Proposed New Source Review/Prevention of Significant Deterioration Permit
(Installation Permit)

Allegheny Energy Center LLC (AEC) (Invenergy)
2130 Margaret Street Ext.
West Newton, PA 15089

Allegheny County Health Department

June 8, 2021

Written Comments by
Environmental Integrity Project, Clean Air Council,
Citizens for Pennsylvania's Future, and Individual Residents

Via email: aqpermits@alleghenycounty.us

Environmental Integrity Project ("EIP"), Clean Air Council ("the Council"), Citizens for Pennsylvania's Future ("PennFuture"), and individual residents (collectively, "Commenters") appreciate the opportunity to submit these comments to the Allegheny County Health Department ("the Department" or "ACHD") regarding the proposed Installation Permit #0959-I001 ("Proposed Permit") for Allegheny Energy Center LLC ("the Applicant" or "Invenergy"), a wholly-owned subsidiary of Invenergy LLC, under the Prevention of Significant Deterioration program of the Clean Air Act.

The Environmental Integrity Project ("EIP") is a national nonprofit organization headquartered at 1000 Vermont Avenue NW, Suite 1100, Washington, D.C. 20005, and with staff in Pittsburgh and Philadelphia. EIP is dedicated to advocating for more effective environmental laws and better enforcement. EIP has three goals: (1) to provide objective analyses of how the failure to enforce or implement environmental laws increases pollution and affects public health; (2) to hold federal and state agencies, as well as individual corporations, accountable for failing to enforce or comply with environmental laws; and (3) to help local communities obtain the protection of environmental laws.

The Council is a non-profit environmental health organization headquartered at 135 South 19th Street, Suite 300, Philadelphia, Pennsylvania, 19103. The Council maintains an office

in Pittsburgh. The Council has been working to protect everyone's right to a clean environment for over 50 years. The Council has members throughout the Commonwealth who support its mission, including members in Allegheny County.

PennFuture is a Pennsylvania-statewide environmental organization dedicated to leading the transition to a clean energy economy in Pennsylvania and beyond. PennFuture strives to protect our air, water, and land, and to empower citizens to build sustainable communities for future generations. A main focus of PennFuture's work is to improve and protect air quality across Pennsylvania through public outreach and education, advocacy, and litigation.

On April 8, 2021, the Department published notice of the Proposed Permit, establishing a 60-day public comment period ending on Tuesday, June 8, 2021. *See* Public Notification. The comments reference sections of the Proposed Permit and the supporting Technical Support Document. *See* Proposed Permit; *see also* Technical Support Document. The comments refer to materials in the application. *See* Application dated March 20, 2019.

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Comments

1. **The Department Should Lower the Ammonia ("NH3") Slip Limit From 4.0 ppmvd to 2.0 ppmvd and Include Continuous Emissions Monitors for Ammonia Based on Recent Permits Issued by PA DEP.**

The facility does not properly perform an analysis of Best Available Control Technology ("BACT") and Lowest Achievable Emissions Rate ("LAER"), in violation of the statute and the regulations. The Department should require the facility to correct this and should not accept limits that do not meet LAER, BACT, or Best Available Technology ("BAT").

The Clean Air Act prohibits the grant of a Prevention of Significant Deterioration ("PSD") permit unless "the proposed facility is subject to the best available control technology for each pollutant subject to regulation under this chapter emitted from, or which results from, such facility." *See* Section 165(a)(4) of the Clean Air Act, 42 U.S.C. § 7475(a)(4) ("No major emitting facility on which construction is commenced after August 7, 1977, may be constructed in any area to which this part applies unless—...the proposed facility is subject to the best available control technology for each pollutant subject to regulation under this chapter emitted from, or which results from, such facility"). Under the regulations, the facility must meet the requirements for "[c]ontrol technology review." 40 C.F.R. § 52.21(j), https://www.govinfo.gov/content/pkg/CFR-2019-title40-vol3/pdf/CFR-2019-title40-vol3-sec52-21.pdf (requiring "best available control technology"). *See also* Environmental Protection Agency ("EPA"), New Source Review Workshop Manual, at B.1-B.75 (Oct. 1990), https://www.epa.gov/sites/production/files/2015-07/documents/1990wman.pdf.

Where major source Nonattainment New Source Review ("NNSR") is indicated, the lowest achievable emissions rate ("LAER") standard applies, and where major source PSD is indicated, the best available control technology ("BACT") standard applies. EPA regulations defined BACT as follows:

> Best available control technology (BACT) means an emissions limitation (including a visible emissions standard) based on the maximum degree of reduction for each regulated NSR pollutant which would be emitted from any proposed major stationary source or major modification which the reviewing authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant.

40 C.F.R. § 51.165(a)(1)(xl). The more stringent LAER is defined as "[t]he most stringent emissions limitation which is achieved in practice by such class or category of stationary sources." 40 C.F.R. § 51.165(a)(1)(xiii)(B). Unlike BACT, the LAER requirement does not consider economic, energy, or other environmental factors.

Pennsylvania has its own BAT standard as well, which applies in the absence of a more stringent control technology requirement. 25 Pa. Code § 127.12(a)(5).

As a threshold matter, the Clean Air Act requires the application of BACT "for each pollutant subject to regulation under this chapter." 42 U.S.C. § 7475(a)(4). It is not clear that this has been done. For example, it appears that the facility is not applying BACT to ammonia. In addition, it is not clear that the facility has properly considered LAER for nonattainment pollutants.

Two months ago, the Pennsylvania Department of Environmental Protection ("PA DEP") issued a permit for the Renovo Energy Center in Clinton County containing a more stringent emissions limitation for ammonia slip. *See* Attachment 1 -- PA DEP, Plan Approval for Renovo Energy Center (Apr. 29, 2021). This is a very similar facility to Allegheny Energy Center. Both facilities would involve General Electric 7HA.02 combustion turbines, although they would be arranged in different configurations with their counterpart steam turbines, and both would use selective catalytic reduction ("SCR") to control NOx. *See id*. at 29, Section vii. In this issuance, PA DEP determined that an ammonia slip limit of 2.0 ppmvd corrected to 15% O2 was appropriate for the facility's SCR system. PA DEP confirmed that this limit was achievable and enforceable after consulting with Connecticut DEEP, which oversees two facilities currently in operation that meet the same slip limit. *See* Attachment 2, PA DEP, Air Quality Program, Northcentral Regional Office, Comment Response Document on the Renovo Energy Center, LLC Renovo Energy Center Generation Plant Plan Approval 18-00033B, at 26 (Apr. 29, 2021), *available at* https://files.dep.state.pa.us/RegionalResources/NCRO/NCROPortalFiles/CommunityInformation/Renovo_Comment_response_document_April_29_2021.pdf. PA DEP also verified the capability of the system to meet the limit with the facility's owner and the manufacturer of the SCR system. PA DEP confirmed the above facts in its response to comments document for Renovo Energy Center, quoted here:

> The Department re-evaluated the SCR operating technology for controlling ammonia slip. The Department reached out to the Connecticut Department of Energy and Environmental Protection (DEEP) to obtain the current status of the CPV Towantic combined cycle power plant turbines. This facility uses a GE turbine base model. Stack testing reports from the CPV Towantic facility in 2018 demonstrated compliance with a 2 ppm ammonia limit. Connecticut DEEP indicates they have no reports suggesting that the facility is not able to meet this limit on an ongoing basis. The same results were reported by the Salem Harbor CCGT plant and the PSEG Bridgeport plant with the same GE turbine. As a result of this updated evaluation, the Department approached Renovo Energy Center. Renovo Energy Center discussed with the manufacturer and they agreed to propose a revised emission limit for ammonia slip of 2 ppm. The Department established the ammonia slip limit of 2 ppm in the plan approval.

Id.

In light of this information, the Department should lower the ammonia slip limit for the proposed facility from 4.0 ppmvd @15% O2 to 2.0 ppmvd @15% O2 and incorporate a corresponding hourly limit, as this now appears to represent the lowest achievable emission rate for this technology.

In addition to the health risks posed by ammonia emissions, it is important to recognize that ammonia slip is a key parameter for both NOx control, as well as secondary formation of particulate matter. Invenergy has selected SCR to meet LAER requirements for NOx control, and tracking ammonia slip is a key component of monitoring catalyst deactivation and control technology efficacy. Catalyst activity in the SCR decreases over time, which corresponds with a decreased NOx reduction reaction rate and increase in ammonia slip. *See* EPA, Cost Control Manual, Seventh Edition Section 4, Chpt. 2, Section 2.2.2, at 2-24 - 2-27 (updated Jun. 2019), *available at* https://www.epa.gov/sites/production/files/2017-12/documents/scrcostmanualchapter7thedition_2016revisions2017.pdf. Once ammonia slip reaches the design limit, the catalyst must be replaced, or a new catalyst must be added. *Id.*

Currently, the Proposed permit only requires ammonia slip testing every two years. *See* Proposed Permit at 21-22, Section V.A.2.d. To adequately meet LAER requirements for NOx control, the facility must consider the most stringent emission limitations and control technology, including continuous monitoring of ammonia slip. By adequately monitoring ammonia slip, the facility can develop a catalyst management plan, which will ensure Invenergy is achieving the required NOx removal while minimizing ammonia emissions to the environment. Since the Invenergy facility is subject to LAER for NOx emissions, the most stringent limits and control technologies must be included in this operating permit.

Ammonia slip is also a key consideration for particulate emissions from the Invenergy facility. Ammonia emissions are identified as one of the four main PM2.5 precursor pollutants in the PM2.5 SIP Requirements rule that are required to be addressed in all PM2.5 nonattainment area SIPs. *See* Fine Particulate Matter National Ambient Air Quality Standards: State Implementation Plan Requirements, 81 FR 58009. This 2016 rule establishes that PM2.5 precursors must be evaluated for potential control measures in any PM2.5 attainment plan and any NNSR program. Invenergy acknowledges that since the project is proposed in a PM2.5 nonattainment area (and NH3 is a precursor to PM2.5), ammonia is a regulated NSR pollutant subject to NNSR. *See* Technical Support Document at 21. Since the facility must meet BACT for PM control, the best available ammonia slip control must also be assessed for this facility, including adequate limits and monitoring of the slip.

Continuous monitoring of ammonia slip is not only a readily available control technology method, but is also required for comparable facilities throughout the state of Pennsylvania. As noted above, Renovo Energy Center is required to continuously monitor ammonia slip using CEMS and is subject to both concentration-based and hourly emission limits for ammonia slip. Invenergy's Lackawanna Energy Center also requires an "ammonia slip monitoring system on the exhaust of each combustion turbine and heat recovery steam generator in accordance with all applicable requirements specified in 25 Pa. Code Chapter 139 and the PADEP's "Continuous Source Monitoring Manual." *See* Attachment 3 -- PA DEP, Plan Approval for Lackawanna Energy Center, at 52-53 (Jul. 12, 2016). Robinson Power Co. LLC's proposed plan approval

(which had not yet been finalized) for the Beech Hollow Energy project included the installation of ammonia CEMS, and continuous monitoring of ammonia slip. *See* Attachment 4, PA DEP, Proposed Modified Air Quality Plan Approval for Robinson Power Co. LLC's Beech Hollow Facility (May 30, 2020), *available at* https://files.dep.state.pa.us/RegionalResources/SWRO/SWROPortalFiles/Community%20Info/RobinsonPower/PA-63-00922D%20DRAFT.pdf. To meet the requirements for NOx LAER and PM BACT, ACHD must require the most stringent emission limits, including the lower concentration limit of 2.0 ppmvd @15% O2, corresponding hourly limits, and continuous monitoring of ammonia slip.

2. **ACHD Must Revise the Proposed Permit to Require Continuous Emissions VOC Monitoring to Ensure that the LAER Requirements Applicable to VOCs are Legally and Practically Enforceable.**

ACHD should revise the Proposed Permit to require continuous emissions monitoring of volatile organic compounds ("VOCs") because the weaker monitoring requirements in the Proposed Permit fail to ensure that the legal requirements for VOCs, namely that Invenergy achieves the "lowest available emissions rate" ("LAER") for VOCs.

"The proposed Project will be classified as a major source under the Allegheny County and Federal NSR regulations. Therefore, BACT (for attainment pollutants) and LAER (for nonattainment pollutants) evaluations will be required for those NSR regulated pollutants that trigger NSR applicability." Invenergy, Installation Permit Application, at 5-1. Nonattainment New Source Review requirements apply to Invenergy's VOC emissions because "the Project is proposed in the Northeast OTR [Ozone Transport Region] which is managed as nonattainment area and VOC is a precursor pollutant of ozone," and Invenergy's projected emissions of 93.40 tpy exceed the nonattainment major source threshold of 50 tpy. Invenergy, Installation Permit Application, at 3-24, Tbl. 3-14. As such, Invenergy must meet the legal requirements for LAER for VOCs. *See* Article XXI, Section 2102.20 (Definitions).

While the Proposed Permit proposes continuous emission monitoring for Nitrogen Oxide (NOx) and Carbon Monoxide (CO), it lacks adequate monitoring to assess continuous compliance with hourly and annual emission limits for VOCs. Emission limits defined within the permit must be practically enforceable. *See, e.g.,* EPA, Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NSR); Final Rule and Proposed Rule, 67 Fed. Reg. 80,186, 80,190-91 (Dec. 31, 2002) (to be codified at 40 C.F.R. pts. 50, 51) (stating that to be "practically" enforceable, a permit must include a "method to determine compliance, including appropriate monitoring, recordkeeping, and reporting").

