EXHIBIT 9

MEMORANDUM

To:	Franklin B. Greiner, Jr.	**Date:**	November 13, 2025
From:	Kyle Costello (ALL4 LLC)		
Subject:	Special Exception Application – Environmental Performance Standards		
CC:	Ethos Development LLC, James S. Snyder, P.E., Roy Rakiewicz (ALL4 LLC)		

ALL4 LLC (ALL4), on behalf of Ethos Development LLC, and Franklin B. Greiner Jr. (Greiner), has prepared the following specialized environmental technical memorandum as required for a Special Exception application for the Greiner Development Project to build three industrial buildings at 2843 Mount Pleasant Road, Mt. Joy, Pennsylvania (Facility). This memo addresses each component and documents compliance with the Township of Mount Joy Performance and design standards for all non-residential uses, as set forth in § 135-326(F-L) under the Mount Joy Zoning Regulations.

ALL4 understands that the proposed Facility will be a typical light industrial development composed of various-sized buildings involving, but not limited to, warehousing, light manufacturing, processing, packaging, production, wholesaling, storage, distribution, or repair of a wide range of consumer products. The proposed Facility will include three separate industrial buildings (Buildings 1, 2, and 3, respectively) with a total combined gross floor area of approximately 1.228 million square feet. The Facility will be provided with separate truck courts for truck access and circulation, loading/unloading, and trailer parking in addition to employee and visitor car parking areas to accommodate the needs of the Facility. All access and parking operations will occur on asphalt or concrete-paved surfaces surrounding the Facility.

This memorandum addresses the Environmental Performance Standards for the development of the site infrastructure and buildings as presented by the developer. Based on the nature of the proposed site, future tenant activities will comply with the performance and design standards for all non-residential uses under § 135-326(F-L) under the Mount Joy Zoning Regulations and state and federal air quality requirements, as applicable. I have provided all opinions in this report to a reasonable degree of professional certainty.

F. Flammable and Explosive Materials

§ 135-326(F) All activities and all storage of flammable and explosive materials at any point shall be prohibited unless adequate safety devices against the hazards of fire and explosion are provided.

While no substantive flammable or explosive materials are anticipated to be used in the normal operation of the Facility, to the extent a particular business may engage in an activity or store such materials, it will only be allowed if adequate safety devices against the hazards of fire and explosion are provided, including meeting all state and federal requirements for storing such materials as well

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as complying with all commercial building code requirements, including installing fire suppression devices and alarms. While the project will utilize propane storage tanks to supply the fuel for comfort heating of the three buildings, these tanks will be installed and used in accordance with all applicable governmental regulations, which will include adequate safety devices against the hazards of fire and explosion.

Accordingly, it is my opinion to a reasonable degree of professional certainty that the Facility will comply with this standard.

G. Radioactive Activities

§ 135-326(G) No activities which emit radioactivity at any point are permitted.

The proposed project will not introduce, utilize, or store any radioactive materials or ionizing radiation sources on-site or as any part of the normal operations of the Facility. There is no business need or plan involving radioactive materials or ionizing radiation sources at this location.

If radiation sources were to be present on a site in Pennsylvania, they would fall under the governance of the Pennsylvania Department of Environmental Protection (PADEP) via the Pennsylvania Radiation Protection Act (35 P.S. 7110.101 et seq.) and its associated regulations (25 Pa. Code, Article V). These regulations mandate that any person who "uses or possesses... a radiation source" must obtain a license or registration from the PADEP (25 Pa. Code 215.1). The project will not seek, apply for, or possess this license or registration. The absence of required state regulatory approval precludes the use of all ionizing radiation sources on the property, and possession of such materials without this authorization is strictly prohibited.

Because the project, as proposed, includes no radiation sources, no specific federal safety requirements apply. The Occupational Safety and Health Administration (OSHA) sets safety standards, 29 Code of Federal Regulations (CFR) 1926.53, for workplaces that utilize ionizing radiation sources, including requirements for dose limits, surveys, and personnel monitoring. By maintaining a zero-radiation status, the project avoids the applicability of these federal regulations entirely. The commitment to exclude all radioactive materials and ionizing radiation sources is integrated into the planning process to ensure compliance with the Mount Joy Township Ordinance and to protect the health, welfare, and safety of the community. This commitment is supported by the regulatory structure, specifically the absence of required state and federal permits and licenses, which ensures that radiation sources will not be brought onto the site.

