

**MARYLAND DEPARTMENT OF ENVIRONMENT
AIR AND RADIATION ADMINISTRATION**

**FACT SHEET AND TENTATIVE DETERMINATION
CSX TRANSPORTATION – CURTIS BAY PIERS**

RENEWAL OF AIR QUALITY STATE PERMIT TO OPERATE

I. INTRODUCTION

The Maryland Department of the Environment (the "Department") received an application from CSX Transportation, Inc. on July 18, 2023 to renew the Air Quality State Permit to Operate for their Curtis Bay Piers coal storage and transfer facility located at 1910 Benhill Avenue, Curtis Bay, MD 21226.

The Department has reviewed the application and has made a tentative determination that the facility, operating under the conditions of the renewal State Permit to Operate, is expected to comply with all applicable air quality regulations. A public meeting has been scheduled for October 10, 2024 at 6:00 p.m. at the Curtis Bay Recreation Center located at 1630 Filbert Street, Baltimore, Maryland 21226 to provide interested parties an opportunity to comment on the Department's tentative determination and draft permit conditions, and/or to present other pertinent concerns about the facility. Notices concerning the date, time and location of the public hearing will be published in the legal section of a newspaper with circulation in the general area of the proposed facility. Interested parties may also submit written comments.

The Department will review all comments received and will then make a final determination with regard to issuance or denial of the permit. A formal response to all comments received will be prepared with the final determination. A notice of final determination will be published in a newspaper of general circulation in the affected area. Notices will also be sent out to all state and local officials in the district where the source is located, state and local officials in the districts within 1-mile of the source, and all interested parties.

II. CURRENT STATUS

CSX Transportation, Inc. (CSX) operates the Curtis Bay Piers coal storage and transfer facility. The facility receives coal by rail and ships coal out via barge and ship. The facility includes railcar unloaders, both underground and aboveground conveyors, and transfer towers to transfer coal to stockpiles prior to loading on barges. The facility currently uses wet suppression systems and enclosure of certain equipment to control fugitive dust.

On July 18, 2023, CSX submitted an application to renew the Air Quality State Permit to Operate for their Curtis Bay Piers facility. With the submission of the application CSX met the regulatory requirement of COMAR 26.11.02.08B to submit a renewal application no later than 60 days prior to its expiration. The current SPTO was issued on October 1, 2018 and although the expiration date of that permit was September 30, 2023, it has been administratively extended until a final determination on the renewal application is issued.

III. APPLICABLE REGULATIONS

CSX is subject to all applicable Federal and State air quality control regulations, including, but not limited to the following:

- (a) COMAR 26.11.06.03C – Particulate Matter from Unconfined Sources
“(1) A person may not cause or permit emissions from an unconfined source without taking reasonable precautions to prevent particulate matter from becoming airborne. These reasonable precautions shall include, when appropriate as determined by the Department, the installation and use of hoods, fans, and dust collectors to enclose, capture, and vent emissions. In making this determination, the Department shall consider technological feasibility, practicality, economic impact, and the environmental consequences of the decision.”

- (b) COMAR 26.11.06.03D – Particulate Matter from Materials Handling and Construction
“A person may not cause or permit any material to be handled, transported, or stored, or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. These reasonable precautions shall include, but not be limited to, the following when appropriate as determined by the control officer:
 - (1) Use of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land.
 - (2) Application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can create airborne dusts.
 - (3) Installation and use of hoods, fans, and dust collectors to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting of buildings or other similar operations.

- (4) Covering, at all times when in motion, open-bodied vehicles transporting materials likely to create air pollution. Alternate means may be employed to achieve the same results as would covering the vehicles.
 - (5) The paving of roadways and their maintenance in clean condition.
 - (6) The prompt removal from paved streets of earth or other material which has been transported there by trucks or earth moving equipment or erosion by water.”
- (c) COMAR 26.11.02.19C – Information Required to be Maintained by a Source.
- “(1) Beginning January 1, 1994, the owner or operator of a source for which a permit to operate is required shall maintain records necessary to support the emission certification, including the following information:
- (a) The total amount of actual emissions of each regulated pollutant and the total of all regulated pollutants;
 - (b) An explanation of the methods used to quantify the emissions and the operating schedules and production data that were used to determine emissions, including significant assumptions made;
 - (c) Amounts, types, and analyses of all fuels used;
 - (d) Emission data from continuous emission monitors that are required by this subtitle or EPA regulations, including monitor calibration and malfunction information;
 - (e) Identification, description, and use records of all air pollution control equipment and compliance monitoring equipment, including significant maintenance performed, malfunctions and downtime, and episodes of reduced efficiency of this equipment;
 - (f) Limitations on source operation or any work practice standards that significantly affect emissions; and
 - (g) Other relevant information as required by the Department.
- (2) The logs and other records of information required by §C(1) of this regulation shall be retained for a period of 5 years and made available to the Department upon request.
- (3) If the owner or operator of a source for which a permit to operate is required fails to maintain or provide the data required by this section, which the Department requests in order to verify the emissions during the previous calendar year, the annual emission-based fee for that source shall be based on the estimated allowable emissions, as defined in COMAR 26.11.01.01B(4), of that source, as determined by the Department.”

