Colliers Engineering & Design

Air Quality Study

January 20, 2023

Neelytown Business Park

Tax Parcel IDs: 36-1-33, 36-1-11.221, 36-1-11.23, 36-1-11.212, 36-1-11.211, 36-1-11.1, 36-1-10.1, 33-1-91
Town of Montgomery, Orange County NY

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Air Quality Data and Reports

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Existing Conditions

a. Project Site & Immediate Vicinity

The Proposed Action involves the development of three (3) warehouse facilities on eight (8) parcels (36-1-33, 36-1-11.221, 36-1-11.23, 36-1-11.212, 36-1-11.211, 36-1-11.1, 36-1-10.1, 33-1-91) in the Town of Montgomery, Orange County, New York. The Project Site is bounded by Neelytown Road to the south and east, Beaver Dam Road to the west, and an existing FedEx warehouse to the north; and encompasses approximately 111.47 acres of undeveloped land (former farm fields and wooded vegetation). Four (4) tax map parcels (36-1-10.1, 36-1-11.1, 36-1-11.23 and 36-1-11.212) are developed with single-family dwellings that would be removed as part of the Project Site. The Project Site is located in the Town's General Industry ("I-1") zoning district and is in the vicinity of other manufacturing/industrial facilities.

b. Emission Sources

Regulated Air Facilities near the Project Site

Review of the New York State Department of Environmental (NYSDEC) regulated facility databases indicated there are six (6) stationary emission sources within one (1) mile of the Project Site. It is noted that these facilities are not currently considered major sources of emissions (Title V). A summary and a figure of the listed sources are provided below:

- Air State Facility: Montgomery Wallboard Processing Plant/TKM Materials (NYSDEC #3-3342-00238). Located 0.1 miles south of the Project Site. The NYSDEC permit indicates that the facility is a gypsum recycling facility which consists of moving gypsum board material through a hammermill, a series of sorting conveyors, a two stage trommel screen, magnetic ferrous material separators, and screw augers for loading of finished product into hoppers and transport vehicles. A baghouse will control emissions from the process dust collection system. Air dispersion modeling was requested from the NYSDEC. The NYSDEC responded on February 6, 2023, indicating that records for the facility were identified. The records provided referred to a Title V permit application, dated January 13, 2023. This facility is connected to the Taylor Biomass Gasification Facility (below). The records are provided as an attachment.

- Air State Facility: Taylor Biomass Gasification Facility (NYSDEC #3-3342-00105/00009). Located 0.1 miles south of the Project Site. The NYSDEC permit indicates that the biomass facility receives up to 450 tons per day (tpd) of Construction & Demolition (C&D) debris, up to 100 tpd of unadultered wood waste, and up to 500 tpd of municipal solid waste (MSW). The material is transported to biomass storage silos and then to a gasifier (conversion of material into a gaseous fuel). Air dispersion modeling was requested from the NYSDEC. As of the issuance date of this report, FOIL documentation has not been received back from the NYSDEC. If Colliers Engineering & Design receives relevant

documents from the NYSDEC that reveals new and pertinent findings relative to the Project Site, a Letter of Addendum to this report will be submitted detailing the new findings. The NYSDEC responded on February 6, 2023, indicating that records for the facility were identified. The records provided referred to a Title V permit application, dated January 13, 2023. The records are provided as an attachment. The Title V permit will allow Taylor Biomass Gasification Facility to convert over 1,000 tons of organic waste into 300 tons of processed biomass per day and to produce about 20 Megawatts (MW) of power annually to the electric grid via existing substations.