If the monitoring requirements in the permit are not sufficient to determine each time a limit is exceeded, such a limit is not practically enforceable. As EPA has explained, "[i]n order for an emission limit to be enforceable as a practical matter, the permit must clearly specify how emissions will be measured or determined for purposes of demonstrating compliance with the limit." Order Responding to the Petitioners' Request for Objection to the Issuance of a Title V

Operating Permit, In the Matter of Yuhuang Chemical Inc. Methanol Plant, Pet. No. VI-2015-03, p.14 (Aug. 31, 2016).

This means that Invenergy "must be able to show continual compliance (or noncompliance) with each limitation or requirement. In other words, adequate testing, monitoring, and record-keeping procedures must be included either in an applicable federally issued permit..." EPA, *New Source Review Workshop Manual* A.5 (Draft Oct. 1990).

The draft permit does a good job of identifying oxidation catalyst for Volatile Organic Compounds (VOC) control, but this must also be paired with adequate monitoring to ensure the control technology is working as designed, meeting purported control efficiencies expressed in the permit application, and that daily and load-based variations are captured.

Currently, the draft permit only requires this facility to test VOC emissions once every 2 years. *See* Draft Permit at 21-22, Section V.A.2.d. This is unacceptable to meet the requirements of LAER and continuously assess compliance with emission limits– particularly for folks forced to live near this proposed site – and due to the fact that Allegheny County and this region generally is already plagued with poor air quality and reoccurring inversion events. Invenergy's VOC monitoring must be capable of tracking emissions continuously and during all operating conditions, including normal operations, startup and shutdown, and periods of operation when the oxidation catalyst is outside of its functional operating parameters (*e.g.* operating temperature or pressure differential). This monitoring technology is readily available and must be considered the most stringent limitations available for the source category. Specifically, Robinson Power Beech Hollow Energy, a comparable natural gas-fired combined cycle power plant in Pennsylvania, is required to continuously monitor VOCs, with limits of 1.0 ppmvd @ 15% O2 without duct firing and 1.3 ppmvd @ 15% O2 with duct firing. *See* PA DEP, Air Quality Plan Approval Modification for Robinson Power Co. LLC's Robinson Power Beech Hollow Project, at 34 (Oct 4, 2018). More recently, PA DEP released a proposed plan approval in 2020, requiring continuous assessment of compliance with VOC emission limits at 1.0 ppmvd @ 15% O2 and an additional hourly limit of 4.40 lbs VOC/hr. *See* Attachment 4, Proposed Plan Approval for the Beech Hollow Facility, at 37.

In order to ensure that the permit limits are enforceable, the permit must require monitoring capable of tracking hourly VOC emissions, and not just a snapshot every couple of years. In order to ensure that the LAER requirements for VOCs that are included in the permit are practically enforceable, ACHD must revise this draft permit to include the following requirements for Invenergy's AES plant:

- Require continuous emission monitors ("CEMS") for all VOC's (or total hydrocarbons) or:
- Establish a VOC to Carbon Monoxide ("CO") ratio that uses measurements from CEMS for CO in order to continuously calculate VOC emissions. This option must correctly establish the relationship for both normal operating conditions, and for tracking the noted higher VOC emissions during startup and shutdown. An example of this permit language can be seen above in the Robinson Power Beech Hollow proposed plan approval, where a VOC to CO ratio is used to continuously assess compliance with VOC limits.

3. Invenergy Must Include Enforceable Limits for Emissions from Startup, Shutdown, and Malfunction in the Permit and Monitoring Requirements Sufficient to Determine Compliance with Those Limits.

A. ACHD Must Add Enforceable Limits for Emissions from Startup, Shutdown, and Malfunctions in the Permit.

Invenergy and the Department have recognized that NOx, CO and VOC emissions from the GE 7HA-02 turbine are higher during periods of startup and shutdown. *See* ACHD, Technical Support Document, at 5 ("Based on manufacturer's data, . . . emissions of NOX, CO, and VOC are higher during startup and shutdown (SU/SD) events."). However, the combustion turbine is currently exempt from emission limits in the Draft Permit at Section V.A.1.(e-m) during periods of startup and shutdown (Draft Permit at 20, Section V.A.1.n ("The emission limits of parts (e)-(m), above, do not apply during periods of startup and shutdown (S/S)")), and only a NOx limit of 252.6 lb/hr is tacked on for startup and shutdown to ensure compliance with NO2 NAAQS. Draft Permit, at 21 ("During startup and shutdown events, at no time shall NO_X emissions exceed 252.6 lb/hr from CT01 to ensure compliance with the 1-hour average NO_2 NAAQS.").

The Department should include practically enforceable limits - including during periods of startup and shutdown, to limit emissions from these acknowledged higher-emission events. The Department must ensure that the Facility's hours of and emissions during these longer periods of startup and shutdown are clearly accounted for through clear definitions, proper emissions limitations, and accurate monitoring. Falling short on any of these items will result in an unenforceable permit and a likelihood that the Facility will emit more during these periods without the Department's, the operator's, or the public's knowledge.

Practically, this can be done through specific emission limits for periods of startup and shutdown, and annual limitations on the number of shutdowns. This would make the permit practically enforceable and allow continuous evaluation of compliance, rather than exemption of startup and shutdown emissions.

For example, Commenters specifically call the Department's attention to Invenergy's Lackawanna Energy Center, where emission limits and annual hourly limits for startup and shutdown provide permit terms to hold the facility in compliance with the Potential to Emit ("PTE") presented in the permit application. The permit for the Lackawanna Energy Center includes hourly limits for cold starts, warm starts, hot starts and shutdown for CO, NOx, and VOCs, and also includes an annual limitation for the combustion turbine and HRSG of 500 hours in any 12 consecutive month period. *See* Attachment 3 at 50-52. Similar startup and shutdown limits are seen in the Renovo Plan Approval (*See* Attachment 1 at 24-26), with emission limits for NOx, VOC, CO and PM during periods of startup and shutdown, and an annual limit for total combined hours of startup and shutdown. Since the maximum emissions for the Invenergy facility have been calculated at 365 hours a year for the PTE, Commenters urge the Department to revise the Draft Permit to include this as an enforceable limit in the facility permit.

B. The Department Must Add Monitoring Requirements to Ensure the Necessary New Limits on Startup, Shutdown, and Malfunction Emissions Are Practically Enforceable.

In addition to the need to include enforceable limits, as stated *infra* in the preceding section, such permit limits, once added, must be complemented by monitoring requirements that ensure the legal and practicable enforceability of such limits. *See, e.g.,* EPA, Prevention of Significant Deterioration ("PSD") and Nonattainment New Source Review ("NNSR"); Final Rule and Proposed Rule, 67 Fed. Reg. 80,186, 80,190-91 (Dec. 31, 2002) (to be codified at 40 C.F.R. pts. 50, 51) (stating that to be "practically" enforceable, a permit must include a "method to determine compliance, including appropriate monitoring, recordkeeping, and reporting"). If the monitoring requirements in the permit are not sufficient to determine each time a limit is exceeded, such a limit is not practically enforceable. As EPA has explained, "[i]n order for an emission limit to be enforceable as a practical matter, the permit must clearly specify how emissions will be measured or determined for purposes of demonstrating compliance with the limit." Order Responding to the Petitioners' Request for Objection to the Issuance of a Title V Operating Permit, In the Matter of Yuhuang Chemical Inc. Methanol Plant, Pet. No. VI-2015-03, p.14 (Aug. 31, 2016).

This means that Invenergy "must be able to show continual compliance (or noncompliance) with each limitation or requirement. In other words, adequate testing, monitoring, and record-keeping procedures must be included either in an applicable federally issued permit..." EPA, *New Source Review Workshop Manual* A.5 (Draft Oct. 1990). Consequently, the Department must include, for all limits it needs to add to the permit to control startup, shutdown, and malfunction emissions as discussed in Section 3.a, *supra*, corresponding monitoring requirements sufficient to determine whether there is continual compliance or noncompliance.

4. Invenergy Should Include Additional HAP Emission Testing to Verify Area Source Determination and Startup and Shutdown Emission Rates.

The Department should revise the draft permit to require additional testing of hazardous air pollutants ("HAPs") to verify the emission rates of HAPs during startup and shutdown and to verify that the proposed facility does not exceed the major source threshold for HAPs. A facility is a major source for HAPs if it has the potential to emit, in the aggregate, 10 tons per year or more of any HAP or 25 tons per year or more of any combination of HAPs. 42 U.S.C. § 7412(a)(1); Article XXI, Section 2101.20. Any stationary source of HAPs that is not a major source is considered an area source. 42 U.S.C. § 7412(a)(2); Article XXI, Section 2101.20.

Invenergy and the Department consider this proposed facility to be an area source for HAPs. *See* Invenergy, Installation Permit Application at 4-11; Technical Support Document at 2. However, the application makes other assumptions within the calculation of HAP potential to emit that raise concerns about underestimation of emissions. The emissions calculations for HAPs are based on 8,760 hours of steady-state operation and on emission factors found in U.S. EPA AP-42 Section 3.1: *Stationary Gas Turbines*. Technical Support Document at 5.

Calculating emissions based only on steady-state operation fails to consider the potential for increased HAP emissions during startup and shutdown events. Invenergy and the Department acknowledge that emissions of some pollutants, including VOCs, are higher during startup and shutdown as compared to normal operating conditions. Technical Support Document at 5; Invenergy, Installation Permit Application at 3-2, Table 3-2. As noted in the application, emissions of certain volatile HAPs are included within the broader category of VOC emissions. *See* Invenergy, Installation Permit Application at pg. 6-27. Verification is needed to ensure that HAP emissions do not also increase during startup and shutdown. Without actual emission data on HAP emissions during startup and shutdown, there is no way to verify that HAP emissions do not exceed the major source threshold. Although Invenergy acknowledges that the combustion turbine will operate at reduced loads of 40 to 90 percent, the HAP analysis failed to consider periods of low-load operation. *See id.* at 3-3. Unlike the emissions scenarios for other pollutants in the application, the HAP analysis only considers 8,760 hours of steady-state constant operation. *See id*. at 3-3, 3-4, 3-5.

Currently, the only HAP testing requirements are the one-time initial stack testing for formaldehyde, and testing for formaldehyde on the combustion turbine once every two years. *See* Technical Support Document at 16. While formaldehyde is the highest expected HAP included in the facility's potential to emit, emissions of BTEX compounds (benzene, toluene, ethylbenzene, and xylene) and other HAPs are also expected from the facility. *See* Technical Support Document at 19, Table 15; Invenergy, Installation Permit Application, at Appendix C, Table C-5. Initial stack testing and periodic stack testing is needed for these other expected HAP emissions as well to ensure that emission estimates from the facility are representative, can accurately be assessed against emission limits and PTE in the draft permit, and are not solely based on AP-42 emission factors. The Department should also request additional information regarding HAP emissions at low-load operations, during startup and shutdown, with duct firing, and potential fugitive emission to supplement the current analysis in the application.

5. The Department Should Provide Additional Information to Establish that the Applicant is Relying on Meteorological Data and Land Use Data that are Representative.

The AERMOD program is only as good as its inputs. If the inputs are not representative, then the program will not provide an accurate prediction of air quality impacts. The application makes several assertions that data are representative, but the assertions are not clearly supported by the evidence. The Department should provide more information to confirm that the data are in fact representative.

While the Applicant asserts that meteorological data at the Liberty monitor are representative of conditions at the location of the proposed project, this assertion is conclusory and it blends two distinct steps. One step involves the meteorological data themselves; the other involves land use data relating to terrain, which also affect the performance of the model. EPA makes this clear in its guidance document for AERMOD:

3.1.1 Meteorological data representativeness considerations (01/09/08)
When using National Weather Service (NWS) data for AERMOD, data representativeness can be thought of in terms of constructing realistic planetary boundary layer (PBL) similarity profiles and adequately characterizing the dispersive capacity of the atmosphere. ***As such, the determination of representativeness should include a comparison of the surface characteristics (i.e., z_0, B_0 and r) between the NWS measurement site and the source location, coupled with a determination of the importance of those differences relative to predicted concentrations***. Site-specific meteorological data are assumed by definition to be representative of the application site; ***however, the determination of representativeness of site-specific data for AERMOD applications should also include an assessment of surface characteristics of the measurement and source locations and cannot be based solely on proximity***. The recommendations presented in this section for determining surface characteristics for AERMET apply to both site-specific and non-site-specific (e.g., NWS) meteorological data.

The degree to which predicted pollutant concentrations are influenced by surface parameter differences between the application site and the meteorological measurement site depends on the nature of the application (i.e., release height, plume buoyancy, terrain influences, downwash considerations, design metric, etc.). For example, a difference in z_0 for one application may translate into an unacceptable difference in the design concentration, while for another application the same difference in z_0 may lead to an insignificant difference in design concentration. If the reviewing agency is uncertain as to the representativeness of a meteorological measurement site, a site-specific sensitivity analysis may be needed in order to quantify, in terms of expected changes in the design concentration, the significance of the differences in each of the surface characteristics.

