

**CONECO ENGINEERS & SCIENTISTS, INCORPORATED
COMMUNITY AIR MONITORING PLAN**

**SOLAR CANOPY CARPORT SYSTEM CONSTRUCTION PROJECT
COMMERCIAL PROPERTY – 500 MAMARONECK AVENUE
HARRISON, NEW YORK**

PREPARER'S SIGNATURE: _____



DATE: February 9, 2023

A. SITE DESCRIPTION

PROJECT NUMBER: C2162.0

ADDRESS: 500 Mamaroneck Avenue, Harrison, New York

CROSS STREET: Union Avenue (north of Site entrance)

SITE USAGE: Commercial Property

PAST SITE USAGE: Municipal Incinerator

SURROUNDING AREA:

 Virgin Land X Residential X Parkland/School

 X Commercial/Retail Industrial Other: X

PREPARER'S SIGNATURE: _____

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Comments: This Community Air Monitoring Program (CAMP) may not be all inclusive and is subject to change during the course of this project. Before the start of work at the Site, specific risks must be assessed, discussed, and documented as part of the pre-excavation/construction meeting and/or job brief. All parties are encouraged to communicate and implement any safety suggestions that improve the safety of any exposed parties.

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COMMUNITY AIR MONITORING PLAN

1.0 Introduction

On behalf of Empire State Realty Trust (ESRT), Coneco Engineers & Scientists, Incorporated (Coneco) has prepared the following Community Air Monitoring Plan (CAMP) that details the methods to be employed during soil excavation, management, and disposal during the installation of a Solar Canopy Carport System located at 500 Mamaroneck Avenue, Harrison, New York (the “Site”). Coneco will be the Consultant for this project as specified in the Environmental Management Plan by Bergmann for New York State Department of Environmental Conservation (NYSDEC) Site #V00213 (Index #W3-0851-99-05). A Site Locus Map is provided as Figure 1.

1.1 Objectives

The objective of the CAMP is to establish measures required to protect downwind receptors from potential airborne releases of volatile organic compounds (VOC) vapor/gases and constituents of concern in dust during soil excavation or soil management on the Site. Real time monitoring for VOC and particulates (dust) at the downwind perimeter of each designated work area, or exclusion zone, will be implemented during invasive soil work or soil management. As originally documented in the Remedial Action Workplan, 500 Mamaroneck Avenue, Harrison New York by ERM, January 2005, identified constituents in soil at the Site consist of polyaromatic hydrocarbons (PAH), polychlorinated biphenyls (PCB), and metals (copper, lead, zinc, arsenic, cadmium, chromium, magnesium, mercury, and nickel). PAH, PCB, and metals are not highly volatile contaminants; therefore, the primary exposure pathway is respiratory inhalation of dust (airborne particles) and/or ingestion, injection, and/or skin contact with soil that contains concentrations of these substances.

The CAMP outlines the required documentation process for air emissions, describes the air monitoring procedures, the monitoring schedule, and data collection and reporting requirements. The Consultant will ensure adherence to the CAMP and provide the monitoring equipment and labor to implement the CAMP. Materials and equipment to apply dust control measures will be provided and implemented by the Contractor.

1.2 Potential Project Air Emissions

Construction related activities planned for the Site that is anticipated to produce air emissions include:

- Excavation or drilling for canopy support posts in potentially degraded soil areas;
- Trenching for electrical lines and equipment in potentially degraded soil areas; and
- Soil stockpiling, loading for offsite disposal, sampling, soil management for reuse onsite, backfilling and restoration of clean fill brought onto the Site.

1.3 Vapor and Dust Control Measures for Air Emission Exceedances

Vapor and dust emissions at work areas will be controlled if monitoring and screening levels are exceeded. Control measures will consist of:

- Potable water misting on disturbed soil areas to suppress vapor and dust emissions.
- Stoppage of work until vapor or dust levels decrease to approved concentrations; and
- Covering disturbed work areas with polyethylene sheeting during non-working periods. Covering of disturbed soil areas and staged soils is also required to shed precipitation from the work area soils to prevent erosion and displacement.

Dust and vapor suppression materials and equipment will be supplied by the Contractor and will be always available for use in a location near the work areas during the project. Control measures will be implemented based on real-time vapor and dust screening measurements and/or visual or olfactory indications of excessive vapor or dust emission.

2.0 Air Monitoring Procedures

Real-time continuous air monitoring for VOC and particulates (PM₁₀) will be implemented at the downwind perimeter of each designated work area while work is being performed. Work areas can consist of excavation areas and other areas where soils are being managed on the Site. The CAMP is intended to protect downwind receptors including residences, businesses, and other persons on the Site not associated with the work items, as well as project workers. The action levels specified herein require monitoring, corrective actions to abate emissions, and possibly work stoppage. The CAMP also serves to document that work actions did not spread non-compliant levels of VOC and particulates (soil dust) off-site.

2.1 Air Monitoring Locations

Vapor and particulate monitoring station locations upwind and downwind from work areas will be determined daily by an onsite weather station reading taken each day prior to invasive work. During daily invasive work, wind direction readings will periodically be retaken; if wind direction changes are greater than 60 degrees in any direction from the original daily reading, monitoring station locations will be adjusted accordingly. All changes, times, and original bearings will be recorded in the CAMP reports.