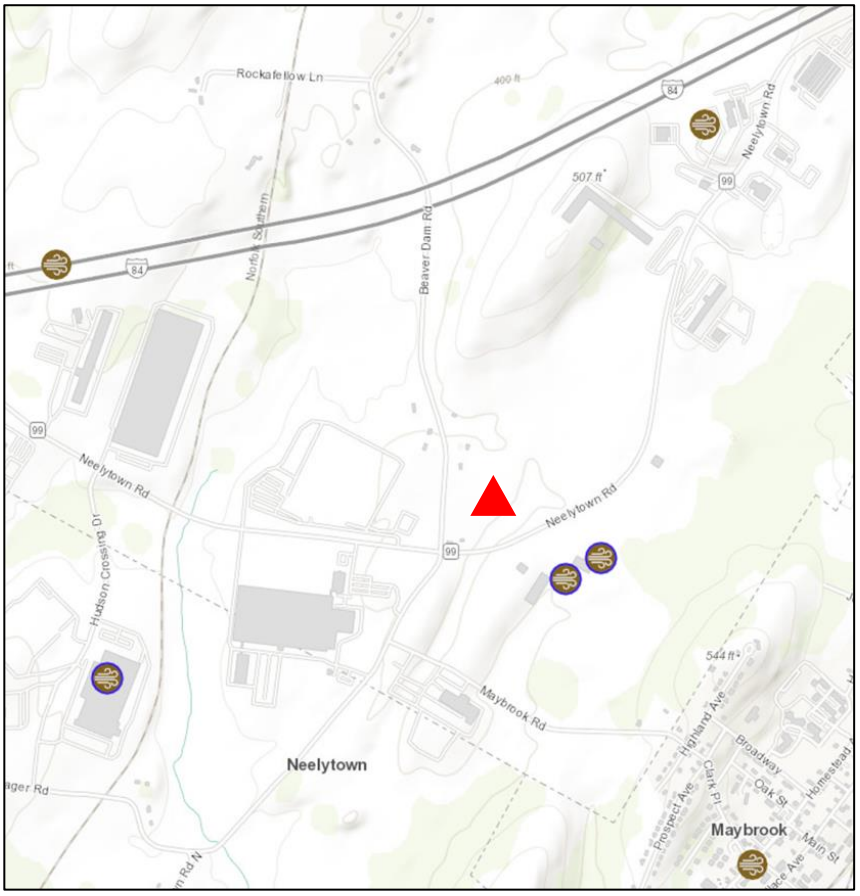
- Air State Facility: Carlisle Construction Materials (NYSDEC #3-3334-00106/00001). Located 0.7 miles southwest of the Project Site. The NYSDEC permit indicates that the facility is a rigid foam manufacturing facility that produces polyisocyanurate foam panels for use in commercia and industrial roofing applications. The polyisocyanurate foam insulating panels are produced by reacting polyol in a blend of fire retardant and catalyst with polymeric diphenylmethane diisocyanate (PMDI). Pentane material is used as an expanding or blowing agent. Panels are formed by combining the materials at a pour table and lamination process (front end). Pentane emissions (Volatile Organic Compounds (VOC)) are collected during the pour and lamination process and controlled by a regenerative thermal oxidizer. Manufactured insulation panels are cut and trimmed to meet dimensional requirements for industry and customer specification. A dust collection system captures particulates generated during sawing and trimming operations (back end) which are controlled by a baghouse filter unit. The insulating foam process is subject to 6NYCRR Part 212 - General Process requirements. VOC emissions are limited below major stationary source thresholds supported by the proper operation of the regenerative thermal oxidizer. Performance testing of the regenerative thermal oxidizer is required to determine operating parameters. Air dispersion modeling requested from the NYSDEC. The NYSDEC replied on February 9, 2023 indicating that a diligent search of the files maintained by the NYSDEC produced no responsive records.

- Air Facility Registration: Medline (NYSDEC #3-3342-00415). Located 0.8 miles northwest of the Project Site. The NYSDEC permit indicates that the facility is a crushing and screening operation with a total of two (2) emission points.

- Air Facility Registration: Maybrook Travel Center (NYSDEC #3-3342-00048). Located 0.5 miles northeast of the Project Site. The NYSDEC permit indicates there is a soil vapor extraction system for diesel fuel and one (1) emission point.

- Montgomery Overall Service (NYSDEC #3-3342-00203). Located 0.7 mile southeast of the Project Site. The NYSDEC permit indicates the facility is a perchloroethylene (tetrachloroethene) dry cleaning uniform rental business with one (1) emission point.