If the proposed meteorological measurement site's surface characteristics are determined to NOT be representative of the application site, it may be possible that another nearby meteorological measurement site may be representative of both meteorological parameters and surface characteristics. Failing that, it is likely that site-specific meteorological data will be required.

See U.S. EPA, AERMOD Implementation Guide, EPA-454/B-19-035 (Aug. 2019), pages 4-5 (bold italics added for emphasis).[1] It is not clear that the applicant and the Department have done this analysis. *See* Application, page 6-7, Section 6.2; *see also* Technical Support Document, pages 44-45; *see also* Attachment 5, Modeling Review of Invenergy LLC (Invenergy) Proposed Natural Gas Combined-Cycle Power Plant Installation Permit (May 22, 2019), page 1 (making the conclusory assertion that "[t]he AERMAP terrain preprocessor and U.S. Geological Survey (USGS) 1/3 arc-second National Elevation Dataset (NED) files were used to determine representative terrain elevations for the receptors.").

[1] This quoted material does not deviate from the previous version in existence before the submission of the application. *See* AERMOD Implementation Guide, EPA-454/B-16-013 (Dec., 2016). Available at: https://nepis.epa.gov/Exe/ZyPDF.cgi/P100QXLE.PDF?Dockey=P100QXLE.PDF

6. **<u>The Department Should Clarify the Air Modeling for the Evaluation of Significant Impact Levels for Particular Air Pollutants.</u>**

The Clean Air Act prohibits the construction of a new facility if it will cause or contribute to a violation of the NAAQS:

> **§7475. Preconstruction requirements**
> **(a) Major emitting facilities on which construction is commenced**
> ***No major emitting facility*** on which construction is commenced after August 7, 1977, ***may be constructed in any area to which this part applies unless—***
> (3) ***the owner or operator of such facility demonstrates***, as required pursuant to section 7410(j) of this title, ***that emissions from construction or operation of such facility will not cause, or contribute to, air pollution in excess of any (A) maximum allowable increase or maximum allowable concentration for any pollutant in any area to which this part applies more than one time per year, (B) national ambient air quality standard in any air quality control region***, or (C) any other applicable emission standard or standard of performance under this chapter:
> ….

Section 165(a)(3) of the Clean Air Act, 42 U.S.C. § 7475(a)(3) (emphasis added), https://uscode.house.gov/view.xhtml?path=/prelim@title42/chapter85/subchapter1/partC&edition=prelim.

In the present case, the Applicant admits that the proposed project would cause an exceedance of the Significant Impact Level ("SIL"), and that the modeling concentration of NOx at a monitoring station would be far in excess of the NAAQS. *See* Application, at 6-18, Section 6.4.3 (Class II Significant Impact Analysis) ("because Project related emissions resulted in modeled concentrations greater than the 1-hour NO2 Class II SIL, a 1-hour NO2 NAAQS modeling demonstration was conducted"), *id.* at 6-19, Section 6.4.4 (National Ambient Air Quality Standards Analysis) ("The 1-hour modeled NO2 concentrations exceeded the NAAQS in all scenarios"). Because the air modeling shows that the proposed facility would contribute to a violation of the NAAQS, the Department should deny the application.

The Applicant tries to get around this result through inventive reasoning that amounts to the assertion that there would be a violation of the NAAQS anyway as a result of operations of other sources. It does this by simply modeling the proposed project, without those other sources. *See id.* at 6-19 ("During the modeled 1-hour NO2 exceedances, the modeled contribution from the AEC-only sources was under the one 1-hour NO2 Class II SIL threshold (7.5 g/m3)"). Then it asserts that this is consistent with EPA's guidance document. *See id.* This is incorrect.

In fact, the guidance requires another analysis of the Significant Impact Level, in this context:

> Where a cumulative impact analysis predicts a NAAQS violation, the permitting authority may further evaluate whether the proposed source will cause or contribute to the violation ***by comparing the proposed source's modeled contribution to that violation to the corresponding SIL value. If the modeled impact is below the recommended SIL value at the violating receptor during the violation, the EPA believes this will be sufficient in most cases for a permitting authority to conclude that the source does not cause or contribute to (is not culpable for) the predicted violation***. This demonstration would, thus, allow the permit to be issued if all other PSD requirements are satisfied.

See U.S. EPA, Guidance on Significant Impact Levels for Ozone and Fine Particles in the Prevention of Significant Deterioration Permitting Program, page 18 (Apr. 17, 2018) (emphasis added). But the contribution is not below the modelled SIL value.

Instead of simply ignoring other sources in its modelling, the Applicant should adopt control measures or obtain additional emissions reductions in order to avoid a violation of the NAAQS:

> If the proposed source's modeled impact is higher than or equal to the recommended SIL value at the violating receptor during a violation, ***then a permit should not be issued unless*** (1) ***further modifications are made to the proposed source to reduce the proposed source's impact to a not significant level at the affected receptor during the violation***, or (2) ***the proposed source obtains sufficient emissions reductions from other sources to compensate for its contribution to the violation***.[48]
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> …
>
> [48]1990 Draft NSR Workshop Manual at C.52-C.53; ***this latter alternative is referred to as a PSD offset***, and state implementation plans may include an offset program based on federal regulations at 40 CFR 51.165(b).

See id. (emphasis added).

Without showing its work and contrary to what the applicant did, the Department concludes that there will not be an exceedance of the 1-hr NAAQS of 188 micrograms per cubic meter. *See* Technical Support Document, at 43-44. While the applicant found a "Modeled + Monitored Concentration (µg/m3)" of 7140.9 micrograms per cubic meter (well above the NAAQS of 188 micrograms per cubic meter), the Department only found a combined impact of 62.2 micrograms per cubic meter. *See id., see also* Application, Table 6-13, page 6-49. The Department should clarify its reasoning and show how it reached this result.

In a communication with the applicant in 2015, the Department stated that "ACHD does not recommend using any of the Allegheny County sites as background based on the location of the proposed project." *See* Attachment 6, Email from Shaun Vozar, Air Pollution Control

Engineer, ACHD to Dan Dix, Technical Manager, All4 Inc, Re: RE: Invenergy Allegheny Follow-up Modeling Discussion (Oct. 29, 2015, 10:09am). The Department should explain what it meant by this statement. The applicant should be fully modeling large stationary sources that are upwind of the proposed facility, including the three U.S. Steel facilities.

In its review memorandum for air modeling, the Department states that it "[r]emoved fugitive emissions from USS Clairton from the model, since they bleed into the background and can be accounted for in the background concentration." *See* Attachment 5, Modeling Review, at 5. The assertion is conclusory. The Department should be accounting for emissions from the Clairton facility, and it should not be assuming that they would automatically be subsumed and contained by a concentration at a monitor.

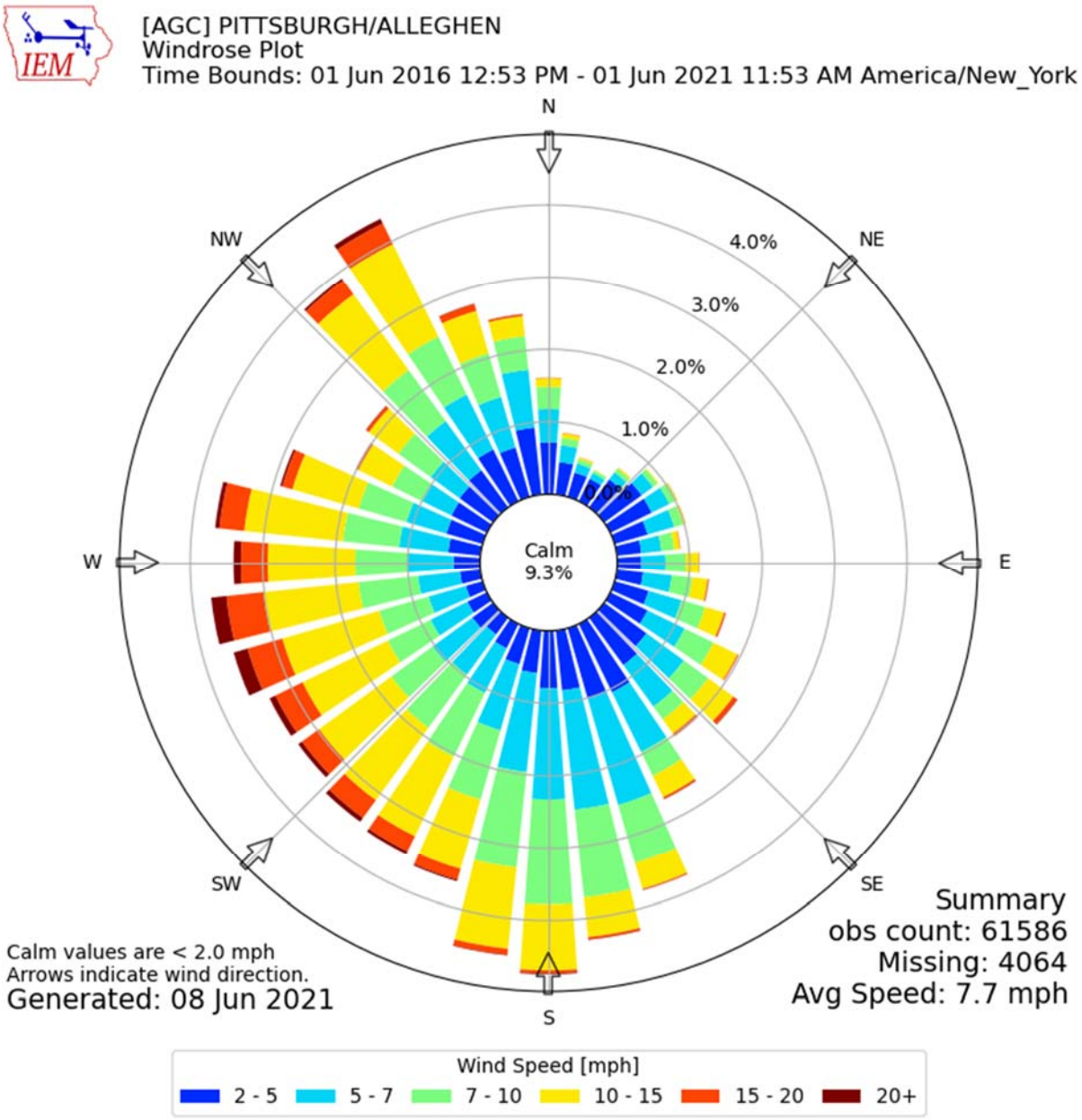
It is insufficient for the applicant to rely on concentrations at a monitor to attempt to evaluate the cumulative impact of emissions of air pollutants. *See* Application, page 6-18, Section 6.4.3 ("[t]he ambient NO2 data is from the Charleroi, PA monitor, the ambient CO data is from the Pittsburgh, PA monitor, and the PM2.5/PM10 data is from the Clairton, PA monitor."). This is tantamount to segregating an airshed into parts, only to add them together again. The dispersion of air pollutants is a dynamic process that cannot be reduced to such assumptions.

Instead of simply adding up concentrations of air pollutants at the monitors, the Department should be conducting source-specific air modeling for all relevant air pollutants.

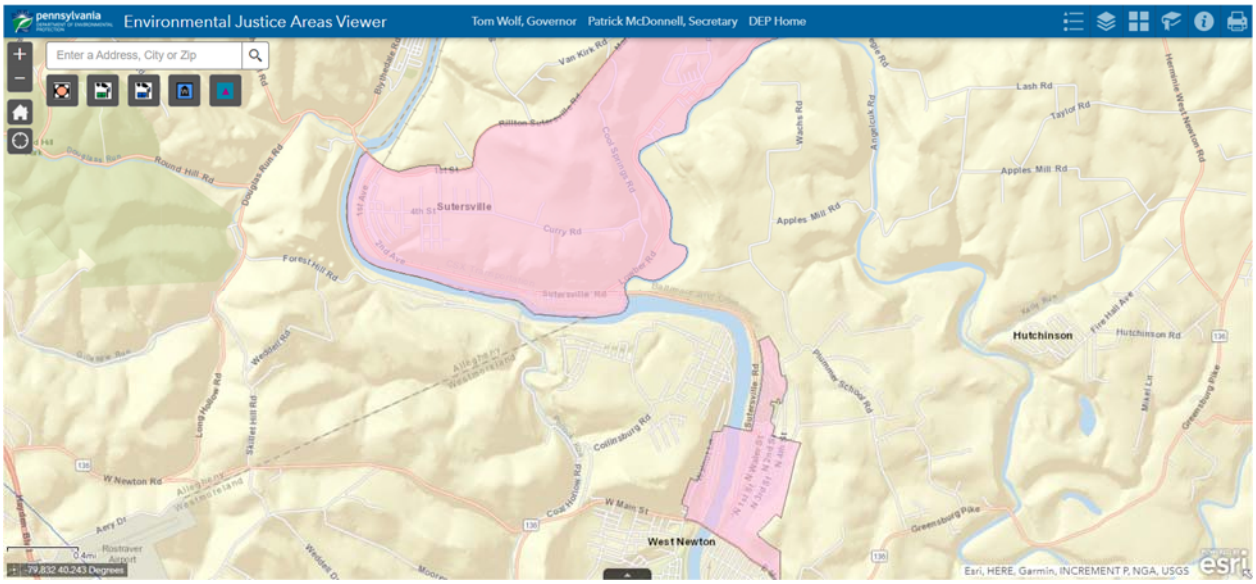
7. The Department Should Impose Additional Requirements to Protect Nearby Communities in Environmental Justice Areas, Including a Cumulative Impact Risk Assessment of Air Pollution.