Accordingly, it is my opinion to a reasonable degree of professional certainty that the Facility will comply with this standard as no activities which omit radioactivity at the Facility will be permitted.

H. Electrical Activities

§ 135-326(H) No electrical disturbances adversely affecting the operation of any equipment other than that of the creator of such disturbance shall be permitted.

Reference is made to a separate letter report from Mr. Charles C. Carlson, P.E., Electrical Engineer, which discusses and certifies the absence of any electrical disturbances occasioned by the operation of the Facility to sources other than the user.

I. Soiling

§ 135-326(I) No fly ash, dust, fumes, vapors, gasses or other forms of air pollution emissions which can cause any excessive soiling upon another property shall be permitted.

The Facility will be constructed and will operate as a typical light industrial facility with customary operations as described in previous sections of this memorandum and is not expected to generate emissions of regulated air pollutants. Detailed explanations are provided as follows.

Air Contamination Sources: No heavy manufacturing, outdoor heavy industrial, or exterior production activities are planned at the Facility, nor will it be equipped with refrigerated storage capabilities. Any emissions sources from the Facility, as constructed, will be insignificant and would be exempt from Pennsylvania's air permit requirements as detailed under the "Regulatory Review and Permit Status" section below. Storage of substantial quantities of gasoline or diesel fuel will not occur onsite, and no truck or automobile refueling facilities are planned for the property.

Trivial Activities: Minor air emissions could occur generally as a result of trivial activities as described in PADEP Document No. 275-2101-003 – Air Quality Permit Exemptions dated July 1, 2021. Specifically, plant maintenance and upkeep operations and repair or maintenance shop activities at the Facility are considered as "trivial" activities and will have no impact on adjacent properties and therefore are specifically exempt from Pennsylvania Plan Approval requirements.

- Trivial Item Exemption No. 17 specifically identifies plant maintenance and upkeep activities (e.g., grounds-keeping, general repairs, cleaning, painting, welding, re-tarring roofs, and paving parking lots) provided these activities are not conducted as part of a manufacturing process, are not related to the source's primary business activity, and do not otherwise trigger a permit requirement.

- Trivial Item Exemption No. 18 specifically identifies repair or maintenance shop activities (excluding emissions from surface coating and degreasing) and not otherwise triggering a permit requirement.

MOBILE SOURCE AIR EMISSIONS

Inbound and outbound logistics and yard traffic at the Facility will involve freight transport (i.e., trucks), propane-powered material handling equipment (i.e. forklifts), and employee passenger cars. The bulk of the material handling equipment within the Facility is expected to be electrically powered. The various on-site vehicles are mobile air contamination sources, defined in 25 PA Code Chapter 121 as "[a]n air contamination source, including, but not limited to, automobiles, trucks, tractors, buses and other motor vehicles…"

- **Federal Responsibility:** The control of emissions from mobile air contamination sources is predominantly a Federal responsibility addressed in Title II (Emission Standards for Moving sources) under the Clean Air Act (CAA).

- **Permit Exemption:** Emissions associated with mobile air contamination sources are not subject to air permitting requirements for stationary sources and are explicitly exempted from Pennsylvania Plan Approval requirements at 25 PA Code §127.14(a)(6) and are also treated as Trivial Item No. 1 in PADEP Document No. 275-2101-003 – Air Quality Permit Exemptions dated July 1, 2021.

- **Idling Compliance:** The facility will be subject to and will comply with the Pennsylvania statutory requirements of Title 35 Chapter 23B - Diesel-Powered Motor Vehicle Idling Act. Chapter 23B restricts diesel truck engine idling during vehicle loading, unloading, or parking to five minutes in any continuous 60-minute period.

Project-Level Air Quality Handbook (Publication No. 321)[1] is used to assist PennDOT, its consultants, and other potential users in the completion of project-level mobile source air quality analyses to satisfy the current state and federal air quality requirements for transportation improvement projects. Figure 3 in the Project-Level Air Quality Handbook provides a breakdown of the project particulate matter (PM) screening process based on the annual average daily traffic (AADT) and the daily truck volume of heavy trucks. In this case, the projected AADT for the Facility is not considered by PennDOT to be a project of Air Quality concern.