Listed Air State Facilities and Air Facility Registrations
DECinfo Locator (ny.gov)



c. EPA Air Quality Data

The National Clean Air Act (CAA), as amended in 1990, requires the EPA to establish National Ambient Air Quality Standards (NAAQS) for six major pollutants of concern: CO, NO2, ozone, Particulate Matter (PM 2.5 and PM 10), SO2, and lead. The CAA defines non-attainment (NAA) areas as geographic regions that do not meet one of more of the NAAQS. When an area is designated as NAA, states are required to develop and implement a State Implementation Plant (SIP) which documents the plan to achieve compliance with NAAQS. Areas that formerly violated NAAQS but currently meet federal standards are designated as maintenance areas.

Orange County, New York is not currently listed as a Nonattainment County for all criteria pollutants as of December 31, 2022. Current Nonattainment Counties for All Criteria Pollutants | Green Book | US EPA. However, Orange County is part of the NY-NJ-CT air quality maintenance area for fine particulate matter (PM 2.5) and is also part of the Poughkeepsie, NY 1997 ozone "orphan" nonattainment area comprised of Dutchess, Orange, and Putnam counties. This area was designated in nonattainment under the 1997 NAAQS criteria, but the EPA has since

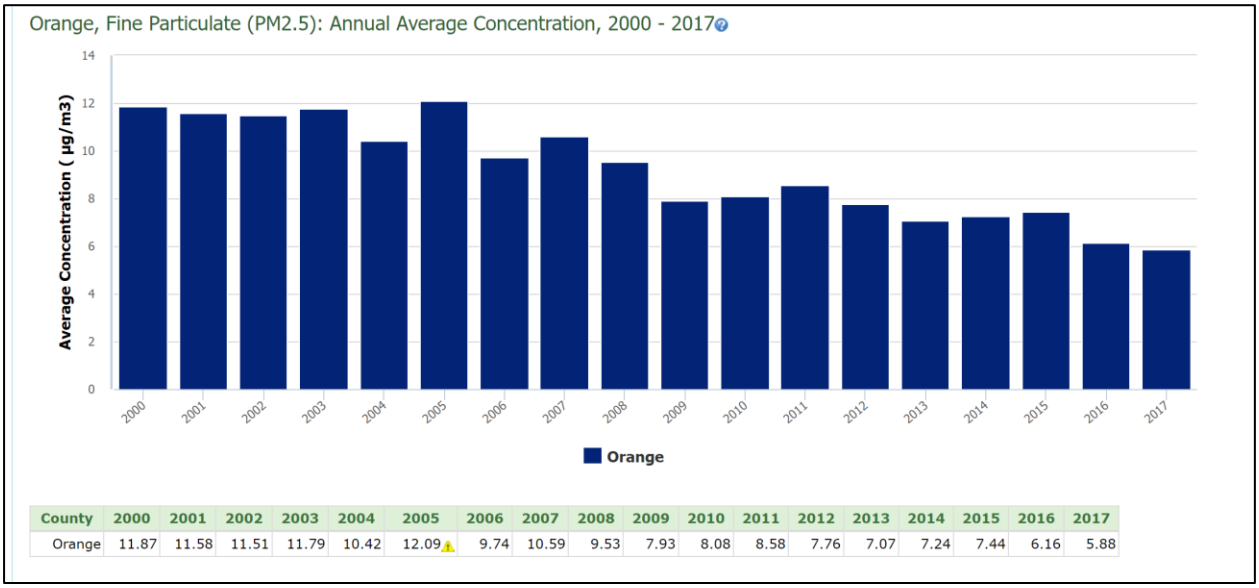
established 2 more stringent NAAQS ozone standards in 2008 and 2015 that Orange County now meets. Court rulings under the South Coast II decision established that EPA could not waive the 1997 NAAQS maintenance plan requirements and is still subject to requirements under the 1997 standards.

d. New York State Department of Environmental Conservation (NYSDEC) Air Quality Data

The NYSDEC measures air quality at 50 sites within NYS and includes the following parameters: Criteria Air Pollutants (ozone, sulfur dioxide, oxides of nitrogen, and carbon monoxide), PM2.5 and PM10, black carbon, and ultrafine particle (UFP) count. The nearest air quality monitoring station (Valley Central station) to the Project Site is located approximately 1.5 miles north. No data was available. Data from another station in Orange County was reviewed (Newburgh) and indicated the levels were below state and federal standards.