A. Residents in Neighboring Communities Already Suffer a Disproportionate Burden of Air Pollution from Many Large Stationary Sources.

Positioned less than one thousand feet from the county line, the proposed plant would not only increase pollution for the local community within the county, but also release pollution into environmental justice areas on the other side of the county line, outside the jurisdiction of the Department and within the jurisdiction of the Pennsylvania Department of Environmental Protection. While the application does not take a position on the prevailing wind direction, it is recognized that the prevailing wind direction is from the southwest. *See* windrose generated via ASOS data using Iowa State University Mesonet, *https://mesonet.agron.iastate.edu/sites/dyn_windrose.phtml?station=AGC&network=PA_ASOS&bin0=2&bin1=5&bin2=7&bin3=10&bin4=15&bin5=20&units=mph&nsector=36&fmt=png&dpi=100&year1=2016&month1=6&day1=1&hour1=12&minute1=0&year2=2021&month2=6&day2=1&hour2=12&minute2=0* (last accessed June 8, 2021) (note this is generated from public wind data from Allegheny Airport, Commenters acknowledge closer wind data will be available to the Department).

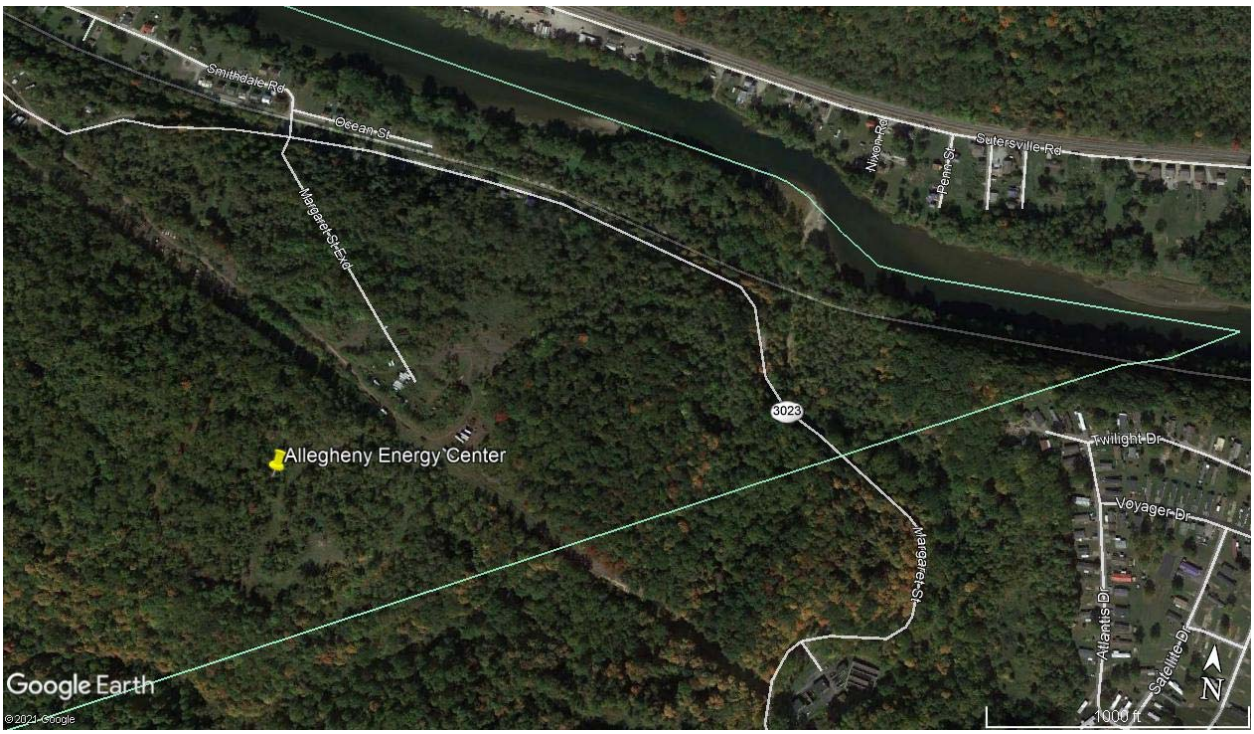


One of the environmental justice areas is located in Sutersville, Westmoreland County, less than one mile to the north, across the Youghiogheny River. The other is located in West Newton, Westmoreland County, less than two miles to the east, also across the Youghiogheny River.



See Department of Environmental Protection, https://padep-1.maps.arcgis.com/apps/webappviewer/index.html?id=f31a188de122467691cae93c3339469c (pink areas are environmental justice areas).

The location of the proposed project is shown by the yellow tack on the following Google Earth map:



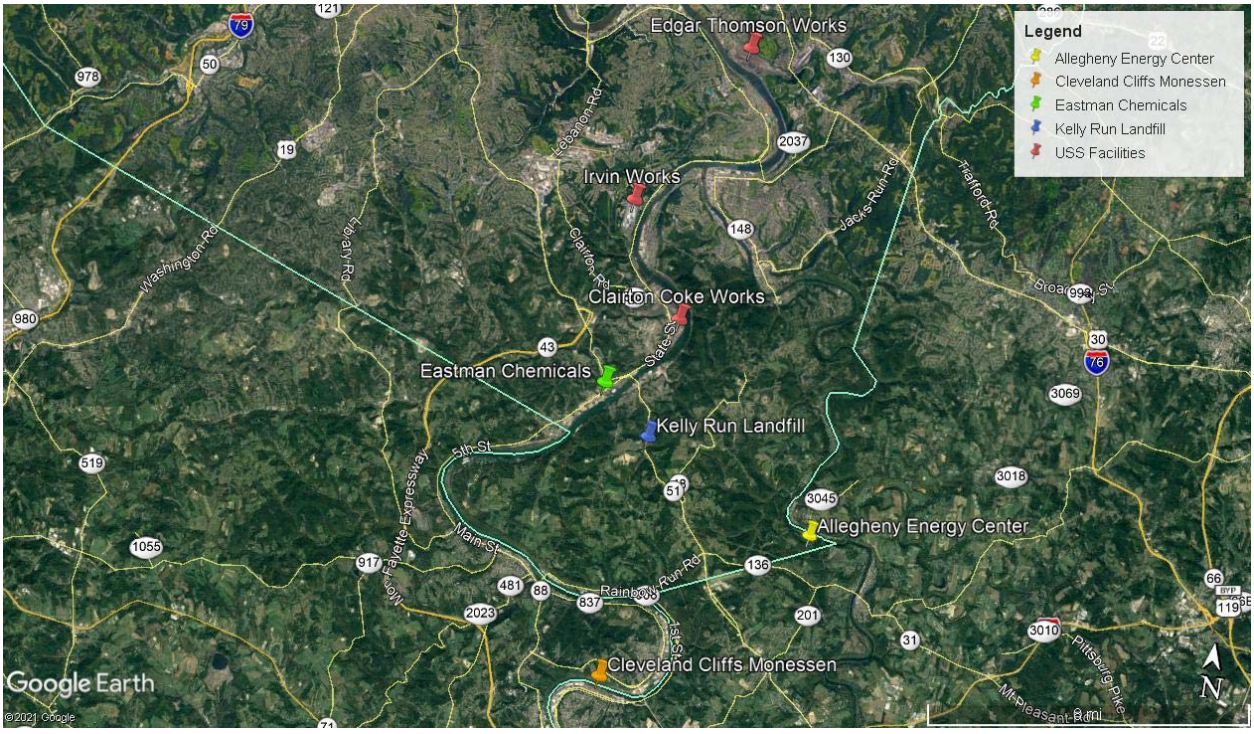
See also Google Map, https://www.google.com/maps/place/40%C2%B013'28.7%22N+79%C2%B047'45.4%22W/@40

.2246498,-79.8135749,6236m/data=!3m1!1e3!4m5!3m4!1s0x0:0x0!8m2!3d40.22465!4d-79.7959444, (79°47' 45.40"W, 40°13' 28.74"N).

A number of heavily polluting facilities are located upwind of the proposed project, to the northwest, west, and southwest. These include the following facilities:

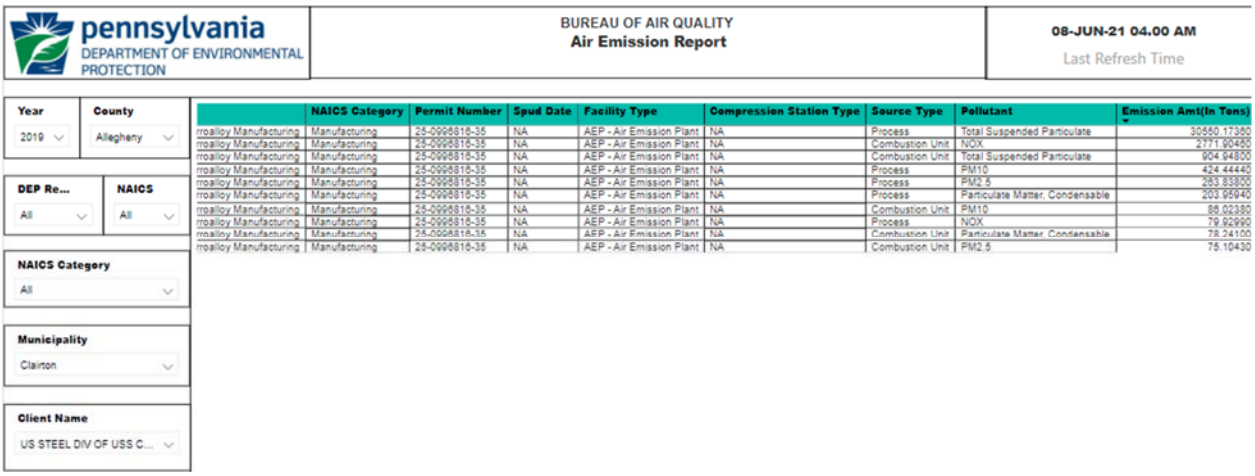
1. Clairton Coke Works in Clairton (coke manufacturing facility located approximately 6 miles to the northwest),
2. Edgar Thomson Works in Braddock (steel manufacturing facility located approximately 12 miles to the northwest),
3. Irvin Works in West Mifflin (steel finishing facility located approximately 9 miles to the northwest),
4. Cleveland Cliffs facility in Monessen (coke manufacturing facility located approximately 6 miles to the southwest),
5. Eastman Chemicals facility in West Elizabeth (chemicals manufacturing facility located approximately 6 miles to the northwest), and
6. Kelly Run Sanitary Landfill in Elizabeth Township (landfill located approximately 5 miles to the west).

The following map shows all these facilities:



These facilities already present significant amounts of emissions:

Clairton:



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DEPARTMENT OF ENVIRONMENTAL PROTECTION

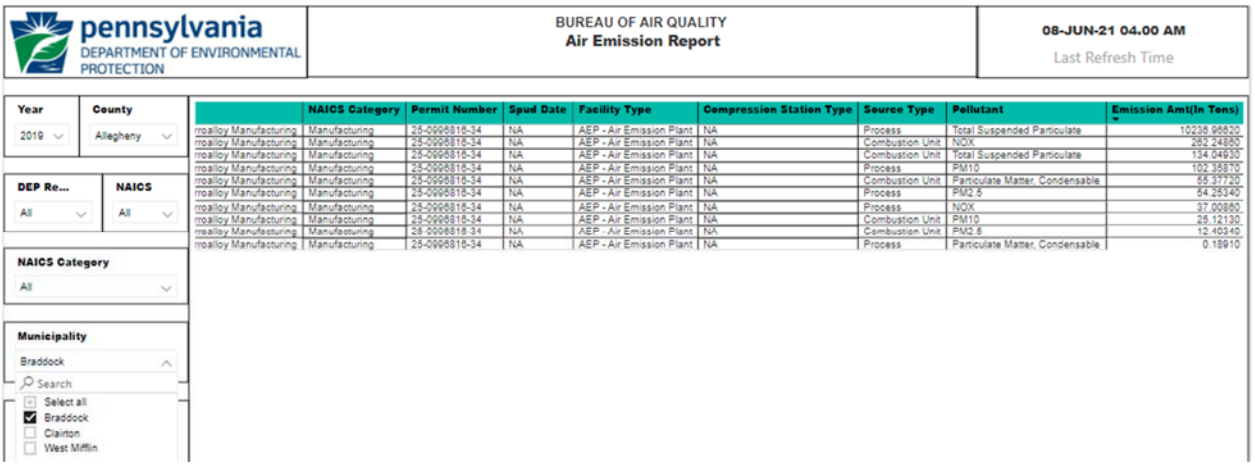
BUREAU OF AIR QUALITY
Air Emission Report

08-JUN-21 04.00 AM
Last Refresh Time

Year: 2019 | County: Allegheny | DEP Re...: All | NAICS: All | NAICS Category: All | Municipality: Clairton | Client Name: US STEEL DIV OF USS C...