- (d) COMAR 26.11.02.19D – Emission Certification
 - “(1) Beginning January 1, 1994, the responsible official designated by the owner or operator of a source for which a permit to operate is required shall certify, as provided at Regulation .02F of this chapter, the actual emissions of regulated air pollutants from all installations at the plant or facility.
 - (2) Certification shall be on a form obtained from the Department and shall be submitted to the Department not later than April 1 of the year following the year for which certification is required.
- (e) COMAR 26.11.06.08 – Nuisance
 - “An installation or premises may not be operated or maintained in such a manner that a nuisance or air pollution is created. Nothing in this regulation relating to the control of emissions may in any manner be construed as authorizing or permitting the creation of, or maintenance of, nuisance or air pollution.”
- (f) COMAR 26.11.06.09 – Odors
 - “A person may not cause or permit the discharge into the atmosphere of gases, vapors, or odors beyond the property line in such a manner that a nuisance or air pollution is created.”
- (g) COMAR 26.11.15.06 – Requirements for New Installations, Sources, or Premises
 - “A(1) Except as provided in §A(2) of this regulation, a person may not construct, modify, or operate, or cause to be constructed, modified, or operated, any new installation or source without first demonstrating to the satisfaction of the Department using procedures established in this chapter that total allowable emissions from the premises of each toxic air pollutant discharged by the new installation or source will not unreasonably endanger human health.”

IV. CONSTRUCTION CHANGES SINCE THE ISSUANCE OF THE PREVIOUS STATE PERMIT TO OPERATE

On September 7, 2022, CSX received a permit to construct for the following modifications to the North Reclaim Tunnel at the existing coal terminal to address the damage caused by an explosion in December of 2021 and to reduce the potential for a recurrence of an explosion:

- (1) A continuous conveyor belt (BC-7) to replace the damaged conveyor in the existing North Reclaim Tunnel.

- (2) Associated equipment repairs to the tunnel roof, BC-7 head chute, the A/B drives, the BC-7 tensioner, replacement of the BC-7 truss, and installation of the steel support frame for the BC-2 tensioner.
- (3) Improved tunnel airflow to be maintained at a minimum of 300 feet per minute (fpm). In accordance with OSHA regulations, the Permittee was also required to install and operate a fixed gas detection system inside the tunnel to monitor for methane.

To further reduce the potential for an explosion, CSX also installed explosion-proof electrical boxes within the tunnel system to eliminate a possible explosion ignition source.

Additionally, the permit required CSX to construct and maintain a fenceline monitoring system for particulate matter. Readings from the fenceline network are available at: www.csxcurtisbayfacts.com/monitoring/

V. ADMINISTRATIVE CHANGES FROM THE PREVIOUS STATE PERMIT TO OPERATE

In 1990, CSX removed the bulk palletized ash handling facility equipped with a baghouse as registered under ARA Registration No. 510-2263-9-0649. As a point source of emissions, COMAR 26.11.06.02C(2) prohibiting visible emissions and COMAR 26.11.06.03B(2)(a) limiting particulate matter emissions from confined sources applied to the baghouse at the time the ash handling facility was in use. There are no other point sources at the facility and references to those regulations are not included in the renewal permit. CSX also removed the ore facility with two (2) Dravo unloaders (ARA Registration No. 510-2263-9-0281). The ore facility and corresponding ARA Registration No. 510-2263-9-0281 are not included in the equipment table of the renewal permit.

VI. COLLABORATIVE INVESTIGATION AND ADDITION OF PHYSICAL BARRIER AND DUST CONTROL REQUIREMENTS

The Community of Curtis Bay Association (CCBA), the South Baltimore Community Land Trust (SBCLT), the Department of Environmental Health and Engineering (EHE) at the Johns Hopkins Bloomberg School of Public Health (BSPH), the Department of Atmospheric and Oceanic Sciences at the University of Maryland (UMD), and the Air and Radiation Administration conducted an on-going air pollution monitoring exercise in the Curtis Bay area. The collaborative investigation report, released in December 2023, confirmed the presence of airborne coal dust in the community surrounding the CSX facility.

