **Manufacturer Data (criteria pollutants)**
 - **AP-42 (HAPs)**
- **Diesel Storage Tanks**
 - **EPA TANKS 5.1**
- **Diesel Truck Unloading**
 - **AP-42**
- **Paved Roadways**
 - **AP-42**
- **Fugitive Emissions**
 - **EPA Protocol for Equipment Leak Emission Estimates**

Estimate of Emissions *(cont.)*

- **CTs**
 - Ability to combust natural gas and diesel (backup fuel)
 - Hourly fuel consumption limits
 - Maximum Design Heat Input limits
 - Aggregate hourly and annual permitted emission limits
- **Diesel Storage Tanks**
 - DAQ also estimated emissions using data from Thomas and an additional ProMax analysis
- **Diesel Truck Unloading**
 - Based on loading type, vapor pressure, molecular weight, and temperature of liquids loaded
- **Plant Roadways**
 - Based on operating days and truck type
- **Fugitive Emissions**
 - Based on industry-wide estimated component counts

Meteorological Conditions

- **FD did not use meteorological data from Elkins for their CTs as some commenters have stated. The correct location data for the site was utilized.**

Storage Tank Emissions

- **EPA TANKS 5.1**
 - **Liquid Contents**
 - **Storage tank dimensions**
 - **Construction**
 - **Paint Condition**
 - **Meteorological Conditions**
- **Application utilized closest populated meteorological data (Elkins)**
 - **DAQ created customized weather data for Thomas and recalculated which resulted in lower emissions**
 - **DAQ also utilized an alternative simulation program (ProMax) which resulted in lower emissions than EPA TANKS 5.1**

Diesel Unloading

- Diesel fuel has been proposed to be used as a backup fuel
- There is a maximum hourly fuel throughput rate based on the short-term combustion
- There is also an annual throughput limitation to the storage tanks and diesel unloading based on 15 million gallons per year

Facility PTE

Emission Source	Annual Emissions (tons/year)					
	NO _x	CO	VOC	SO ₂	PM ₁₀	Total HAPs
Combustion Turbines	99.35	56.36	43.84	58.89	71.44	9.33
Diesel Storage Tanks	-	-	0.10	-	-	0.10
Diesel Truck Unloading	-	-	0.17	-	-	0.17
Plant Roads	-	-	-	-	0.42	-
Fugitive Leaks	-	-	0.10	-	-	0.10
Facility PTE	99.35	56.36	44.21	58.89	71.86	9.70

Source Determination

- **Synthetic Minor**
 - **Physical and operational limitations so that source is below PSD major thresholds**
- **Enhanced monitoring and recordkeeping**
- **FD may not relax the synthetic minor limits and become a major source without first retroactively obtaining a PSD permit for the facility (§45-14-19.7)**

Greenhouse Gas (GHG) Emissions

- **No state or federal statutory basis or air quality standard to require minor stationary sources to quantify GHG emissions or implement a GHG control strategy**
- **SCOTUS rules that GHGs alone could not define a source as major**
- **Exception is a voluntary request to limit the emissions of GHGs to levels that would maintain the facility at minor source levels for GHGs under PSD if another pollutant had already triggered major source status**

Applicable Air Quality Rules

- WV Legislative Rules

- 45CSR4: To Prevent and Control the Discharge of Air Pollutants into the Open Air Which Causes or Contributes to an Objectionable Odor or Odors
- 45CSR13: Minor Source Permitting Rule
- 45CSR16: Standards of Performance for New Stationary Sources (Incorporates applicable Federal Air Quality Regulations)
- 45CSR17: To Prevent and Control Particulate Matter Air Pollution from Materials Handling, Preparation, Storage and Other Sources of Fugitive Particulate Matt
- 45CSR22: Air Quality Management Fee Program (Minor Source)
- 45CSR40: Control of Ozone Season Nitrogen Oxide Emissions (Combustion Turbines)

- Federal Air Quality Regulations

- 40CFR60, Subpart KKKK: Combustion Turbines

Potentially Applicable Air Quality Rules

- WV Legislative Rules

- 45CSR33: Acid Rain Provisions and Permits
- 45CSR30: Operating Permits (Title V)

- Federal Air Quality Regulations

- 40CFR60, Subpart TTTTa: Standards of Performance for Greenhouse Gas Emissions for Modified Coal-Fired Steam Electric Generating Units and New Construction and Reconstruction Stationary Combustion Turbine Electric Generating Units
- 40CFR70: Title V Operating Permit Program
- 40CFR72: Acid Rain Program
- 40CFR97, Subpart DDDDD: Federal NOx Budget Trading Program, CSAPR

WVDAQ Documents

- **Engineering Evaluation/Fact Sheet**

- **Rationale document for Preliminary Determination**

- **Draft Permit**

- **Includes operating restrictions, emission limitations and monitoring, recordkeeping and reporting requirements**
 - **Enforces the potential-to-emit (PTE) upon which we based our Preliminary Determination to approve**

Engineering Evaluation/Fact Sheet

- **Administrative information**
- **Discussion of Confidential Business Information**
- **Description of proposed facility/emission units**
- **Discussion of emission calculations**
- **Quantifies proposed emissions per pollutant**
- **Applicability and compliance with federal regulations and state air quality rules**
- **Monitoring, record keeping, reporting, and testing requirements**
- **DAQ statutory authority**

Draft Permit

- **Facility-wide requirements**
- **Specific unit requirements**
 - **Limitations and standards**
 - **Maximum Design Heat Input Capacities**
 - **Operating Requirements**
 - **Fuel specifications**
 - **Control technology requirements**
 - **Monitoring requirements**
 - **Performance testing and compliance requirements**
 - **Recordkeeping requirements**
 - **Reporting requirements**

What Happens Next?

- **Virtual meeting on July 17, 2025, to accept additional oral comments ONLY**
- **Comment period scheduled to conclude on July 18, 2025, at 5:00 PM**
- **Prior to a final determination, the DAQ will evaluate and respond to timely comments that are relevant to air quality issues**
- **DAQ will make a Final Determination pursuant to the requirements §45-13-5.7**
- **Final Determination will be available in same locations as Engineering Evaluation/Fact Sheet and Draft Permit**

Summary

- **FD is proposing to build a CT facility in Tucker County**
- **DAQ has made a preliminary determination that the proposed construction is properly defined as a minor source and will meet all applicable state rules and federal air quality regulations**
- **Engineering Evaluation/Fact Sheet and Draft Permit have been available for review since publication of the legal advertisement (June 18, 2025)**
- **DAQ will continue to accept public comments until 5:00 PM on July 18, 2025**
- **DAQ will evaluate and respond to all timely public air quality-related comments**
- **DAQ will make a final determination on this permitting action and make this determination and any related documents available at that time**

Contact Information

**West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street, SE
Charleston, WV 25304**

Attention: Jerry Williams
jerry.williams@wv.gov

**** Fundamental Data Comments as subject line ****

<https://dep.wv.gov/daq/permitting/Pages/NSR-Permit-Applications.aspx>