Accordingly, mobile source air emissions generated by the Facility will not be considered a significant source of PM emissions and will not cause any excessive soiling upon another property.

REGULATORY REVIEW AND PERMIT REQUIREMENTS

Given that no heavy or exterior manufacturing processes are proposed, our analysis focused on whether excessive soiling at the property line could occur from minor sources of emissions. The following analysis provides technical justification that these minor sources will not cause excessive soiling beyond the property line, and, therefore, the Facility meets this requirement of the ordinance.

[1]https://www.pa.gov/content/dam/copapwp-pagov/en/penndot/documents/public/pubsforms/publications/pub%20321.pdf

The as-constructed Facility support and other site activities are generally exempt from Pennsylvania's Plan Approval Application requirements at 25 PA Code §127, Subchapter B and do not contribute materially to air pollution as defined in 25 PA Code §121, under Pennsylvania's air resources regulations. For example, internal combustion engines rated at less than 100 brake horsepower (BHP) each are exempt from Plan Approval requirements under the PADEP Document No. 275-2101-003 – Air Quality Permit Exemptions, dated July 1, 2021, under 25 Pa. Code §127.14(a)(8), Item No. 4 of the referenced document. Accordingly, because the emergency generators at the Facility have a maximum rating of less than 100 BHP each, they are exempt from state air quality permitting requirements as they are not a significant source of air pollution and would not result in any soiling at the property line. The three emergency generator engines, while insignificant sources of emissions, are subject to federal air quality standards that limit their operation (except during emergencies), limit their emissions, and require operation and maintenance in accordance with the manufacturer's recommendations, thereby assuring proper operation and minimal emissions.

Likewise, the propane storage tanks that will store the fuel to be used for the permit-exempt comfort heating systems for the three Facility buildings are pressurized, with no associated working or breathing losses of volatile organic compounds (VOC). Therefore, no VOC emissions are expected from the propane storage tanks at the Facility.

The Facility will not be a major source of air emissions under 40 CFR Part 70 – State Operating Programs, will not be Title V facility under 25 Pa. Code 121, and will not be subject to major source operating permit requirements. Facility-wide actual emissions will be less than Pennsylvania's State-Only Operating Permit exemption thresholds, as specified on Page 18 of Pennsylvania Plan Approval requirements in accordance with PADEP Document No. 275-2101-003 – Air Quality Permit Exemptions dated July 1, 2021. Therefore, the Facility, as constructed, will be exempt from the requirement to obtain a minor source operating permit. The proposed Facility does not include any direct sources of fly ash, dust, fumes, vapors, gases or other forms of air pollution emissions which can cause any excessive soiling upon another property. The Facility will maintain records of actual emissions to document that emissions remain less than the operating permit thresholds. Applications for air quality construction permits (i.e., Plan Approval Application) and/or operating permits will be submitted if future tenant operations change in a manner that the exemption criteria no longer apply. Future tenant changes will also be protective of the performance and design standards for all non-residential uses under § 135-326(F-L) of the Mount Joy Zoning Regulations ordinances.

FUGITIVE DUST TECHNICAL JUSTIFICATION AND METHODOLOGY

Minor fugitive dust emissions may occur during site preparation and construction operations as a result of earth-moving operations, paving of bituminous surfaces, and related excavation and construction activities, which are short-lived and not regulated for normal operations. The Facility and its selected contractors will commit to best management practices to reduce temporary air quality impacts during the construction period, as will be required by the Project's PA Chapter 102 Erosion and Sediment Control, National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges of Stormwater Associated with Construction Activities (PAG-02).

Upon completion, minor vehicle-induced fugitive dust emissions may be generated by truck traffic on paved roads and streets at the Facility. Fugitive emissions are regulated under 25 Pa. Code § 123.1. 25 Pa. Code §123.1(a)(3), which specifies that fugitive emissions from the use of roads and streets are permissible. Under 25 Pa. Code §123.1(a)(3) §123.1(c), persons responsible for permissible sources of fugitive emissions (e.g., roads and streets) shall take *"all reasonable actions to prevent particulate matter from becoming airborne".* Furthermore, *"Paving and maintenance of roadways"* is specifically identified by §123.1(c)(3) as a reasonable action to minimize fugitive emissions from roads and streets. All roads, streets, and parking areas at the facility will be paved and will be routinely maintained in accordance with applicable standards and best property maintenance practices.

