

Odor Control Plan (OCP)

**FORT MYER CONSTRUCTION CORPORATION (Plant 2)
1155 W Street NE
Washington, DC 20002**

Revision 1.0
November 2023

Client # 5634

Project Manager: Kurt Gilliam, Director of Environmental Services

Prepared by:



Cornerstone
ENVIRONMENTAL HEALTH AND SAFETY, INC
ISO 9001:2015 REGISTERED QUALITY SYSTEM

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FOREWORD

The Department of Energy and Environment (DOEE) issued a final rule that requires stationary sources such as asphalt processing plants located in Washington, DC to adopt a DOEE approved Odor Control Plan (OCP). This document has been created to maintain compliance with 20 DCMR § 903, Odorous or Other Nuisance Air Pollutants.

The regulation states that an OCP shall include the information found in this plan.

WARRANTY

The basis for this Odor Control Plan is information provided by the customer for its specific facility. Cornerstone Environmental, Health and Safety, Inc. has exercised due diligence in analyzing the information and compiling the information and recommendations into this plan.

The responsibility and liability for the accuracy and completeness of the input data remains solely with the provider (the customer) of the information.

1 SOURCE INFORMATION

| | |
|---|--|
| NAME: | Fort Myer Construction (Plant 2) |
| PHYSICAL ADDRESS: | Fort Myer Construction (Plant 2) 1155 W Street NE Washington, DC 20002 |
| MAILING ADDRESS: | Fort Myer Construction Corporation 2237 33rd Street NE Washington, DC 20018 |
| TELEPHONE: | (202) 269-0400 |
| CONTACT NAMES: | David Love, General Manager Asphalt Plants dlove@fortmyer.com |
| LOCATION: | Facility geographic coordinates are Latitude 38° 55' 7.52" N and Longitude 76° 59' 25.14" W. |
| SOURCE TYPE | Asphalt processing plant. |
| DESCRIPTION OF OPERATIONS AND LAYOUT | The facility produces hot mix asphalt, used primarily for road paving. The SIC/NAICS codes for the operation are 2951/324121, "Asphalt Paving Mixtures and Blocks". Associated with that is the stockpiling of aggregate materials used in the production process and hot asphalt aboveground storage tanks. Attachment 1 provides an aerial photograph of the asphalt processing plant. |
| HOURS OF OPERATION: | The source can operate at any time every day of the week; however, the air permit limits the total amount of hot mix asphalt production in any twelve-month rolling period. Please note that the plant typically shuts down completely for approximately two months in winter for annual maintenance. |
| EMERGENCY CONTACT | David Love, General Manager Asphalt Plants (240) 417-4288 dlove@fortmyer.com |

2.1 ODOR GENERATED BY THE SOURCE**2.1.1 FLOOR PLAN**

The odor-emitting activity at the asphalt plant is associated with the production of hot mix asphalt. Hot mix asphalt production involves heating asphalt cement, coating sand, and aggregate with the asphalt. Since the activity occurs at an outdoor plant and not within a building, a floor plan is not applicable. Attachment 1 contains an aerial photograph of the asphalt plant and the locations of the hot asphalt above-ground storage tanks.

The process includes storage of liquid asphalt in four separate 25,000-gallon above-ground storage tanks (Tanks #1, #2, #3, and #4). These tanks maintain the liquid asphalt at about 300° F. None of the tanks are pressurized, and each has a single vent. Each vent is normally aspirated to a Blue Smoke Vent Condenser, and then to the atmosphere.

A 10,000-gallon above-ground storage tank containing Tack (Tack Tank) is also located at the facility. Tack is a thin asphalt mixture used to promote bonding of hot mix asphalt to an underlying surface. Tack is stored at approximately 140° F. This tank is not pressurized and is vented to the atmosphere through normal aspiration.

2.1.2 SPECIFIC ODOR EMITTING ACTIVITY

The specific odor-emitting activity from the plant is emitted from the hot melt asphalt above-ground Tanks #1 through #4, mainly during tank filling. In addition, the hot mix asphalt manufacturing process emits odor when asphalt cement is heated and mixed with sand in a drum. The exhaust from the hot mix asphalt drum is directed to a baghouse prior to being emitted to the atmosphere, minimizing the odor.

2.1.3 PHASES OF ODOR-EMITTING ACTIVITY

The timing and duration of odor-emitting activity is dependent upon the weather and production schedule. Hot mix asphalt is generally not manufactured during precipitation events. Furthermore, the air permit limits the total amount of hot mix asphalt production in any twelve-month rolling period. The plant typically shuts down completely for approximately two months in winter for annual maintenance.