	NAICS Category	Permit Number	Spud Date	Facility Type	Compression Station Type	Source Type	Pollutant	Emission Amt(In Tons)
rroalloy Manufacturing	Manufacturing	25-0996816-35	NA	AEP - Air Emission Plant	NA	Process	Total Suspended Particulate	30660.17380
rroalloy Manufacturing	Manufacturing	25-0996816-35	NA	AEP - Air Emission Plant	NA	Combustion Unit	NOX	2771.90480
rroalloy Manufacturing	Manufacturing	25-0996816-35	NA	AEP - Air Emission Plant	NA	Combustion Unit	Total Suspended Particulate	904.94800
rroalloy Manufacturing	Manufacturing	25-0996816-35	NA	AEP - Air Emission Plant	NA	Process	PM10	424.44440
rroalloy Manufacturing	Manufacturing	25-0996816-35	NA	AEP - Air Emission Plant	NA	Process	PM2.5	283.83800
rroalloy Manufacturing	Manufacturing	25-0996816-35	NA	AEP - Air Emission Plant	NA	Process	Particulate Matter, Condensable	203.95940
rroalloy Manufacturing	Manufacturing	25-0996816-35	NA	AEP - Air Emission Plant	NA	Combustion Unit	PM10	86.02380
rroalloy Manufacturing	Manufacturing	25-0996816-35	NA	AEP - Air Emission Plant	NA	Process	NOX	79.92990
rroalloy Manufacturing	Manufacturing	25-0996816-35	NA	AEP - Air Emission Plant	NA	Combustion Unit	Particulate Matter, Condensable	78.24100
rroalloy Manufacturing	Manufacturing	25-0996816-35	NA	AEP - Air Emission Plant	NA	Combustion Unit	PM2.5	75.10430

Braddock:



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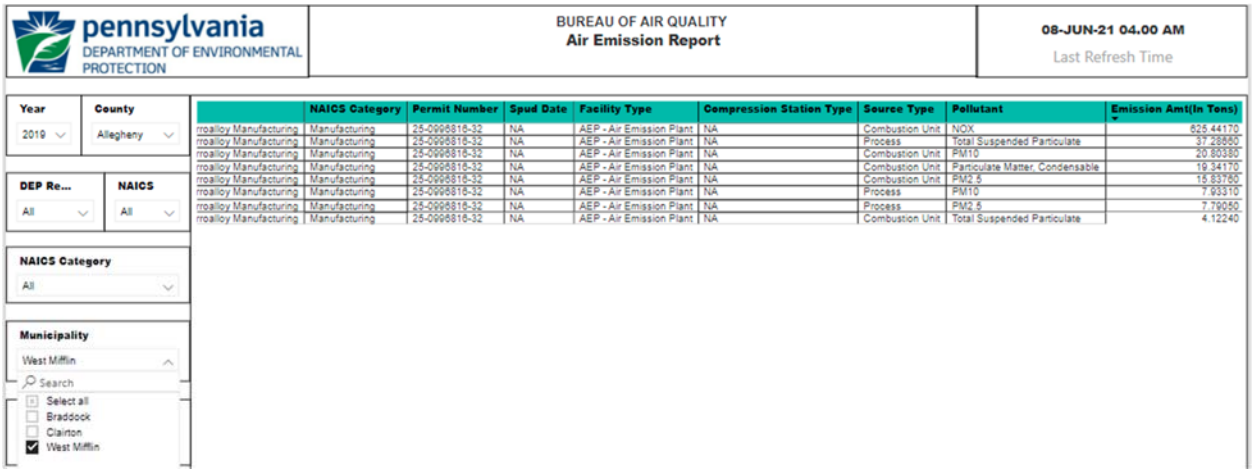
Air Emission Report

08-JUN-21 04.00 AM
Last Refresh Time

Year: 2019 | County: Allegheny | DEP Re...: All | NAICS: All | NAICS Category: All | Municipality: Braddock (Select all, Braddock, Clairton, West Mifflin)

	NAICS Category	Permit Number	Spud Date	Facility Type	Compression Station Type	Source Type	Pollutant	Emission Amt(In Tons)
rroalloy Manufacturing	Manufacturing	25-0996816-34	NA	AEP - Air Emission Plant	NA	Process	Total Suspended Particulate	10238.96920
rroalloy Manufacturing	Manufacturing	25-0996816-34	NA	AEP - Air Emission Plant	NA	Combustion Unit	NOX	262.24860
rroalloy Manufacturing	Manufacturing	25-0996816-34	NA	AEP - Air Emission Plant	NA	Combustion Unit	Total Suspended Particulate	134.04930
rroalloy Manufacturing	Manufacturing	25-0996816-34	NA	AEP - Air Emission Plant	NA	Process	PM10	102.35870
rroalloy Manufacturing	Manufacturing	25-0996816-34	NA	AEP - Air Emission Plant	NA	Combustion Unit	Particulate Matter, Condensable	68.37720
rroalloy Manufacturing	Manufacturing	25-0996816-34	NA	AEP - Air Emission Plant	NA	Process	PM2.5	54.25340
rroalloy Manufacturing	Manufacturing	25-0996816-34	NA	AEP - Air Emission Plant	NA	Process	NOX	37.00860
rroalloy Manufacturing	Manufacturing	25-0996816-34	NA	AEP - Air Emission Plant	NA	Combustion Unit	PM10	25.12130
rroalloy Manufacturing	Manufacturing	25-0996816-34	NA	AEP - Air Emission Plant	NA	Combustion Unit	PM2.5	12.40340
rroalloy Manufacturing	Manufacturing	25-0996816-34	NA	AEP - Air Emission Plant	NA	Process	Particulate Matter, Condensable	0.18910

Irvin:



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Air Emission Report

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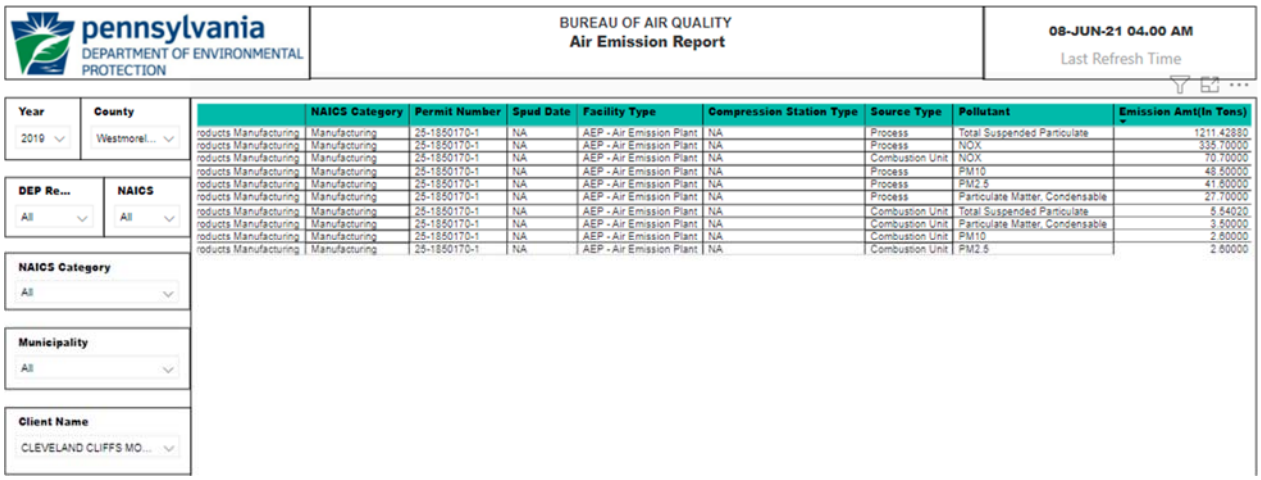
Last Refresh Time

Year: 2019 | County: Allegheny | DEP Re...: All | NAICS: All | NAICS Category: All | Municipality: West Mifflin (Select all, Braddock, Clairton, West Mifflin)

	NAICS Category	Permit Number	Spud Date	Facility Type	Compression Station Type	Source Type	Pollutant	Emission Amt(In Tons)
rroalloy Manufacturing	Manufacturing	25-0996816-32	NA	AEP - Air Emission Plant	NA	Combustion Unit	NOX	625.44170
rroalloy Manufacturing	Manufacturing	25-0996816-32	NA	AEP - Air Emission Plant	NA	Process	Total Suspended Particulate	37.28880
rroalloy Manufacturing	Manufacturing	25-0996816-32	NA	AEP - Air Emission Plant	NA	Combustion Unit	PM10	20.80380
rroalloy Manufacturing	Manufacturing	25-0996816-32	NA	AEP - Air Emission Plant	NA	Combustion Unit	Particulate Matter, Condensable	19.34170
rroalloy Manufacturing	Manufacturing	25-0996816-32	NA	AEP - Air Emission Plant	NA	Combustion Unit	PM2.5	15.83760
rroalloy Manufacturing	Manufacturing	25-0996816-32	NA	AEP - Air Emission Plant	NA	Process	PM10	7.93310
rroalloy Manufacturing	Manufacturing	25-0996816-32	NA	AEP - Air Emission Plant	NA	Process	PM2.5	7.79050
rroalloy Manufacturing	Manufacturing	25-0996816-32	NA	AEP - Air Emission Plant	NA	Combustion Unit	Total Suspended Particulate	4.12240

Cleveland-Cliffs:



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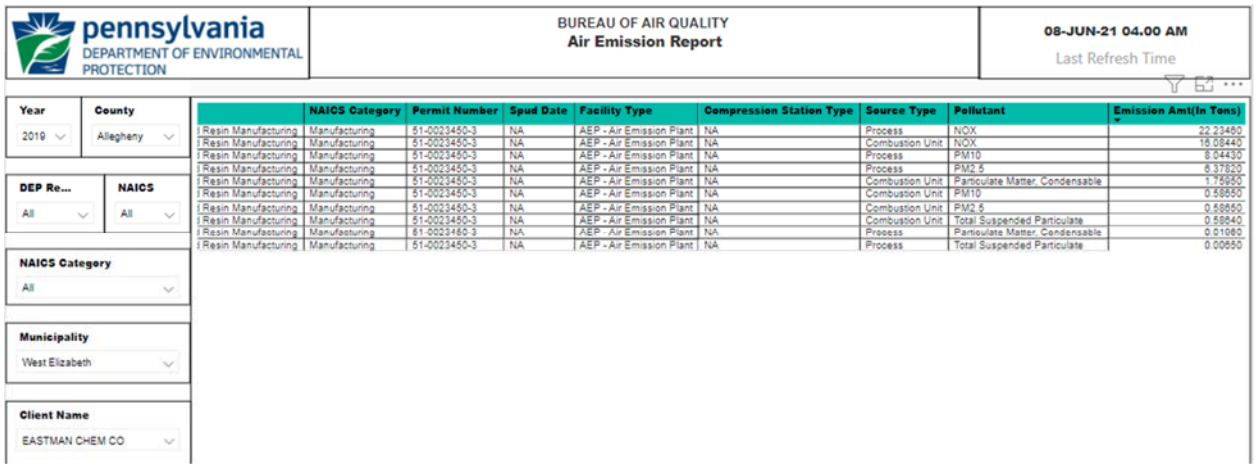
BUREAU OF AIR QUALITY
Air Emission Report

08-JUN-21 04.00 AM
Last Refresh Time

Year: 2019 | County: Westmorel...
DEP Re...: All | NAICS: All
NAICS Category: All
Municipality: All
Client Name: CLEVELAND CLIFFS MO...