Fugitive Roadway Dust Evaluation

Minor fugitive emissions associated with vehicular traffic at the Facility will occur during normal Facility operation. All other dust sources are negligible or would be contained within the industrial buildings and would not be able to cause soiling on another property. Fugitive emissions from paved roadways can be characterized as dust and can occur whenever vehicles travel over a dry, paved surface, such as the road or parking lot. PM (i.e., dust) emissions from paved roads can occur from brake and tire wear emissions, and from resuspension of loose, dry material on the road surface.

Fugitive dust emissions associated with trucks and employee vehicles traveling on Facility roadways and parking areas were calculated in accordance with generally accepted methodology. The calculation procedure from the U.S. Environmental Protection Agency (U.S. EPA) AP-42 emissions factors under Chapter 13.2.1, Paved Roads. Chapter 13.2.1 of AP-42 provides a method to calculate PM emissions from paved roads. The equation for the calculation method is provided below:

$$E_{ext} = [\, k\,(sL)^{0.91} * (W)^{1.02}\,](1 - \frac{P}{4N})$$

Where:

- E_{ext}: annual average emission factor in the same units as k.
- k: particle size multiplier for particle size range and units of interest
- sL: road surface silt loading (grams per square meter)
- W: average weight (tons) of the vehicles traveling the road
- P: number of "wet" days with at least 0.01 inches of precipitation on an annual basis.
- N: number of days in a year

Site Data and Assumptions

The inputs for the equation above were determined based on preliminary design of the site, projected staffing levels, and anticipated business operations. A round-trip drive length at the site was determined to be approximately 1.80 miles per truck. This represents a conservative estimate of travel, as it is the furthest distance from the most remote entrance and passing all three buildings. The weight of the trucks and employee vehicles was based on typical-sized vehicles of each category. The particle size multiplier was selected from U.S. EPA AP-42 Chapter 13 Table 13.2.1-1, the PM value represents PM_{30} which is sometimes termed "suspendable particulate". The wet days per year are based on Figure 13.2.1-2 in U.S. EPA AP-42 Chapter 13.

We calculated emissions reflecting the "worst case" scenario because they assume that all trucks and vehicles will travel to the farthest parking spots from the Facility's main entrance. As part of the Facility's regular property maintenance operations and stormwater pollution prevention best management practices, sweeping of roadways, parking lots and other vehicle transit areas, and the like, will further reduce fugitive dust emissions from roadways.

Based on this analysis, fugitive roadway dust from the Facility is not a significant source of air pollution and will not cause any excessive soiling upon another property.

Conclusions

Based on the analysis set forth above, it is my opinion to a reasonable degree of professional certainty that the Facility will not create any fly ash, dust, fumes, vapors, gasses or other forms of air pollution emissions that would cause any excessive soiling upon another property.

J. Vibration

§ 135-326(J) No vibration which is discernible to the human sense of feeling on an adjacent property for three minutes or more in duration is permitted in any hour of the day between 7:00 a.m. and 7:00 p.m. or for 30 seconds or more between the hours of 7:00 p.m. and 7:00 a.m.

An analysis of the site vibration impacts was completed using industry-standard vibration calculations. The daily site operations expect to have minimal vibration based on the operating equipment onsite, as further demonstrated in this section. The normal day-to-day operations at the Facility will consist of warehousing and light manufacturing related operations, with inbound and outbound logistics and distribution traffic. The trucking activity at the Facility is the main source of vibration, and an analysis of the impact from trucking is included in this section. The following assumptions are based on normal Facility operation after completion of construction. During construction of the Facility, on-site vibrations may occur associated with construction vehicles, earthmoving operations, blasting and general building construction. These operations are separately regulated and are considered temporary, short-term, and intermittent in nature and will occur during daytime hours and therefore, are not considered a part of normal, long-term Facility operations.