3.1 ADMINISTRATIVE CONTROLS

3.1.1 MAINTENANCE, TESTING, AND AUDIT PROCEDURES TO ENSURE THAT CONTROL EQUIPMENT IS FUNCTIONING PROPERLY AND THE OCP IS BEING ADHERED TO.

To limit odor-emitting activity, Fort Myer Construction Corporation Plant 2 (FMCC Plant 2) conducts the following activities:

- Baghouse inspections including fluorescent dust leak tests
- Baghouse performance testing conducted by an outside contractor
- Baghouse stack outlet observations
- Maintain the baghouse pressure drop within manufacturers specifications
- Visual inspections of asphalt cement storage tanks and associated piping
- Limit the temperature of hot mix asphalt to prevent vaporization of asphalt cement
- Routine maintenance of the Blue Smoke Vent Condenser
- Submit annual emissions report to DOEE, which includes an audit of the facility's records
- Annual shutdown for maintenance

3.1.2 STAFF TRAINING

FMCC Plant 2 employees are trained in the proper operation of the plant and its associated equipment. Employees are expected to observe conditions at the plant and stop production whenever a failure occurs that causes excessive emissions or may pose a danger to personnel or the environment.

3.1.3 RECORDKEEPING PROCEDURES AND FORMS

Most records are kept electronically, such as the baghouse pressure drop readings, fluorescent dust leak tests, temperature of the hot mix asphalt, and annual shutdown maintenance activities. Reports from outside contractors who conduct performance testing, tuning, and process adjustments are also typically filed electronically.

3.1.4 OTHER WORK PRACTICES NECESSARY TO PREVENT NUISANCE ODORS

An additional work practice to prevent nuisance odors is limiting the time trucks idle when waiting to be loaded with hot mix asphalt.

3.2 PROPOSAL CONCERNING ENGINEER CONTROLS

A proposal concerning engineering controls, reviewed by a professional engineer licensed with the Department of Licensing and Consumer Protection and certified by the professional engineer to be sufficient to effectively mitigate odors for all odor sources. Engineering controls shall include each of the following components:

- a. System design
- b. Operational processes
- c. Maintenance plan

FMCC Plant 2 has identified the primary source of odors from the operation as air vented from the four heated 25,000-gallon hot mix liquid asphalt tanks (Tanks #1 - #4), primarily during tank filling. As heated liquid asphalt is drained from each tank for hot mix asphalt production, the head space above the liquid asphalt fills with asphalt vapor. When the tank is filled, these vapors are displaced and flow out of the tank through a vent.

FMCC Plant 2 installed a Blue Smoke Vent Condenser on each of the four hot asphalt tanks in 2009. Air from each tank vent flows through a condenser before being vented to the atmosphere. As the hot asphalt vapor flows through the condenser, it is cooled to below 250° F causing the oil and associated odor to condense on filter media and drain back into the tank. This greatly minimizes the release of asphalt vapors and odor to the atmosphere.

The condenser is cooled by ambient air, has no moving parts, and is virtually maintenance-free. Periodic cleaning of the coalescing filter media is required. This is performed on a routine basis to help prevent the release of blue smoke (odors) from the unit. Attachment 2 provides more information concerning the Blue Smoke Vent Condenser.

The Tack Tank is maintained at a much lower temperature (about 140° F) than Tanks #1 - #4 and is not considered a significant source of odor.

Hot mix asphalt plants have been in operation for over 100 years and are designed to comply with Clean Air Act and local regulations without additional engineering controls. Typical industry-specific best practices include burner tuning, operation of the plant in accordance with the manufacturer's specifications, and equipment maintenance. FMCC Plant 2 conducts stack tests to determine emissions as required by its air permit, typically every five years.

3.3 TIMELINE FOR IMPLEMENTATION OF ODOR MITIGATION PRACTICES

FMCC Plant 2 installed a Blue Smoke Vent Condensers on each hot mix asphalt tank (Tanks #1 - #4) vent in 2009 and provides routine maintenance of the condensers.

3.4 PROCEDURES FOR RECEIVING, RESPONDING TO, AND TRACKING COMPLAINTS

If a complaint is received, the FMCC Plant 2 employee will listen to the complaint and let the caller know that someone from our company will return the call within 24 hours. Once the caller's contact information and reason for the complaint has been obtained, the information will be forwarded to an office manager so that it may be distributed to the appropriate personnel who will return the call. The office manager maintains a log of complaints.