The study found that coal dust is present throughout the community. Specifically, coal particles were identified at all of 8 community sampling locations and in 100% of samples during 3 different rounds of sampling using sophisticated surface electron microscopy analysis. Sampling locations ranged from the edge of the coal terminal to around $\frac{3}{4}$ of a mile away from the facility. More visible dark dust was found closer to the coal terminal than at locations farther away. Smaller coal dust particles that are of particular health concern were found along with larger particles throughout the community.

The study also found that coal dust finds its way into the community on a day-to-day basis and is correlated with both activity at the coal terminal and wind direction. Multipollutant air quality sensors found pollutant signatures associated with coal dust leaving the terminal's fence line on average nearly once every hour and a half, with clearer and higher intensity signatures closest to the terminal. The community sensor network found that average particle pollution levels in Curtis Bay were higher than at nearby MDE regulatory monitors. This pollution burden comes from many different pollution sources in the area, including significant coal dust and diesel truck traffic. The study did not find that ambient particulate levels exceeded any national ambient air quality standards.

The findings with respect to coal dust establish that the current precautions being taken by CSX at its coal terminal are inadequate to prevent coal dust from reaching the community. The findings further support the conclusion that the operation of the terminal has created a nuisance.

It is an important consideration in the context of operating permit development that Curtis Bay is a community with a low-income population twice the state average. The number of residents with less than a high school education is also twice the state average, as is the population under five years of age. Moreover, the community is surrounded by a high concentration of significant and impactful industrial and governmental operations, each of which contributes to the pollution burden impacting the community.

The facility is unique among facilities of this type in its proximity to a residential community, with coal storage piles less than 900 feet from the nearest homes.

Collectively, the overall findings of the study, the makeup of the community and the number of significant neighboring pollution sources give rise to environmental justice concerns, as adverse effects from exposure to particle pollution and other pollutants are borne disproportionately by the most vulnerable, including infants, children, the elderly, people of color, those with low incomes, and those with underlying health conditions. The census tract containing the facility and the residential community of Curtis Bay has among the highest scores in the state for pollution burden and vulnerability in the MDE Environmental Justice Screening Tool.

These considerations lead the Department to propose that CSX should install additional controls to both better prevent coal dust from leaving the facility and to remedy nuisance conditions, and to do so in a manner that is highly effective and long lasting. This draft permit would require CSX to:

- (1) Construct a physical barrier to prevent coal dust from being transported from any coal storage piles on the site into the surrounding community, with flexibilities to accommodate site constraints;
- (2) Install and operate a system to apply water to railcars loaded with coal at the entry point to the facility; and
- (3) Install improved water application systems in the railcar unloader sheds.

CSX will be required to obtain an approval from the Department prior to making barrier changes and will also be required to update the facility's Fugitive Dust Plan to incorporate the physical barrier requirements.

VII. ADDITION OF ENHANCED FUGITIVE DUST PLAN AND FENCELINE MONITORING PLAN

As required by the permit to construct issued on September 7, 2022, CSX submitted a revised Fugitive Dust Plan to ARA for review and approval on May 24, 2023. At a minimum, the revised plan was required to include the following: (1) a detailed description of each potential source of emissions, the fugitive dust mitigation measures used, and the parameters monitored (e.g., wind speed set point, minimum pile heights, visible observations) that would trigger the use of water sprays; (2) a diagram showing the location of each water spray nozzle system at the premises labeled for quick identification; (3) a log of actions implemented to mitigate fugitive dust for each source of fugitive emissions that includes the date, time, and action taken; and (4) an evaluation of measures that could be utilized to further ensure dust is controlled. The May 2023 plan is included in Appendix 1 of the renewal SPTO and will be amended to incorporate new physical barrier requirements.

As required by the permit to construct issued on September 7, 2022, CSX submitted a Fence Line Monitoring Plan to ARA for review and approval on November 6, 2022. At a minimum, the plan was required to include equipment types designated by MDE to measure particulate pollution leaving the site and shall include equipment to measure applicable meteorological conditions. The approved plan is included in Appendix 2 of the renewal SPTO.

VIII. TENTATIVE DETERMINATION

Based on the above information, the Department has concluded that the CSX Transportation, Inc. – Curtis Bay Piers facility will comply with all applicable Federal and State air quality control requirements under these new permit conditions, and the Department has made a tentative determination to issue the renewal State Permit to Operate.