Review of the Environmental Public Health Tracking database for Orange County indicates the annual average concentration of fine particulate matter (PM2.5) is 5.88 micrograms/cubic meter ($\mu g/m^3$) as of 2017. 5.88 $\mu g/m^3$ is below the National Ambient Air Quality Standard (NAAQS) standard (12 $\mu g/m^3$) for PM2.5. Refer to below image.

On-site air sampling for PM2.5 and PM10 is planned for Spring 2023 and data will be submitted upon review.



County	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Orange	11.87	11.58	11.51	11.79	10.42	12.09	9.74	10.59	9.53	7.93	8.08	8.58	7.76	7.07	7.24	7.44	6.16	5.88

Future Conditions without Proposed Action

Without the Proposed Action, the Project Site would remain almost entirely vacant with minimal activity occurring. Air quality conditions on and adjacent to the Project Site are expected to remain

similar to current conditions. Development surrounding the Project Site at Taylor Biomass Gasification Facility may impact background air quality levels.

Potential Impacts

Short-term and long-term emission sources were evaluated during this study.

Short Term

Short term and localized impacts occurring during construction to air quality may result from fugitive dust and construction equipment exhaust. Locations downwind of construction activities may be temporarily impacted. Prevailing wind direction is generally to the northwest in the vicinity of the project. Short term impacts may be mitigated through engineering controls and if warranted, a Community Air Monitoring Plan (CAMP). Mitigation measures may include dust suppression, such as applying water to unvegetated areas and access roads and securely covering staged soil with polyethylene sheeting. All soil erosion and sediment control measures will be implemented throughout the duration of construction. Work may also be paused during windy/adverse weather conditions when visible dust is observed leaving the project area. Asbestos abatement will be completed in accordance with all applicable federal, state, and local regulations and will not adversely affect surrounding communities or workers.

Construction vehicles are required to comply with 6 NYCRR Subpart 217.3 which prohibits heavy vehicles (including both diesel and non-diesel) from idling for more than five (5) minutes.

It is noted that no sensitive receptors (i.e., hospitals, schools, daycare facilities, elderly housing) were identified within ½ mile of the Project Site.

Emergency generators are exempt from air permitting in NYS but are required to meet EPA emission standards and are limited to 500 hours per year of operation. It is anticipated that the generators will only run during emergencies and maintenance testing.

Long Term

An assessment of the potential air quality effects of CO emissions on a microscale level that would result from additional vehicles, including trucks, entering and exiting the proposed project site, was performed following the procedures outlined in the New York State Department of Transportation (NYSDOT) Environmental Procedures Manual (EPM), revised March 2020.

The EPM lists three screening criteria to first determine whether the action would increase traffic volumes or idling and if any other roadway changes (e.g. changes in speed, roadway width, sidewalk locations, etc.) could potentially increase in air pollutant concentrations. 12 intersections, including 5 new unsignalized driveways, were determined to be potentially affected by the project and were analyzed for changes in traffic. The screening procedure described below utilized data from the traffic analysis for the Estimated Time of Completion (ETC) 2027 and ETC +10 2037 analysis years. Results of the initial 3 step screening are discussed below:

Level of Service Screening (Step 1):

According to the EPM, intersections with a LOS of A, B, or C are generally excluded from a CO microscale analysis unless there are potentially sensitive receptors within the area.

Results from the traffic modeling study indicate 10 out of 12 intersections within the project will experience a LOS of C or better for ETC and ETC +10 for the preferred alternative for the worst case, AM, scenario LOS. LOS ratings for two of the intersections, *NYS Route 208 & I-84 WB on/off Ramps* and *NYS Route 208 & I-84 EB on/off Ramps/Neelyton Road* (Exhibit 1) falls below an LOS of C indicating further screening of these two intersections is required to determine if a CO microscale analysis is required.