	NAICS Category	Permit Number	Spud Date	Facility Type	Compression Station Type	Source Type	Pollutant	Emission Amt(In Tons)
roducts Manufacturing	Manufacturing	25-1850170-1	NA	AEP - Air Emission Plant	NA	Process	Total Suspended Particulate	1211.42880
roducts Manufacturing	Manufacturing	25-1850170-1	NA	AEP - Air Emission Plant	NA	Process	NOX	335.70000
roducts Manufacturing	Manufacturing	25-1850170-1	NA	AEP - Air Emission Plant	NA	Combustion Unit	NOX	70.70000
roducts Manufacturing	Manufacturing	25-1850170-1	NA	AEP - Air Emission Plant	NA	Process	PM10	48.50000
roducts Manufacturing	Manufacturing	25-1850170-1	NA	AEP - Air Emission Plant	NA	Process	PM2.5	41.60000
roducts Manufacturing	Manufacturing	25-1850170-1	NA	AEP - Air Emission Plant	NA	Process	Particulate Matter, Condensable	27.70000
roducts Manufacturing	Manufacturing	25-1850170-1	NA	AEP - Air Emission Plant	NA	Combustion Unit	Total Suspended Particulate	5.54020
roducts Manufacturing	Manufacturing	25-1850170-1	NA	AEP - Air Emission Plant	NA	Combustion Unit	Particulate Matter, Condensable	3.50000
roducts Manufacturing	Manufacturing	25-1850170-1	NA	AEP - Air Emission Plant	NA	Combustion Unit	PM10	2.60000
roducts Manufacturing	Manufacturing	25-1850170-1	NA	AEP - Air Emission Plant	NA	Combustion Unit	PM2.5	2.60000

Eastman:



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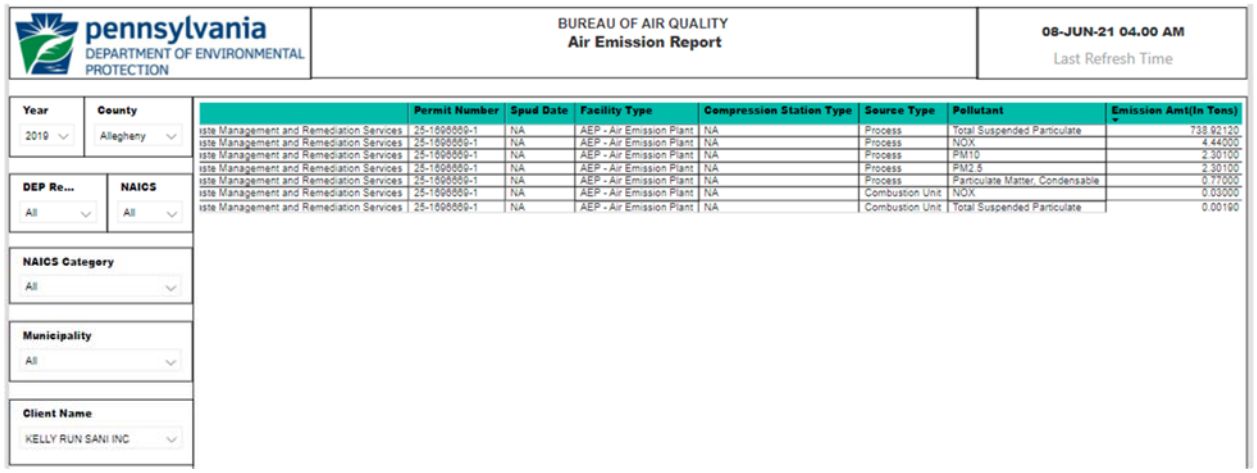
BUREAU OF AIR QUALITY
Air Emission Report

08-JUN-21 04.00 AM
Last Refresh Time

Year: 2019 | County: Allegheny
DEP Re...: All | NAICS: All
NAICS Category: All
Municipality: West Elizabeth
Client Name: EASTMAN CHEM CO

	NAICS Category	Permit Number	Spud Date	Facility Type	Compression Station Type	Source Type	Pollutant	Emission Amt(In Tons)
l Resin Manufacturing	Manufacturing	51-0023450-3	NA	AEP - Air Emission Plant	NA	Process	NOX	22.23460
l Resin Manufacturing	Manufacturing	51-0023450-3	NA	AEP - Air Emission Plant	NA	Combustion Unit	NOX	18.08440
l Resin Manufacturing	Manufacturing	51-0023450-3	NA	AEP - Air Emission Plant	NA	Process	PM10	8.04430
l Resin Manufacturing	Manufacturing	51-0023450-3	NA	AEP - Air Emission Plant	NA	Process	PM2.5	6.37820
l Resin Manufacturing	Manufacturing	51-0023450-3	NA	AEP - Air Emission Plant	NA	Combustion Unit	Particulate Matter, Condensable	1.75950
l Resin Manufacturing	Manufacturing	51-0023450-3	NA	AEP - Air Emission Plant	NA	Combustion Unit	PM10	0.58650
l Resin Manufacturing	Manufacturing	51-0023450-3	NA	AEP - Air Emission Plant	NA	Combustion Unit	PM2.5	0.58650
l Resin Manufacturing	Manufacturing	51-0023450-3	NA	AEP - Air Emission Plant	NA	Combustion Unit	Total Suspended Particulate	0.58540
l Resin Manufacturing	Manufacturing	51-0023460-3	NA	AEP - Air Emission Plant	NA	Process	Particulate Matter, Condensable	0.01060
l Resin Manufacturing	Manufacturing	51-0023450-3	NA	AEP - Air Emission Plant	NA	Process	Total Suspended Particulate	0.00550

Kelly Run Sanitary Landfill:



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BUREAU OF AIR QUALITY
Air Emission Report

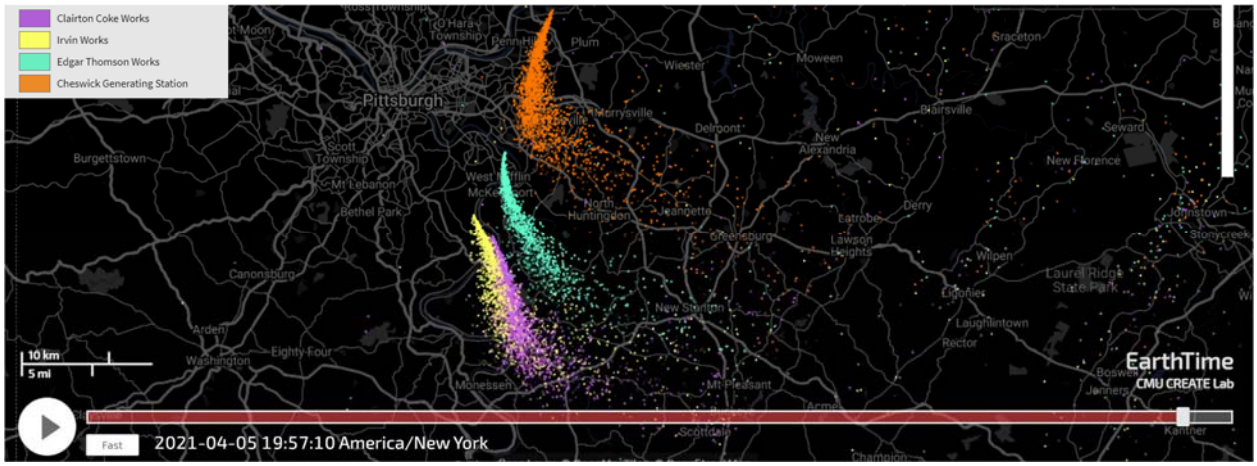
08-JUN-21 04.00 AM
Last Refresh Time

Year: 2019 | County: Allegheny
DEP Re...: All | NAICS: All
NAICS Category: All
Municipality: All
Client Name: KELLY RUN SANI INC

	Permit Number	Spud Date	Facility Type	Compression Station Type	Source Type	Pollutant	Emission Amt(In Tons)
ste Management and Remediation Services	25-1696869-1	NA	AEP - Air Emission Plant	NA	Process	Total Suspended Particulate	738.92120
ste Management and Remediation Services	25-1696869-1	NA	AEP - Air Emission Plant	NA	Process	NOX	4.44000
ste Management and Remediation Services	25-1696869-1	NA	AEP - Air Emission Plant	NA	Process	PM10	2.30100
ste Management and Remediation Services	25-1696869-1	NA	AEP - Air Emission Plant	NA	Process	PM2.5	2.30100
ste Management and Remediation Services	25-1696869-1	NA	AEP - Air Emission Plant	NA	Process	Particulate Matter, Condensable	0.77000
ste Management and Remediation Services	25-1696869-1	NA	AEP - Air Emission Plant	NA	Combustion Unit	NOX	0.03000
ste Management and Remediation Services	25-1696869-1	NA	AEP - Air Emission Plant	NA	Combustion Unit	Total Suspended Particulate	0.00190

See PA Department of Environmental Protection, Air Emission Reports, http://cedatareporting.pa.gov/reports/powerbi/Public/DEP/AQ/PBI/Air_Emissions_Report. These are not the only harmful emissions from these facilities. The screenshots above only include emissions of Total Suspended Particulates, PM10, PM2.5, PM (condensable), and NOx. For example, it does not include sulfur dioxide and it does not include hazardous air pollutants.

Below is a screenshot of the dispersion of air pollutants from the three US Steel facilities from Plume PGH, produced by the Carnegie Mellon University CREATE Lab. Note that under certain meteorological conditions (*e.g.* inversions), pollution from even distant facilities, such as Edgar Thomson Works, reach the area of the proposed facility. Though the Plume Pittsburgh model is focused on the dispersion of SO2 plumes, the modeled pollution paths demonstrate how emissions maintain significant concentration in the air miles from the source due to the unique topography of the area.



See Plume Pittsburgh, https://plumepgh.org/?date=2021-04-05 (last accessed June 8, 2021). This video simulation can be run by clicking on this link: https://plumepgh.org/?date=2021-04-05 (last accessed June 8, 2021).

For these reasons, residents have appropriately raised concerns about the application for the proposed facility in this location. *See* Attachment 7, Email from Fred Bickerton to Allegheny County Health Department (Jul. 9, 2019) (expressing concerns about air quality impacts from proposed facility and other facilities). For additional concerns about cumulative impacts and risks from the perspective of nearby individuals, please see the oral and written comments presented by the undersigned individuals as well as others, at the June 8, 2021 public hearing. The concern for cumulative impacts applies to both criteria pollutants and hazardous air pollutants.

B. The Department Has the Authority to Require the Applicant to Perform More Rigorous Air Modeling, Above and Beyond What Was Done for Evaluating Significant Impact Levels.

The air modeling performed in support of the application is narrow in scope, focusing only on whether the projected emissions would exceed Significant Impact Levels. That air modeling was limited to project emissions for determining an exceedance of the SIL, and did not include emissions of air pollutants from other facilities upwind of the proposed project. *See* Application, at 6-3, Section 6.1.2 (Significant Impact Analysis Emissions Inventory) ("[f]or the SIL analysis, Project-wide emissions from the Project sources were used to model concentrations for comparison with the SILs"); *see also* Technical Support Document, at Appendix C, at 44-45. Although modeling for the evaluation of whether the proposed project would contribute to a violation of the national ambient air quality standard is nominally cumulative, the applicant did not conduct full comprehensive modelling for all individual stationary sources, but relied on assumptions regarding background concentrations at particular monitoring stations. This is not an adequate substitute for full comprehensive air modeling. The applicant should be doing comprehensive air modelling for both criteria pollutants and hazardous air pollutants.

In its guidance document for Significant Impact Levels, EPA recognizes that state air permitting agencies have discretion to require broader air modeling to make the required air quality impact demonstration under the PSD program:

> ***Permitting authorities retain the discretion*** to apply and justify different approaches and ***to require additional information from the permit applicant to make the required air quality impact demonstration***, consistent with the relevant PSD permitting requirements.

See U.S. EPA, Guidance on Significant Impact Levels for Ozone and Fine Particles in the Prevention of Significant Deterioration Permitting Program, at 4 (Apr. 17, 2018) (emphasis added).

C. The Department Should Impose Additional Requirements in the Proposed Installation Permit to Decrease Air Impacts from the Proposed Project.

Nothing in the federal Clean Air Act preempts the Department from imposing additional emissions limitations or permit conditions to decrease air quality impacts. In fact, the federal law reserves to state and local governments the authority to impose more stringent requirements:

> §7416. Retention of State authority
>
> Except as otherwise provided in sections 1857c–10(c), (e), and (f) (as in effect before August 7, 1977), 7543, 7545(c)(4), and 7573 of this title (preempting certain State regulation of moving sources) ***nothing in this chapter shall preclude or deny the right of any State or political subdivision thereof to adopt or enforce*** (1) ***any standard or limitation respecting emissions of air pollutants*** or (2) ***any***

> ***requirement respecting control or abatement of air pollution***; except that if an emission standard or limitation is in effect under an applicable implementation plan or under section 7411 or section 7412 of this title, such State or political subdivision may not adopt or enforce any emission standard or limitation which is less stringent than the standard or limitation under such plan or section.

See Section 116 of the Clean Air Act, 42 U.S.C. § 7416.

Moreover, nothing in the Pennsylvania Air Pollution Control Act preempts the Department's authority to impose more stringent requirements. *See* Air Pollution Control Act, Act of Jan. 8, (1960) 1959, P.L. 2119, No. 787. Nothing in the state regulations preempts this authority. *See* 25 Pa. Code chapter 127. Nothing in the county regulations forecloses this authority. *See* Allegheny County Air Pollution Control Regulations.

To address the additional air impacts, the Department should require the Applicant to conduct more complete, comprehensive air modeling that better accounts for the pollution sources in the area and impacts, and add more stringent monitoring requirements and limitations in the permit as warranted. (This should extend to both criteria pollutants and hazardous air pollutants). The Department should not simply allow the applicant to just add together different variables from different monitors based on multiple assumptions, combined with projected contributions by this proposed facility in order to calculate what it thinks will be the ambient concentrations in an already problematic airshed. This is especially the case where the Department has not reviewed an application for an installation permit for a new source in recent memory, and this would be a new major source less than 1,000 feet from the county border, with two environmental justice areas on the other side of that border. At a minimum, the Department should require modeling that includes data from the Greensburg and Charleroi monitors and should require CEMS for additional pollutants.

8. <u>The Department Should Require Invenergy to Properly and Fully Analyze the Additional Impacts Analysis, to Address the Collateral Implications of Expanding the Natural Gas Infrastructure.</u>

Section 165(a)(6) of the Clean Air Act prohibits the grant of a PSD permit unless "there has been an analysis of any air quality impacts projected for the area as a result of growth associated with such facility." 42 U.S.C. § 7475(a)(6). The regulations for "[a]dditional impact analyses" restate this requirement, expanding it to include analyses of not only air quality impacts, but also "impairment to visibility, soils and vegetation." 40 C.F.R. § 52.21(o)(1), https://www.govinfo.gov/content/pkg/CFR-2019-title40-vol3/pdf/CFR-2019-title40-vol3-sec52-21.pdf ("[t]he owner or operator ***shall provide an analysis of the impairment to visibility, soils and vegetation that would occur*** as a result of the source or modification and general commercial, residential, industrial and other growth associated with the source or modification" (emphasis added)). In addition, the regulations provide that "[t]he owner or operator ***shall provide an analysis of the air quality impact projected*** for the area as a result of general commercial, residential, industrial and other growth associated with the source or modification." *Id.* § 52.21(o)(2) (emphasis added).