TECHNICAL JUSTIFICATION AND METHODOLOGY

This predictive approach, utilizing the Federal Transit Administration (FTA) Construction Vibration Attenuation Formula[2], adapted from equation 7-2, is an established methodology for preliminary site assessment and risk screening in geotechnical and construction engineering. It is an industry-

[2] https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf

standard practice for calculating Peak Particle Velocity (PPV) decay over distance. The formula is as follows:

$$PPV_2 = PPV_1 \left(\frac{D_1}{D_2}\right)^n$$

Where:

- PPV_1: Reference Peak Particle Velocity (mm/s or in/s) at distance D_1.
- PPV_2: Activity Predicted Peak Particle Velocity (mm/s or in/s) at distance D_2.
- D_1: Reference Distance (m or ft) where the reference PPV_1 was measured.
- D_2: New Distance (m or ft) where prediction is desired.
- n: Attenuation Coefficient (or Decay Constant).

Physical Basis of Attenuation

Vibration wave decay is governed by two primary physical mechanisms, both captured within the power law formulation:

1. Geometric Spreading (Distance Loss): As energy moves away from the source, it naturally spreads out over a larger and larger area (like an expanding sphere). This process simply dilutes the energy, causing the wave's intensity to drop in proportion to the increase in distance.

2. Material Attenuation (Damping Loss): This is the non-elastic energy dissipation within the material itself (soil, rock, etc.). Essentially, the medium dissipates some of the wave's mechanical energy and converts it into heat through internal friction and material stickiness. This effect is critical because real-world materials are dissipative, making the overall decay rate greater than what distance alone would predict.

Source Data and Parameter Selection

The conservative Reference PPV used is derived from an initial calculation that aggregates the potential peak vibration energy from the primary mobile source relevant to the site, which includes a loaded semi-truck. Current operations estimate a total of 383 truck trips daily with a peak hourly rate of 44 truck trips per hour. The highest calculated PPV from this source grouping was selected as the controlling reference value, establishing a worst-case scenario for the assessment. As discussed in the FTA, *Transit Noise and Vibration Impact Assessment Manual, September 2018,*[3] and California Department of Transportation (Caltrans), *Transportation and Construction Vibration Guidance Manual, April 2020*[4]*,* light trucks, compressors, generators, hydraulic loaders and typical warehouse or light industrial activities generate little or no ground vibration and therefore are not expected to contribute to vibrations on-site.

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[3] https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf

[4] https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf

The selection of the Attenuation Coefficient (n=1.5)[4] represents a conservative judgment based on published empirical studies for sites lacking specific geotechnical data. This coefficient is justified because:

- It is a widely accepted mid-range value for typical soil and overburden conditions.
- It is deliberately lower than the n=2.0 value associated with highly dissipative, ideal soil (which would predict faster decay), thereby maintaining a margin of safety against underestimating PPV levels.

HUMAN PERCEPTION AND SCREENING THRESHOLDS

The minimum threshold for extremely sensitive human perception of steady-state vibration is a PPV of 0.015 mm/s (or 0.0006 in/s)[4]. This minimal threshold defines the zone where vibration may cause human annoyance, which is orders of magnitude lower than typical structural damage limits. The PPV amplitude is the primary screening criterion because it directly measures the velocity, or strength, of the ground motion.

For specific, non-impact sources such as standard operational warehouse truck traffic on well-maintained paved surfaces, the motion typically produces dominant frequencies in the 4 to 30 Hz range, which includes the 4 to 8 Hz band[4] where humans are most sensitive to annoyance. However, the preliminary, conservative screening estimate indicates that PPV levels from this source are not expected to exceed the 0.015 mm/s (or 0.0006 in/s) human perception threshold beyond 45 meters (147.6 feet).

The 45 meter (147.6 feet) distance represents a conservative estimate of distance whereby the wave's amplitude is considered imperceptible, rendering the vibration (regardless of its frequency) negligible for assessment purposes.

JUSTIFICATION OF DESKTOP SCREENING TOOL

The application of this model for desktop screening is applicable based on the following criteria:

- **Established Standard:** The power law regression is fundamental to vibration analysis and forms the basis for numerous international standards governing construction and blasting activities. It provides a common, reproducible, and auditable calculation methodology.

- **Risk Management and Conservatism:** In the absence of definitive, site-specific attenuation data, the model allows for the selection of conservative input parameters. By selecting a lower bound value for n (e.g., n=1.0 for rock or n=1.2 for very competent soil), the resulting PPV predictions are maximized, thereby providing a clear margin of safety for defining exclusion zones or mitigating risk to nearby structures.