2.2 VOC Monitoring

Total VOC monitoring will be conducted at the downwind perimeter of the immediate work area (exclusion zone) on a continuous basis, during intrusive or other potential dust generating construction activities with electronic data logging equipment. A Photoionization Detector (PID) with a 10.6 eV lamp will be used for the monitoring. The recorded readings of total VOC will be an average reading over a 15-minute period. Readings will be stored on-site and summarized in weekly CAMP reports to be submitted to NYSDEC and the New York State Department of Health (NYSDOH).

2.3 Particulates Monitoring PM₁₀

Particulates will be monitored continuously during invasive and or potential dust generating activities using instruments equipped with data logging capability. The particulate monitoring equipment will also be equipped with an audible alarm to indicate exceedances of action levels as identified in the following Section of this CAMP. A Dust Trak II 8530 (or equal) will be used to conduct PM₁₀ monitoring during invasive or soil management activities. Recorded readings will consist of an average reading over a 15-minute period and any instantaneous readings used for decision making. Readings will be stored on-Site and summarized in weekly CAMP reports that will be sent to NYSDEC and NYSDOH. It will be incumbent upon Consultant or Contractor to visually assess dust conditions during all work activities in addition to instrumentation monitoring. If dust is noticed by these methods, dust suppression methods will be used.

2.4 VOC Monitoring Action and Response Levels

In accordance with the NYSDOH Generic Community Air Monitoring Plan, VOC will be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone as determined by Consultant) on a continuous basis or otherwise specified. Upwind levels will be measured at the start of each workday and periodically thereafter to establish background conditions. The PID to be used for this item will consist of a 10.6 eV lamp that is appropriate to measure a broad range of VOC. Based on the nature of the compounds of concern at the Site, we do not anticipate triggering an instrument response above background. The PID will be capable of calculating a 15-minute running average reading to be recorded and compared to action levels as specified below.

1. If the downwind ambient air readings of VOC at the limit of the exclusion zone, exceed 5 parts per million volumetric (ppmv) above background for the 15-minute average reading, work activity will be temporarily stopped, and monitoring will be continued. If the VOC level readily decreases (per instantaneous reading) below 5 ppmv over background, work activity will be resumed with continued monitoring.
2. If VOC levels at the downwind limit of the exclusion zone persist at levels more than 5 ppmv over background but less than 25 ppmv, work activities must be stopped, the source of the vapors identified, and corrective actions will be taken to abate the emissions as monitoring is continued. After these steps are performed, work activities can resume provided that the total VOC level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less- but in no case less than 20 feet, is below 5 ppmv over background for the 15-minute average.
3. If the VOC level is above 25 ppmv at the perimeter of the work area (exclusion zone), activities must be shut down.
4. All 15-minute readings will be recorded and be available for NYSDEC and NYSDOH personnel to review. Instantaneous readings, if any, that were used for decision purposes will also be recorded.

2.5 PM₁₀ Monitoring Action and Response Levels

If the downwind PM₁₀ particulate concentration at the limit of the exclusion zone is 100 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) greater than background (upwind) perimeter for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must/will be employed. Work may continue with dust suppression techniques provided that downwind PM₁₀ particulate levels at the limit of the exclusion zone do not exceed $150 \mu\text{g}/\text{m}^3$ above the upwind level and provided that no visible dust is migrating from the work area.

If, after implementation of dust suppression techniques, downwind PM₁₀ particulate levels are greater than 150 µg/m³ above the upwind level, work must be stopped, and a re-evaluation of activities initiated. Work can resume if dust suppression measures and other controls are successful in reducing the downwind PM₁₀ particulate concentration to within 150 µg/m³ of the upwind level and in preventing visible dust migration.

All readings will be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

2.6 Meteorological Monitoring

Meteorological data will be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The meteorological data to be monitored consists of wind speed, wind direction, temperature, barometric pressure, and relative humidity. Wind direction measurements will be utilized to position the total VOC and particulate monitoring equipment in appropriate upwind and downwind locations. A wireless instrument station or equivalent will be used to measure and log meteorological data.

2.7 Instrument Calibration

Calibration of the VOC, PM₁₀, and meteorological instrumentation will be conducted in accordance with their equipment manufacturer's requirements. The VOC and PM₁₀ monitoring equipment will be calibrated or zeroed daily and such calibrations will be recorded in the field logbook.

3.0 Monitoring Schedule and Data Collection/Reporting

3.1 Monitoring Schedule

Community air monitoring will be conducted prior to initiation of vapor or dust generating activities to establish baseline data and until activities are complete. Air monitoring for VOC and PM₁₀ may be discontinued during heavy precipitation events as unreliable data may result. Meteorological monitoring will be performed continuously during all vapor or dust generating activities.

3.2 Data Collection and Reporting

Continuous air monitoring data and collection locations will be logged for all potential dust generating activities on the Site by Consultant during the project. Data will be electronically logged except during significant precipitation events as determined by the Consultant. Vapor and particulate matter instrumentation will be set up to continuously monitor instantaneous readings and record average readings per 15-minute increments as discussed in earlier sections. Data will be logged and stored on each instrument and downloaded to a dedicated computer or dedicated external hard drive daily. All records and data will be maintained on-site for NYSDEC and NYSDOH to review.

The consultant will prepare weekly CAMP reports that will include the following:

- A text summary of air monitoring work activities and results for the monitoring period with associated data tables of recorded results. The weekly report will also include daily monitoring locations and associated graphs for each day depicting the 15-minute averages for vapor and particulate matter relative to the above-described action levels.
- The weekly report will also include the raw data files from the individual monitors and meteorological station.

If a work stoppage occurs due to inability to control fugitive emissions to comply with the established limits, NYSDEC will be notified within 24 hours of stoppage.