The requirement to review air quality impacts associated with growth is also found in the air modeling requirement, which ties it together through the term "secondary emissions." That is a defined term. *See* 40 C.F.R. § 52.21(b)(18) ("Secondary emissions means emissions which would occur as a result of the construction or operation of a major stationary source or major modification, but do not come from the major stationary source or major modification itself").

In turn, "secondary emissions" must be included in the "source impact analysis" or the facility. See 40 C.F.R. § 52.21(k)(1) ("including secondary emissions").

EPA's New Source Review Workshop Manual addresses how to evaluate the question of air quality impacts associated with growth. *See* New Source Review Workshop Manual, at D.3-D.4, D.8-D.10, *available at* https://www.epa.gov/sites/production/files/2015-07/documents/1990wman.pdf. The Workshop Manual describes a two-step process in creating a growth analysis:

> 1) A projection of the associated industrial, commercial and residential source (ICR) growth that will occur in the area due to the source. The applicant is required to assess the availability of ICR services existing in the area and predict how much new growth is likely to occur in order to support the source or modification under review.
>
> > (a) In order to predict residential growth, the applicant will need to rely on variables like the size of the available workforce, the number of new employees and the availability of housing in the area.
> >
> > (b) Industrial growth would pertain to the growth of industries providing goods and services, maintenance facilities and other large industries necessary for the operation of the source or modification under review.
>
> 2) The applicant is required to develop an estimate of the secondary air pollutant emissions which would likely result from this permanent residential, commercial and industrial growth.

Once the applicant has emissions estimates from the proposed source or modification, they must combine the estimates of "associated emissions." The combined estimate is a prediction of the ground-level concentration of pollutants generated by the source and any associated growth. *See* EPA, New Source Review Workshop Manual, at D.3-D.4, https://www.epa.gov/sites/production/files/2015-07/documents/1990wman.pdf. "It is important that the analysis fully document all sources of information, underlying assumptions, and any agreements made as a part of the analysis." *Id.* at D1.

Regarding the current application, the Applicant generally asserts that the impacts as a result of growth would be insignificant. *See* Application, at 6-24, Section 6.5.2 ("In general, it is anticipated that the Project will have insignificant impacts on secondary source growth in the area of Allegheny County with respect to air quality related impacts"). In turn, the Department found that "[i]n accordance with 40 CFR § 52.21(o), Allegheny Energy Center provided a

satisfactory analysis of the impairment to visibility, soils, and vegetation that would occur as a result of Allegheny Energy Center's facility and general commercial, residential, industrial, and other growth associated with Allegheny Energy Center's facility." Technical Support Document, at 45.

The Applicant's analysis, and the Department's assessment are insufficient.

A. Invenergy's Air Quality Impacts Analysis Was Flawed and Incomplete.

As for air quality impacts projected for the area as a result of growth, the Applicant makes two narrow assertions. First, it asserts that the addition of approximately 16 full-time staff "would have little impact on the need for housing and related commercial services." *Id.* at 6-24, 6-25. Second, it asserts that Smithdale Road "is well constructed to accommodate the traffic related to the construction and operation of the Project." *Id.* at 6-25.

In its analysis of impacts on vegetation, the applicant asserts that "acute damage to vegetation is not likely to occur at ambient air concentration levels below the 1-hour NO2 NAAQS, although some reduction in growth might occur at continuous NO2 concentration levels as low as 200 – 500 μg/m." *See* Application, at 6-26, Section 6.5.3 (Adverse Impacts on Vegetation and Soils).[2] But Applicant does not mention that its own cumulative analysis demonstrated a cumulative impact much higher than the 1-hour standard of 188 micrograms per cubic meter. *See* Application, page 6-49 Table 6-13 (setting forth "Modeled + Monitored Concentration (μg/m3)" of 7140.9 micrograms per cubic meter).

Applicant ignores this statement, instead asserting that its own contribution would not be significant. *See* Application, at 6-25 (Adverse Impacts on Vegetation and Soils) ("In view of the small increase in ambient concentration levels anticipated as a result of the Project, adverse effects on vegetation from NOX emissions are not expected to occur."). Again, this amounts to hiding behind other large polluting facilities to justify the addition of more air pollution in the community.

With respect to vegetation, the Applicant makes a conclusory assertion regarding the biological impact on plant life, not based on any numerical calculations. *See* Application, page 6-26 ("Investigation of particulate effects on plants has generally shown no damage, although some interference with respiration and photosynthesis might occur if heavy crusts of dust accumulate on moist plant tissue. [citing literature]"). Ignoring the fact that the facility would have permitted emissions of 88.30 tons of fine particulates per year and 44.59 tons of particulates (condensable) per year, the Applicant asserts that "[t]his level of accumulation is more likely to be associated with heavy agricultural or construction activities than with highly controlled industrial particulate emissions." *See id. See also* Technical Support Document, at 19. The conclusory assertion that the wind will blow it away is not satisfactory. *See* Application, pages 6-26 through

[2] Without showing any analysis, the Department came up with a lower number that is less than the 1-hour standard of 188 micrograms per cubic meter. *See* Technical Support Document, page 44, Table C-2 – Allegheny Energy Center NAAQS Air Quality Modeling Demonstration (setting forth 62.2 micrograms per cubic meter).

6-27 ("[f]urthermore, natural weather conditions tend to remove dust and particulates from plant surfaces before heavy accumulations can build up.").

Ignoring the fact that there would be permitted emissions of 17.11 tons of sulfuric acid mist and 98.05 tons of ammonia per year, the Applicant asserts that "[t]he profile of non-criteria pollutants and magnitude of emissions are not expected to cause detrimental impacts to vegetation as pollutants that potentially could cause acidic deposition (e.g., H2SO4 emissions) are minimal and none of the fuels proposed to be utilized by AEC contain mercury in any appreciable amounts"). The Applicant ignores these facts again when it asserts that "[s]ince natural gas is the primary fuel, there will be minimal sulfur emissions that could result in acidic sulfur deposition."). *See id.*

Regarding the present application, the Air Quality Monitoring Results and Additional Impacts Analysis in the application purport to include the required analysis but simply do not look at growth as is required, nor do they fulfill the other requirements specified above.

These references to a growth analysis imply that those visibility variables and emissions were calculated for the proposed Invenergy Allegheny Energy Center. However, there is no qualitative discussion of growth or treatment of the projected growth emission quantities, or evidence or analysis to substantiate the conclusion that the growth associated with the facility was projected to be negligible. Without those calculations and discussions, there is no quantifiable way to see or verify how the conclusions in the application and draft permit came to be.

B. Invenergy's Air Quality Impacts Analysis Also Failed to Consider Many Additional Impacts, Including Failing to Consider Any of the Negative Impacts the Proposed Facility Will Have on the Local Recreation and Tourism Industry.

There are also many other potential impacts that the Applicant failed to address. For example, the Applicant should have addressed the fact that the communities most heavily impacted by the emissions from the proposed Invenergy Allegheny Energy Center - West Newton, in particular - have established their community as a recreational area relying solely on outdoor activities associated with the Great Allegheny Passage ("GAP") Trail and the Youghiogheny River (also "the Yough"). According to a recent US News/Associated Press article,

> "... [T]the Great Allegheny Passage ... has been an adventure, of the good kind, for many of the small towns along the 150-mile former railroad which runs through Allegheny, Westmoreland, Fayette and Somerset counties. The economic impact it has bestowed has been huge, said Bryan Perry, director of the Great Allegheny Passage Conservancy, a nonprofit that supports and coordinates work among all the trail volunteer groups."

Attachment 8, Renatta Signorini, "Trail Network Runs From Pittsburgh to Cumberland, Maryland," *Tribune-Review*, " (Apr. 3, 2021), available at https://www.usnews.com/news/best-

states/pennsylvania/articles/2021-04-03/trail-network-runs-from-pittsburgh-to-cumberland-maryland. The article details positive economic benefits for towns located along the trail that attracts local outdoor enthusiasts as well as tourists from as far away as Brazil, Japan, and Germany.

The article goes on to describe just one example of how West Newton has benefited directly from its GAP Trail-based economy. "While having the trail run through a town is a great asset for locals, it also means tourists are looking for places to eat and stay and help with booking and travel planning … All of those businesses began, either they were launched or they've pivoted to target trail travelers, in the last 20 years." *Id.*

"That was the case for Mary Lou Rendulic, owner of Bright Morning Bed & Breakfast in West Newton, mile marker 113. She originally purchased a home there in 2001. When friends started asking to stay overnight so they could hit the trail early, she realized she had a potential moneymaker." *Id.*

"The Great Allegheny Passage has brought the small Youghiogheny River town a sense of pride and new businesses to attract trail users. It changed things up in town,' she said." *Id.*

Additional tourist attractions and thriving businesses located along the GAP Trail include the following:

- West Newton Historic Railroad Station
- Westmoreland Yough Trail Chapter of the Great Allegheny Passage: https://bikewytc.org/
- Canoe and kayak outfitters
- Local trailside restaurants and microbrewery
- Local Bed & Breakfast
- River Runs, Races and Riverfest celebrations: http://membership.ohiorivertrail.org/index.php/2-uncategorised/23-great-allegheny-passage-boston-pa-to-west-newton-pa

Tourists to the area - including West Newton Borough - travel to recreate on the popular Youghiogheny River. The Yough is a major recreational attraction and draws visitors from around the east coast and the world. The Yough watershed provides habitat for several state and federally threatened and endangered species, and many of the local streams feature naturally reproducing populations of brook trout, which are increasingly uncommon.

Based on air modeling included in the application for the proposed Invenergy Allegheny Energy Center, pollutants from the stacks of the plant would heavily impact this same area. Local residents and those who recreate in the area have expressed concerns for the health of the community including the river, the trail and those who use both.

It is unclear why the Department did not require a deeper and broader analysis of the local communities' economic impacts. Instead, the Applicant submitted very limited details on how they would benefit economically from the project but neglected to properly consider how West Newton and the surrounding communities would be negatively impacted.

The application materials include no qualitative discussion of growth or treatment of the projected growth emission quantities, or evidence or analysis to substantiate the conclusion that the growth associated with the facility would have "insignificant impacts." Without those calculations and discussions, there is no quantifiable way to see or verify the conclusions in the Application.

The EPA's NSR Workshop Manual states, "[a]fter carefully examining all data on additional impacts, the reviewer must decide whether the analyses performed by a particular applicant are satisfactory." The "criteria for determining the completeness and adequacy of the analysis" include "whether the data and conclusions are presented in a logical manner understandable by the affected community and interested public." Invenergy has not provided a complete or adequate growth analysis as is required for this facility.

A proper growth analysis would take into consideration the fact that the facility is being planned in the area as a component of a much larger gas infrastructure build-out and is driving part of that build-out. The fuel demands of the plant may drive the drilling of new gas wells, or the expansion/re-fracking of existing gas wells, with very significant impacts in the area to air quality. The new wells will require additional miles of gathering line, possibly compressor stations, pigging stations, meter stations, and more. The future secondary emissions generated from these sources in supporting the Invenergy Allegheny Energy center's operations need to be analyzed. The power plant would also need a fuel pipeline for input and an electrical transmission line for output, both of which are associated with additional emissions. The type of analysis needed for impacts associated with the gas pipeline is readily replicable from FERC environmental impact assessments.

These are very significant emissions — among others — that the Applicant, and the Department, appear not to have considered at all in doing the growth analysis. This type of analysis needs to be undertaken before a plan approval may be issued. And this is not even to mention the cumulative impacts from the emissions from gas infrastructure build-out in the area taken as a whole. As the first report of the Forty-Third Statewide Investigating Grand Jury recommended, the Department should not be ignoring the cumulative impacts of other development in the area. *See, e.g.,* Office of the Attorney General, Commonwealth of Pennsylvania, Report 1 of the Forty-Third Statewide Investigating Grand Jury, at 10 (Recommendation 4), *available at* https://www.attorneygeneral.gov/wp-content/uploads/2020/06/FINAL-fracking-report-w.responses-with-page-number-V2.pdf.

The Department should require the Applicant to evaluate the impacts to the community from the growth related to the potential approval of this project, including the impacts on the tourism and recreation industry of reduced air quality, reduced soil and vegetation quality due to the proposed project's emissions, and the secondary emissions caused by the growth required to support this new major source of air pollution. It should require a meaningful cumulative impacts analysis measuring the contributions of individual sources upwind, to the air quality in the community downwind. These and additional impacts must be fully analyzed and submitted to the Department for further review, as well as be released for additional public comment.

9. The Department Should Require all ERCs for NOx and VOC Emissions to be Purchased from the Local Impacted Area and Should Require Invenergy to Propose ERCs Before the Close of the Public Comment Period.