Exhibit 1
AM Level of Service (LOS)

Intersection #	Intersection Name	2022 Existing	2027 No Build	ETC (2027) Build	ETC +10 (2037) Build
1	NYS Route 208 & I-84 WB on/off Ramps (signalized)	C	**E**	**F**	**F**
2	NYS Route 208 & I-84 EB on/off Ramps/Neelytown Road (signalized)	**D**	**D**	**D**	**E**
3	Neelytown Road & Beaver Dam Road/Neelytown Road North (signalized)	B	B	B	B
4	Neelytown Road & NYS Route 416 (signalized)	A	A	B	B
5	NYS Route 211 & NYS Route 416 (unsignalized)	B	C	A	A
6	Goodwill Road & Beaver Dam Road (unsignalized)	A	A	A	A
7	Chandler Lane & Beaver Dam Road (unsignalized)	A	A	A	A
8	Neelytown Road & Site Driveway 1 (unsignalized)	-	-	C	A
9	Neelytown Road & Site Driveway 2 (unsignalized)	-	-	C	C
10	Neelytown Road & Site Driveway 3 (unsignalized)	-	-	A	C
11	Beaver Dam Road & Site Driveway 4 (unsignalized)	-	-	A	A
12	Beaver Dam Road & Site Driveway 5 (unsignalized)	-	-	A	A

Capture Criteria (Step 2):
The two intersections impacted by the project, exhibiting ETC and ETC +10 with an LOS rating of D, E, or F have been screened by the criteria below:

1) A 10% or more reduction in the source receptor distance.

No source receptors (i.e., hospitals, schools, daycare facilities, elderly housing) were identified within ½ mile of the Project Site. The project will also not reconfigure these intersections.

2) A 10% or more increase in traffic volume on affected roadways

Both intersections are anticipated to be under the 10% threshold for an increase in traffic volume.

Exhibit 2 Traffic Volume			
Intersection #	**Intersection Name**	**ETC (2027) Build Traffic Increase (AM) %**	**ETC +10 (2037) Build Traffic Increase (AM) %**
1	NYS Route 208 & I-84 WB on/off Ramps (signalized)	**1.07**	**1.06**
2	NYS Route 208 & I-84 EB on/off Ramps/Neelytown Road (signalized)	**1.12**	**1.12**

3) A 10% or more increase in vehicle emissions

NYSDOT has not updated required tables and this criteria cannot be evaluated without modeling at this time. It is assumed the project meets this criteria.

4) Any increase in the number of queued lanes

The project will not reconfigure these intersections or add lanes.

5) A 20% reduction in speed, when build estimated average speed is at 30 mph or less.

This criteria is met for this project.

Conclusion

Based on available traffic and NYSDOT data, the project should meet the thresholds established in the NYSDOT EPM Air Quality manual and no further analysis for CO is required.

Particulate Matter Microscale Analysis

Although this project is not a federally supported highway or transit project that is subject to a conformity determination under Section 93.123(b)(1) of 40 CFR 51.390, the "Transportation Conformity Guidance for Quantitative Hot-spot Analyses in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas" published by EPA was used to determine if this project would be considered a transportation project of local air quality concern that would require a quantitative analysis. It was determined the two intersections with a LOS of D, E, or F did not meet the criteria that would warrant modeling of PM. The LOS levels were not the result of increased traffic volumes from a significant number of diesel vehicles. Although the project will increase the number of diesel vehicles, the increase in traffic was minor compared to the no build condition and (Exhibit 2). Additionally, as discussed in the Traffic Impact Study, the proposed development is not expected to significantly impact the area roadways or its traffic operation.

Conclusion

The Project Site is not anticipated to adversely impact background air quality conditions based on the lack of long-term emissions originating from site operations and review of traffic data. The Project Site is already situated in an industrial area with no sensitive receptors immediately nearby. Based on surrounding facility information (classification as a non-major facilities), it is unlikely that air pollution (above background levels) and associated odors will occur and affect the Project Site.

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