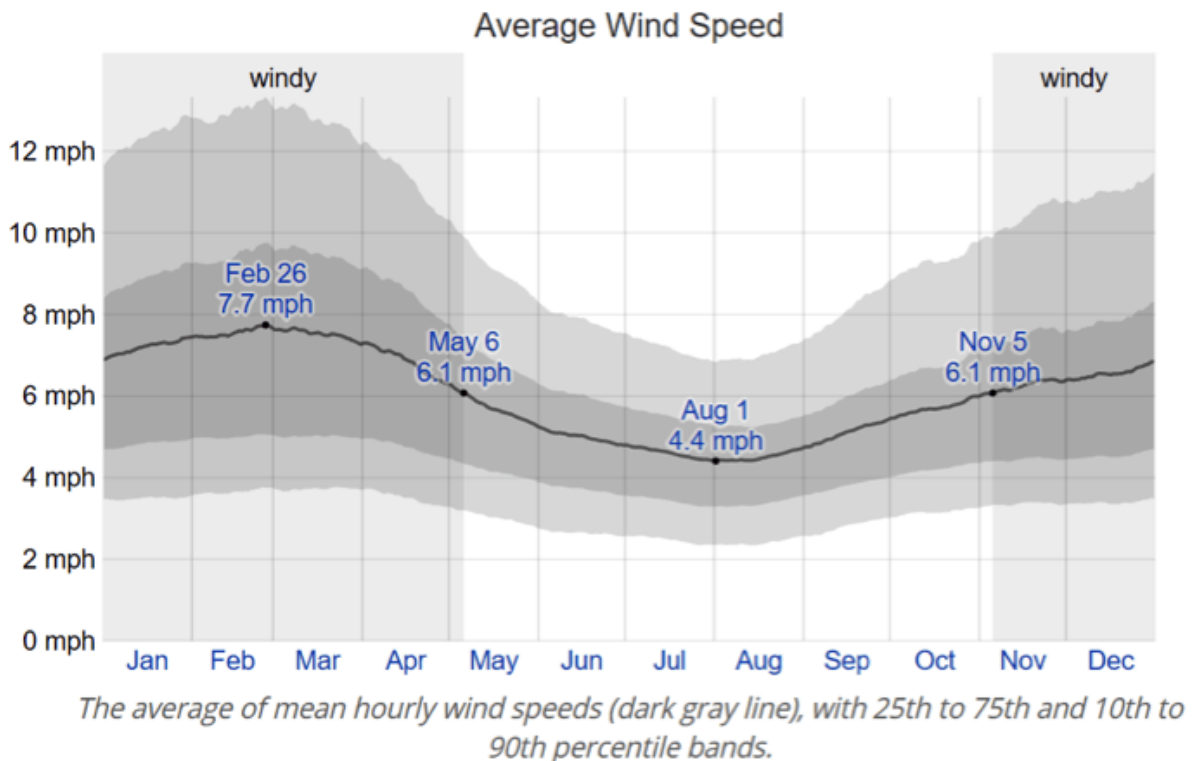


David Michael Glenn PhD; the retired director of the USDA-ARS-Appalachian Fruit Research Station, Kearneysville, WV, with over 30 years experience in weather measurement and interpretation, provided the following weather information related to the Rockwool project:

“As stated in the Rockwool permit, they will be emitting 471 tons/year of volatile organic compounds (VOC’s) and 239 tons/year of nitrogen dioxides (NOx’s), the building blocks of ozone, in addition to 154 tons/year of particulate matter. The reason that this project will construct 210 foot smoke stacks is to use wind currents to dilute and distribute the pollutants off-site.

It is my argument that wind characteristics in the Jefferson county area do not support this strategy and differ significantly from Milton, Ontario and the area near Byhalia, MS where Rockwool has existing and similar plants. The Rockwool plant’s plan for mitigation of particulate and gaseous emissions with a 210 foot tall smoke stack is unacceptable to Jefferson county given the wind behavior and prevalence of calm winds for extended periods of time throughout the year.



In Charles Town, WV, The *windier* part of the year lasts for 6 months, from November through April, with average wind speeds of approximately 7 miles per hour. The *calmer* time of year lasts for 6 months, from May through October with average wind speed of approximately 5 mph. (Source: <https://weatherspark.com/y/21067/Average-Weather-in-Charles-Town-West-Virginia-United-States-Year-Round>)

The Effects of Calm Air Events on Particulate Pollution

From 2008 to 2017, 30% of the year had wind speeds less than 3 knots (3.45 mph) which the national Weather Service (NWS) classifies as 'calm' meaning there is no detectable wind motion by the instrumentation. The predominance of still air occurs at night but night or day, the still air provides ample time for particulates to settle to the ground in very close proximity to the site since this plant operates 24/7. Under these conditions, the nearby schools, businesses and homes will experience fallout of the particulate matter ranging from an average of 5 hours to an extreme of 15-20 hours throughout the year.

Ozone pollution is an additional concern. Ozone is a heavy gas and will settle to ground.

During the daylight hours from March to October when light and temperature conditions are adequate for ozone production (8 AM to 6 PM) due to the VOC and NOx emissions, calm air occurs an average of 1.5 hours of each day but calm periods can occur for 6-8 hours. These are conditions typical of the spring frosts, inversions, and hot sultry days that occur in Jefferson county. Calm wind conditions would allow ozone to be generated at the top of the 210 foot tall smoke stack and settle nearby potentially affecting ozone sensitive groups, children and the elderly as well and further reducing soybean yield in nearby farms due to direct ozone damage.

These data do not support the premise of Rockwool that a 210 foot smokestack will distribute and dilute its emissions with no effect on the populace and businesses of Jefferson County.

Deficiencies of the AERMOD model of air pollution used by EPA and WVDEP

If you wonder why the WVDEP did not consider these conditions, it is because the AERMOD model of EPA uses hourly data and pools data into average annual events to arrive at average annual emission levels. Details such as extended periods of calm air are masked by the pooling protocol required by the AERMOD model. The 'devil is in the details' and those details are a critical issue in the acceptance of the Rockwool plant into the community of Jefferson County. There is no 'average' person and no 'average' day, month or year. It is the unique characteristics of each day that will determine the effect of Rockwool's emissions on the businesses and population of Jefferson County. The fact that the WVDEP is unable to model to such a fine level of detail does not dismiss the fact that extended calm periods will have an effect in Jefferson County.

It is my argument that the Rockwool plant's plan for mitigation of particulate and gaseous emissions with a 210 foot tall smoke stack is unacceptable to Jefferson County given the wind behavior and prevalence of calm winds for extended periods of time throughout the year."

Rockwool emissions #6 out of 2093

FACILITY REPORT

Rockwool USA, Inc.
Toxic Release Inventory ID #: 3551WROLUS45720
4754 CANTON RD, THUNDERBOLT, MISSISSIPPI 39361
Industry: Nonmetallic Mineral Product

CONTEXT

County

Total of TRC releases in MARSHALL, MS
2 (1 Facility, 1 MARSHALL, MS)

National

Ranked 6 out of 2093 TRC facilities in Industry: Nonmetallic Mineral Product
(Rank 1 = Highest, 2093 = Lowest)

ON SITE RELEASES TOTALS