CONCLUSIONS

The predictive analysis of post-construction site operations suggests that ground vibration impacts are expected to be minimal and well below established screening thresholds. The calculations indicate that PPV from routine operations is not expected to exceed the extremely sensitive human perception threshold of 0.015 mm/s beyond a distance of approximately 45 meters (147.6 feet). Furthermore, the brief, transient vibrations generated as vehicles, such as loaded trucks, enter the site are comparable to or less than vibrations already caused by passing traffic on adjacent public roadways.

The nearest occupied residential receptor is located more than 182 meters (600 feet) to the south of the site from the anticipated truck travel routes. At the closest approach to a potentially receptive property line, the northeast corner of Building 1, trucks are expected to temporarily pass within 24 meters (80 feet) of the currently agriculturally zoned property. Once trucks move onto the Facility's internal access drives, they are immediately moving away from adjacent properties, and the short duration of the pass-by event minimizes any potential off-site impact.

The site-wide peak rate of 44 truck trips per hour yields an average spacing of 1.36 minutes per truck circulating throughout all three building sites on the property. A conservative case analysis of the 80 foot boundary near the Northeast corner of Building 1, estimates that truck traffic is limited to approximately 14.6 truck trips per hour (~33.3% of total peak traffic, based on an even distribution across three buildings). This represents an average truck trip at this closest point of 4.09 minutes, thereby preventing continuous vibration over the regulated durations for both daytime and night-time activity and providing adherence to the maximum vibration duration thresholds. As a result, the total duration of perceptible vibration on an adjacent property, at any point on the site, is projected to be far less than the lowest permitted duration of 30 seconds.

Accordingly, it is my opinion to a reasonable degree of professional certainty that the Facility will not cause vibrations which are discernible to the human sense of feeling on an adjacent property for three minutes or more in duration during any hour of the day between 7:00 a.m. and 7:00 p.m. or for 30 seconds or more between the hours of 7:00 p.m. and 7:00 a.m.

K. Atmosphere

§ 135-326(K) No activities producing heat, cold, dampness or movement of air are permitted which shall produce any material effect on the temperature, motion or humidity of the atmosphere at the lot line or beyond.

This qualitative analysis addresses the potential for the proposed Facility (three industrial buildings and ancillary equipment) to generate noticeable thermal, dampness, or air movement impacts outside of the designated property boundaries. Potential sources of thermal emissions are limited to emergency generators and internal space heating systems.

EMERGENCY GENERATORS

The Facility will likely incorporate approximately three emergency standby generators. When operational, the engines associated with the units emit localized plumes of warm exhaust air. For typical warehouse and light industrial facilities, emergency generators operate exclusively for backup power and infrequent, scheduled maintenance testing. They are not a source of routine, long-term power.

- **Impact Assessment:** While in intermittent operation the generators exhaust system emits air at a temperature above ambient temperature, the volume of air is low compared to the overall atmosphere and cannot be felt outside the immediate area of the generator exhaust point. Based on the proposed site layout, the generators will be situated at substantial distances from the nearest lot lines, as defined by the § 135-165 *Area and bulk requirements* setback requirements. This setback requirement ensures that the heat produced from the generators will not be felt at the lot line or beyond.

- **Justification:** Due to the relatively small thermal output, intermittent and infrequent operation, and the localized dispersion of the exhaust plumes, any temperature increase will be contained entirely within the immediate equipment zone and the Facility property and will quickly dissipate.

INTERNAL SPACE HEATING SYSTEMS

The primary heat source for the warehouses consists of internal space heating systems, designed exclusively to maintain operational comfort heating temperatures within the occupied buildings.

- **Equipment:** The planned heating units are Cambridge Engineering S-Series heaters, which are designed as high-efficiency, direct-fired, or make-up air systems that convey heated air directly into the building interior spaces. Comfort heating will generally occur during the heating season beginning October 1 and ending April 30.

- **Heat Containment:** The design principle ensures the heat energy is conveyed inside the insulated building envelope for operational purposes. The system design is explicitly focused on internal heat retention and minimized thermal loss to the exterior environment.

- **External Impact:** All S-Series units will be installed as roof-mounted components. Given the mandatory setback requirements established by the governing zoning ordinance, § 135-165 *Area and bulk requirements*, coupled with the actual plan design that locates all buildings much further away than the minimum setback and with rooftop units inset even farther from the building face, no part of the building (and thus, no heater component) will be permitted to be anywhere near the lot line.

