

Marathon Petroleum uses a variety of methods to effectively control dust

Bulk solid material storage and handling operations at the Detroit Refinery are regulated by the Michigan Department of Environmental Quality's Air Quality Division (Renewable Operating Permit No. MI-ROP-A9831-2012c). In accordance with this permit, Marathon Petroleum has implemented an approved Fugitive Dust Control Plan that satisfies applicable provisions of the Natural Resources and Environmental Protection Act and Michigan's Administrative Rules for Air Pollution Control.

Below are the methods we use for fugitive dust control and minimization, including dust from refinery operations, construction activities, and petroleum coke processing and transport operations.

Fugitive Dust Control and Minimization Practices

Control of Petroleum Coke Operations

- **Coke Pit and Wall** – Petroleum coke generated from the refinery coker unit is staged in a pit, which is surrounded by 30-foot tall walls to prevent wind erosion. Coke height is maintained below the height of the wall. The coke has a high surface moisture content when it's discharged from the coker unit drums to the pit.
- **Coke Pit Sprinkler System** – The sprinkler system is used when needed to increase the moisture content of the coke.
- **Enclosed Coke Transfer System** – This transfer system is fully enclosed and all air is filtered through bag houses in both the load-out building and crusher building.
- **Truck Load-out Building** – The loading of coke into trucks for off-site transport occurs in an enclosed building with an air curtain and bag house filter.
- **Vehicle Covers** – Coke transport trucks must be covered before leaving the truck load-out building.
- **Truck Wheel Wash System** – Prior to exiting the refinery truck load-out building, trucks pass through a wheel wash system designed to remove excess dust from the wheels, lower section of the trailer, and the rear of the trailer.
- **Visible Emissions Monitoring** – Visible emissions observations are conducted by the coke handling operators daily to confirm that the fugitive dust program is properly minimizing emissions from the coke processing and transport operations.

General Fugitive Dust Control Practices

- **On-site Speed Limits** – Vehicles travel at posted speed limits to reduce fugitive dust.
- **Vehicle Covers** – Material transport vehicles are kept covered, except when loading or unloading.
- **On-site Road Cleaning** – A street sweeper or water truck operates as needed to reduce fugitive dust emissions from on-site roadways. An approved dust suppressant may also be used to reduce emissions, if needed.
- **Visible Emissions Monitoring** – Visible emissions observations are conducted by trained personnel, on a monthly basis, to confirm that the fugitive dust program is properly minimizing emissions from on-site roadways.

Enhanced Street Sweeping Program – The Detroit Refinery has voluntarily implemented an enhanced street sweeping program designed to reduce fugitive dust emissions from nearby

roadways, including Oakwood Blvd., Dix Road, Schaefer Ave., and Fort Street. The street sweeping program is conducted a minimum of twice per month from April through September.

Perimeter Air Monitoring System (PAMS) – Marathon operates four air monitoring stations surrounding the refinery. In addition to other constituents, the four monitors continually measure particulate matter emissions.

We are asking for variances from the Bulk Solid Materials Ordinance for some of its provisions. Here are the variances, and why we are requesting them:

- a) Sec. 22-5-16(c) Opacity measurement test method

MPC is already required to conduct daily visual emissions observations as part of its Renewable Operating Permit (ROP). The ordinance requires opacity monitoring utilizing a different test method (U.S. EPA Method 9d), which is redundant.

- b) Sec. 22-5-20(a) Wind monitor location

MPC has a network of four perimeter air monitoring stations with two weather stations. These weather stations are representative of weather conditions at the coke pad/pit.

- c) Sec. 22-5-22(d) Rumble strips for outgoing material transport trucks

MPC's truck loadout building is equipped with dust control on the loading chute and a wheel wash station as the truck exits the building. These measures provide dust control superior to rumble strips.

- d) Sec. 22-5-29 Roadway Cleaning

MPC has implemented an enhanced street sweeping program as part of its fugitive dust control plan maintained in accordance with its ROP.

- e) Sec. 22-5-40 Enclosure of Carbonaceous Bulk Solid Materials

Sec. 22-5-41 Enclosure Plan

Sec. 22-5-42 Enclosure Requirements

Sec. 22-5-71 Enclosure Deadline

Sec. 22-5-72 Enclosure Reporting

MPC has a robust fugitive dust management program in compliance with MDEQ requirements and its ROP. The program includes controls to limit particulate matter emissions from coke production and handling. These include

- **Use of water curtain system which coke passes through when discharged from the drums into the pit.**
- **Maintaining an adequate moisture content in the coke (avg. 10%)**
- **A five-sided coke pad/pit area with water spray systems to maintain moisture and eliminate dust.**
- **Visual monitoring for fugitive dust.**
- **A bridge crane (vs. front end loader) to minimized coke handling and potential for dust emissions.**
- **A totally enclosed coke conveyor and truck loadout system with water spray and particulate emissions controls.**