While the Department is, appropriately, requiring Invenergy to purchase hundreds of tons of VOC and NOx emission offsets, the Department should require Invenergy to secure all ERCs it is required to purchase to offset the increase in PTE from this new facility from within the local impacted area. The Draft Permit requires Invenergy to secure 275 tons of NOx and VOC emissions reductions credits ("ERCs") prior to operating any sources at the facility. *See* ACHD, Draft Permit, at 17-18 & Tbl. 4-1 (*see* Paragraph 22, Section IV, Site Level Terms and Conditions, of the Draft Permit). Invenergy is required to purchase these ERCs to offset the total of the net increase in potential to emit. 25 Pa. Code §127.205(4); *see* Draft Permit at 17-18 & Tbl. 4-1. However, neither Invenergy nor the Department specifies which sources of NOx and VOC ERCs Invenergy will use or even propose to use to satisfy the offset requirements of 25 Pa. Code § 127.205.

A. The Department Should Require Invenergy to Purchase All ERCs from the Local Impacted Area.

A facility may obtain ERCs from outside the nonattainment area only if the facility "demonstrates that ERCs are not available in the nonattainment area where the facility is located, . . . if the other nonattainment area has an equal or higher classification and if the emissions from the other nonattainment area contribute to an NAAQS violation in the nonattainment area of the proposed facility." 25 Pa. Code § 127.208(8).

Offsets purchased must comply with 25 Pa. Code § 127.208, which requires the following:

1. "For the pollutants regulated under this subchapter, the facility shall demonstrate to the satisfaction of the Department that the ERCs proposed for use as offsets will provide, at a minimum, ambient impact equivalence to the extent equivalence can be determined and that the use of the ERCs will not interfere with the overall control strategy of the SIP" (25 Pa. Code § 127.208(3));

2. "ERCs shall include the same conditions, limitations and characteristics, including seasonal and other temporal variations in emission rate and quality, as well as the maximum allowable emission rates the emissions would have had if emitted by the generator, unless equivalent ambient impact is assured through other means" (*id.* § 127.208(4));

3. "ERCs may not be transferred to and used in an area with a higher nonattainment classification than the one in which they were generated" (*id* § 127.208(6)); and

4. "If the facility proposing new or increased emissions demonstrates that ERCs are not available in the nonattainment area where the facility is located, ERCs may be obtained from another nonattainment area if the other nonattainment area has an

> equal or higher classification and if the emissions from the other nonattainment area contribute to an NAAQS violation in the nonattainment area of the proposed facility. In addition, the requirements of paragraph (3) shall be satisfied" (*id.* § 127.208(8)).

For the purposes of the transfer of VOC and NOx credits, "the areas included within an ozone transport region established under section 184 of the Clean Air Act, 42 U.S.C.A. § 7511c, which are designated in 40 CFR § 81.339 (relating to Pennsylvania) as attainment, nonattainment or unclassifiable areas for ozone, shall be treated as a single nonattainment area." As the included parenthetical specifies, all of the areas "designated in 40 CFR § 81.339 (relating to Pennsylvania)" are within Pennsylvania. *See* 25 Pa. Code § 127.208(9); 40 C.F.R. § 81.339.

Together, these regulations require that a facility within the ozone transport region in Pennsylvania must generally acquire NOx or VOC credits from an area among those within Pennsylvania. The facility may only obtain NOx or VOC credits from a source outside Pennsylvania if it demonstrates that credits are not available within the same Pennsylvania nonattainment area and additionally demonstrates (a) that the source credits' nonattainment area has an equal or higher classification, (b) that emissions from the source credits' nonattainment area contribute to a NAAQS violation in the facility's nonattainment area, and (c) that the facility has fulfilled requirements of subsection (3). *See* 25 Pa. Code § 127.208(8), (9).

While it is still unclear whether this will be an issue, Commenters have observed violations of these requirements at other facilities required to secure ERCs where the owner/operator wanted to purchase ERCs from out of state. The Department should ensure all regulatory requirements are satisfied before approving any proposed offsets.

Commenters specifically request that the Department require offsets from within the area where the impacts of this new facility will be constructed and operated in order to protect health and the environment in the impacted area. Specifically, and optimally, the credits should be purchased from within or as close as possible to the impacted area, represented on the following image:

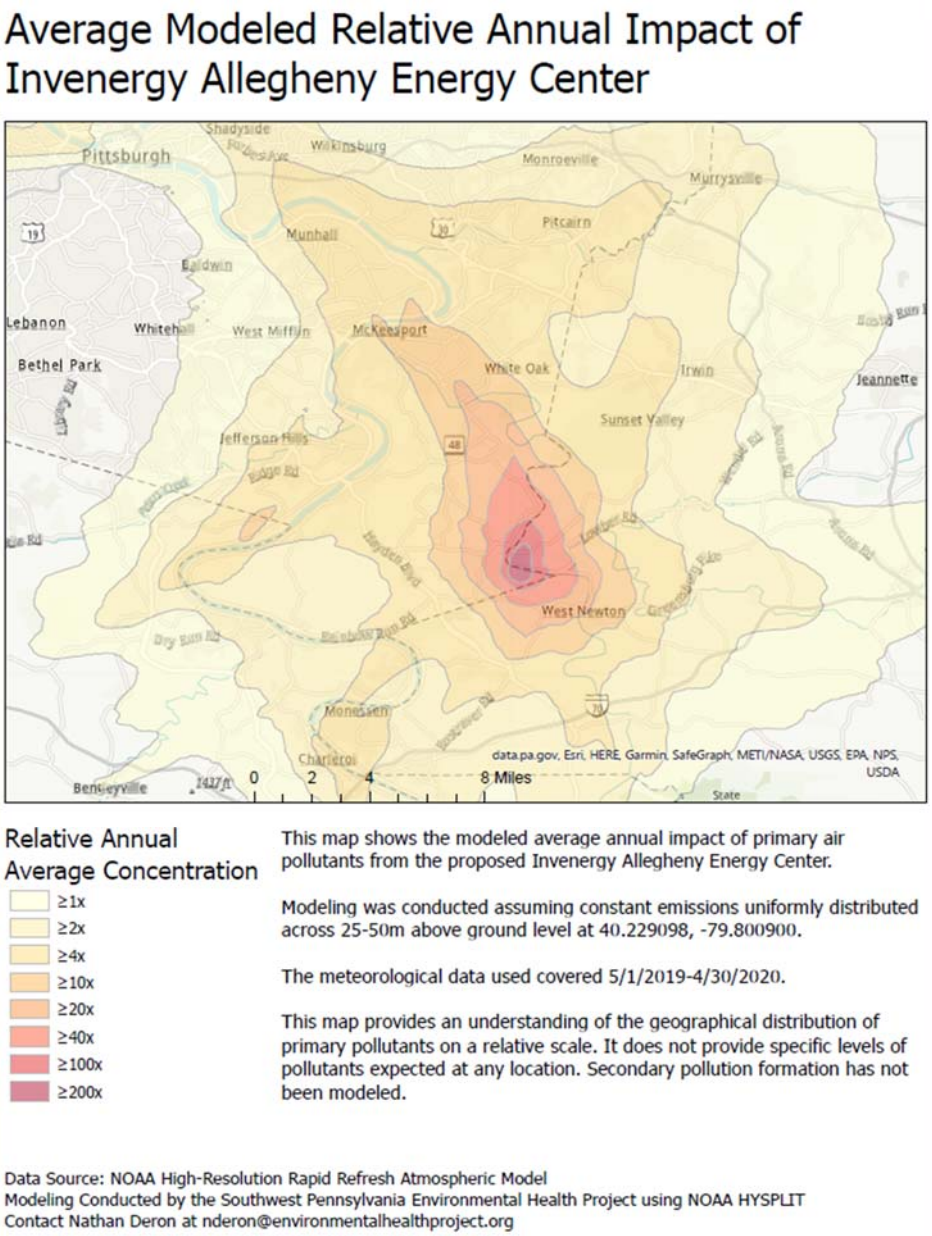


Image obtained from Nathan Deron, Environmental Health Project, Average Modeled Relative Annual Impact of Invenergy Allegheny Energy Center (created and modified on June 4, 2021).

ERCs purchased from within the impact zone would best be able to offset and reduce emissions of the facility.

In fact, a recent Stipulation of Settlement that resolved an appeal before the Environmental Hearing Board required the retirement of ERCs and specifically required that the ERC's come from within not just the state of Pennsylvania but a specific five-county region within Pennsylvania. *See* Attachment 9 -- *Clean Air Council and Environmental Integrity Project v. Commonwealth of Pennsylvania Department of Environmental Protection & Sunoco Partners Marketing & Terminals, L.P.*, 2018-057-L (Stipulation of Settlement, Apr. 7, 2020),

available at https://environmentalintegrity.org/wp-content/uploads/2020/04/Plan-Approval-23-0119H-Stipulation-of-Settlement-FINAL.pdf.

Ensuring ERCs are purchased from local sources is especially important in Allegheny County given the extremely poor air quality in the county. For example, according to the American Lung Association's recent 2021 State of the Air report, "Allegheny County was the most polluted county in the metro area, with a weighted average of 9.5 days (an 'F' grade) with unhealthy air quality during 2017-2019, slightly better than the 9.7 days recorded in 2016-2018, covered in last year's report." *See, e.g.,* Attachment 10, American Lung Association, Press Release, "Despite Its Best Air Quality, Pittsburgh Metro Area Ranks 9th Worst in Nation for Particle Pollution; Finds 'State of the Air Report" (Apr. 20, 2021), *available at* https://www.lung.org/media/press-releases/pittsburgh-sota-2021. ERCs should be local to Allegheny County or as close as possible there to best offset the facility's potential to emit.

B. The Department Should Require Invenergy to Disclose Its Intended Purchase(s) of ERCs and Provide Additional Public Comment if Necessary to Ensure the Public Can Comment on Intended ERC Offset Purchases.

In order to provide members of the public with notice or the opportunity to consider and comment on Invenergy's selection of and the Department's approval of purchased credits, Invenergy must designate the 275 tons of NOx and VOC credits to be purchased prior to the advancement of the permit process. Since Invenergy has not indicated the purchase of these credits, or Department approval, within the permit application or draft permit documentation, the public is unable to comment on whether these credits meet the required elements of the regulation. The Department, by closing the public comment period without requiring Invenergy to provide the details of the intended ERC purchase to the public for review, deprives the public of a meaningful public comment process and fails to ensure the public can adequately evaluate potential risks from the facility's emissions in this area.

10. <u>The Department Should Clarify How the Proposed Air Pollution Episode Regulations Would Apply to the Proposed Project, Located Close to the County Line.</u>

On page 4-21 of its application AEC states "If requested by ACHD, AEC will prepare and submit a source curtailment plan to address the reduction of emissions during air pollution episodes." Given ACHD's new focus on updating its air pollution episode regulations, and the proximity of AEC to Clairton and the Mon Valley, ACHD should request a source curtailment plan. This is especially true given the fact that it will be a new significant source of PM in the already overburdened area.

According to the Department's proposed air pollution episode regulations, the proposed facility would have to prepare a Mon Valley Air Pollution Mitigation Plan because it would have allowable emissions greater than 10 tpy PM10 and 6.5 tpy PM2.5 and it would be located in Elizabeth Township. *See* Proposed Permit, Section V.a.1.p, TABLE V-A-1: Emission Unit CT01 Emission Limitations, page 20 (setting forth allowable emissions rate of 88.30 tpy for PM10 and 88.30 tpy for PM10); *See* Proposed Regulations https://www.alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Programs/Air_Quality/20210505-Mon-Valley-Air-Pollution-Episode-Rule.pdf, Section 2106.06.a ("This section applies to the following sources located in one or more of the municipalities identified in Subsection d"), 2106.06.d. (Elizabeth Township is listed among 32 municipalities in the Mon Valley Air Pollution Episode Area, but municipalities in Westmoreland County are not).

Given the positioning of the proposed facility close to the county line, there is a concern that air pollution episodes in the nearby community could escape through the cracks of regulation. Under the Department's proposed air pollution episode regulations, the designation of a watch or warning is based on air monitoring data at a monitoring station within the Mon Valley in Allegheny County (*e.g.*, the Liberty Monitor or Braddock Monitor) or a forecast, rather than air quality outside the county:

> **Mon Valley Air Pollution Episodes.** For purposes of this Section, the "Mon Valley PM2.5 threshold level" shall be the value of the primary 24-hour $PM_{2.5}$ NAAQS.
>
> **1. Mon Valley Air Pollution Watch.** The Department shall issue a Mon Valley Air Pollution Watch ***if the Department has determined*** from an air quality forecast that for at least the next 24-hour period atmospheric conditions will exist which indicate that the 24-hour average ambient concentration of PM2.5 ***in one or more of the municipalities identified in Subsection d*** is forecasted to exceed the Mon Valley $PM_{2.5}$ threshold level.
>
> **2. Mon Valley Air Pollution Warning.** The Department shall issue a Mon Valley Air Pollution Warning if during a rolling 24-hour averaging period, the Mon Valley $PM_{2.5}$ threshold level is

> exceeded ***at an official monitoring station in the municipalities identified in Subsection d*** and the Department has determined atmospheric conditions will continue as described in Paragraph c.1.

See Proposed Rule, Section § 2106.06.c (bold italics added for emphasis). This means there could be an air pollution episode in Sutersville or West Newton, to which the proposed facility and other sources in Allegheny County would contribute, but it might not be detected through the efforts of the Department.

The Department should clarify how the proposed air pollution episode regulations would be protective of the communities beyond the county line, and near the location of the proposed facility.

Thank you for your consideration of these comments.

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