CONCLUSION

Based on the contained design of the heating and generator systems, their intermittent and seasonal operation, and the required setback distances from all lot lines, the Facility will produce no material effect on the temperature, motion, or humidity of the atmosphere at the lot line or beyond. Accordingly, it is my opinion to a reasonable degree of professional certainty that the Facility will not involve any activities producing heat, cold, dampness or movement of air that would have a material effect on the temperature, motion or humidity of the atmosphere at the lot line or beyond.

L. Odorous Emissions

§ 135-326(L) No emission of odorous gasses or other odorous matter in such quantities as to be detectable to the human sense of smell when measured at the lot line shall be permitted.

This qualitative analysis reviews the potential for the proposed Facility's operations to cause detectable odorous emissions at the lot line, concludes that the impact is negligible, and identifies the relevant regulatory framework.

REGULATORY CONTEXT

Odor regulation is primarily managed at the local level, as demonstrated by the lack of specific federal or state standards applicable to this non-agricultural facility.

- **Federal Level:** U.S. EPA has no specific standards pertaining to malodors, viewing odors as a local issue best handled through local oversight.

- **State Level:** The relevant state regulations, detailed in 25 Pa Code Subchapter G (Facility Odor Management criteria), are designed specifically for agricultural facilities due to the odorous nature of their operations. Because the facility is not an agricultural operation, the standards under 25 Pa Code Subchapter G do not apply. 25 Pa Code §123.31(b) prohibits "…the emission into the outdoor atmosphere of any malodorous air contaminants from any source, in such a manner that the malodors are detectable outside the property of the person on whose land the source is being operated." Because the proposed project is a light industrial, manufacturing Facility with no heavy industrial activities and associated air discharges to the atmosphere, no malodorous emissions are anticipated.

- **Local Level:** The local standards under § 135-326(L) are the only applicable odor regulations for the Facility, which has no objective standard for which to comply. As suggested by the federal and state frameworks, odor levels are difficult to quantify and are typically regulated on a case-by-case basis under local oversight. Regardless, emissions of malodorous compounds from the facility are not expected.

REVIEW OF POTENTIAL ODOR SOURCES

Propane Fired Equipment

When propane burns completely in a well-maintained engine or appliance, the combustion process destroys the ethyl mercaptan odorant. The exhaust products are primarily carbon dioxide CO_2 and water vapor H_2O, which are essentially odorless.

Uncombusted Diesel Fuel

The proposed warehouse and project site are not projected to contain diesel fuel storage or diesel fueling operations. Diesel fuel is a clear yellow liquid with a kerosene or hydrocarbon odor and is known to evaporate readily due to its low vapor pressure.[5] No diesel fueling or diesel fuel storage operations are expected to take place at the Facility. Any odorous emissions associated with diesel fuel evaporation will be negligible.

Diesel Fuel Combustion Emissions

Odors would primarily result from combusted diesel fuel emitted through vehicle exhaust systems. Diesel fuel combusted in a well-maintained diesel engine typically does not result in significant odorous emissions. This low-odor profile is a result of advanced technologies and on-road diesel standards for mobile source emissions[6] regulated under CAA Title II. These technologies include Exhaust Gas Recirculation (EGR), Diesel Oxidation Catalyst (DOC), Diesel Particulate Filter (DPF), and Selective Catalytic Reduction (SCR) with Diesel Exhaust Fluid (DEF). Engine software and onboard diagnostics monitor the air-fuel mixture to minimize the formation of pollutants, including unburned carbon (soot) and compounds like NO_x and CO. In addition, the use of Ultra-Low Sulfur Diesel (ULSD) fuel, as mandated by 40 CFR Part 80, Subpart I, significantly reduces the potential for forming sulfur-based odorous compounds and also contributes to lower PM and sulfate emissions.

- **Source of Odor:** Odorous compounds, such as unburned fuel, are primarily associated with the release of soot. Soot can increase when operating at elevated engine speed and torque.

- **Facility Operational Context:**
    - Engine speed in and around the light industrial project is not expected to be elevated.
    - While high torque levels may occur at low engine speeds (e.g., during the initial start-up when hauling loads), these are short-term events (likely less than a minute) and will only occur during limited site operations (initial movement of heavy loads).