4 PROFESSIONAL ENGINEER STATEMENT

I have reviewed the proposal concerning the Blue Smoke Condenser System and believe it to be sufficient to reduce asphalt odors from FMCC Plant 2. I am a professional engineer licensed with the Department of Licensing and Consumer Protection.

PROFESSIONAL ENGINEER SIGNATURE: Michael D. Matthews

PRINTED NAME: Michael D. Matthews

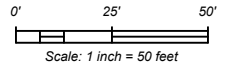
LICENSE # / EXPIRATION DATE P.E. # 907370 (exp. 8/31/2024) STATE: D.C.

DATE: 11/1/2023



ATTACHMENT 1 ASPHALT PLANT AERIAL PHOTOGRAPH

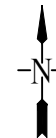
W St. NE



880 LENNOX COURT
ZIONSVILLE, INDIANA 46077

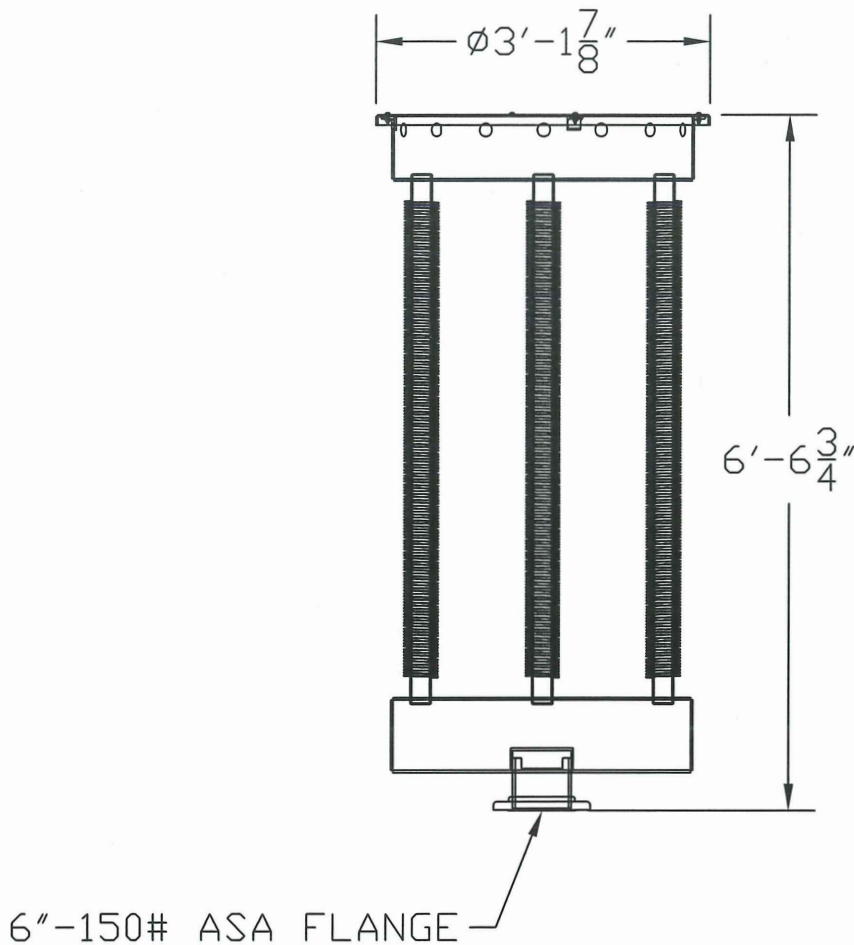
LEGEND

 SITE BOUNDARY



Facility Layout

| | |
|---|-------------|
| COMPANY: Fort Myer Construction Corporation | |
| ADDRESS: 1155 W Street, NE (Plant 2) | |
| CITY: Washington | STATE: DC |
| COUNTY: District Of Columbia | REV: 1.0 |
| DATE: 11/01/2023 | ACCT#: 5634 |



BLUE SMOKE CONDENSER

WEIGHT: 1,200 lbs

THE BLUE SMOKE VENT CONDENSER IS AN AIR OVER AIR HEAT EXCHANGER. VAPORS FROM THE ASPHALT TANK PASS THROUGH MULTIPLE PIPES COVERED BY STEEL SPIRAL WOUND FINNING. AMBIENT AIR PASSES OVER THE FINNED TUBING LOWERING THE TEMPERATURE OF THE VAPORS, CHANGING THE ASPHALT VAPOR BACK INTO A LIQUID FORM. THE LIQUID ASPHALT THEN DRAINS BACK INTO THE TANK BY GRAVITY.