- **Diesel Engine Emissions Control:**

[5] https://dep.wv.gov/daq/Documents/June%202019/053-00080_MSDS_13-3435.pdf

[6] https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-emissions-commercial-trucks-and-buses-heavy

- EGR systems are designed to recirculate exhaust gas back in the inlet manifold to lower the gas temperature and reduce NO_x emissions[7]. NO_x emissions can be considered odorous; thus, this control technology reduces odor from diesel emissions.
- DPF systems are designed to physically trap and remove PM/soot from the engine's exhaust. This can result in a greater than 85% reduction in PM emissions[8] which in turn reduces the odors from diesel exhaust.
- DOC systems consists of a precious metal-coated flow-through honeycomb structure contained in a stainless steel housing that causes a catalytic reaction to break down pollutants. DOCs have been shown to reduce PM emissions by 20-40%, hydrocarbons by 10-60%, and carbon monoxide by 10-60%[9]. These reductions in pollutants reduce the odor impacts from diesel exhaust.
- SCR with DEF systems inject aqueous urea solution into the exhaust stream, which combines with NO_x in the presence of a catalyst to form harmless by-products like nitrogen and water vapor[10]. The reduction in NO_x emissions reduces the odors from the diesel exhaust. Since 2010, SCR with DEF has been used in nearly all on-road diesel vehicles to meet U.S. EPA's 2010 on-highway NO_x standards.

Conclusion: The off-site impacts of odorous diesel fuel combustion emissions by on-site truck traffic are expected to be minimal. A fundamental design principle for the site is the substantial separation of primary truck activity from off-site receptors. This design provides ample distance between the main operational areas and the nearest property lines and adjacent residential neighborhoods, allowing for natural atmospheric dissipation of any potential diesel exhaust odors. Additionally, all on-site vehicles will be required to comply with the Pennsylvania Diesel-Powered Motor Vehicle Idling Act (Title 35 Chapter 23B), which further limits the generation of standing diesel emissions. Because odor control is integrated through both physical site design (distance) and mandatory regulation (idling limits), the potential for off-site odor impacts is negligible, and specialized odor dispersion modeling is not deemed necessary.

ODOROUS EMISSIONS CONCLUSIONS

In addition to negligible odors being generated by the uses at the Facility, the site's physical layout is an intentional design element that prevents any off-site impact. The design incorporates a substantial separation distance between the main truck activity areas and adjacent residential properties. This distance, combined with natural atmospheric dispersion, provides rapid dilution. Therefore, considering the robust technical controls mandated for modern engines, the Facility's adherence to state idling regulations, and the mitigating effects of the intentional site layout, the potential for an off-site odor impact negligible.

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[7]https://www.nrf.eu/wp-content/uploads/2024/01/NRF-technical-article-EGR-and-why-we-need-EGR-coolers-EN.pdf

[8] https://www.epa.gov/sites/default/files/2016-03/documents/420f10027.pdf

[9] https://www.epa.gov/sites/default/files/2016-03/documents/420f10031.pdf

[10] https://www.cummins.com/en/in/engines/bsiv-selective-catalytic-reduction-scr

Accordingly, it is my opinion to a reasonable degree of professional certainty that no emission of odorous or other odorous matter will be released from the Facility in such quantities as to be detectable to the human sense of smell when observed at the lot line.

Conclusion

The analyses presented herein establish that the proposed light industrial development for the Greiner Development Project is designed and committed to meet all required Township of Mount Joy Environmental Performance Standards (§ 135-326 F-L). Through detailed technical justification, conservative modeling, and adherence to established regulatory frameworks at the local, state, and federal levels, this memorandum demonstrates that the planned Facility operations, specifically regarding flammable or explosive materials, radioactivity, electrical activities, soiling, vibration, atmosphere, and odorous emissions, will not result in any adverse off-site impacts. The design incorporates best management practices, utilizes modern, efficient equipment, and maintains substantial buffer distances, ensuring the health, safety, and general welfare of the surrounding community and properties are protected as intended by the Mount Joy Zoning Regulations. This commitment is supported by the regulatory structure, which precludes the use of any non-compliant materials or sources on the property. In conclusion, it is my opinion to a reasonable degree of professional certainty that the Facility, as proposed, satisfies those performance and design standards outlined in this report.

Should you have any questions about this submittal, please feel free to contact Kyle Costello at (610) 422-1152 or kcostello@all4inc.com.