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Chief of Case Administration
Office of the Chief Counsel
Surface Transportation Board
395 E Street, SW
Washington, DC 20423-0001

36886

Re: *CSX Transportation Inc.-Petition for a Declaratory Order*, STB FD No. ~~36866~~

Dear Sir or Madam:

I have attached for e-filing Reply of the Maryland Department of the Environment in Opposition to CSXT's Petition For Declaratory Order in the above-referenced proceeding.

If you have any questions, please do not hesitate to contact me.

Sincerely,

Allison I. Fultz

Enclosure

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BEFORE THE
SURFACE TRANSPORTATION BOARD

Finance Docket No. 36886

CSX TRANSPORTATION, INC. –
PETITION FOR DECLARATORY ORDER

REPLY OF THE MARYLAND DEPARTMENT OF THE ENVIRONMENT IN OPPOSITION TO CSXT'S PETITION FOR DECLARATORY ORDER

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Dated: January 30, 2026

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CSX TRANSPORTATION, INC. –
PETITION FOR DECLARATORY ORDER

REPLY OF THE MARYLAND DEPARTMENT OF THE ENVIRONMENT IN OPPOSITION TO CSXT'S PETITION FOR DECLARATORY ORDER

The Maryland Department of the Environment (MDE) hereby submits this Reply in opposition to CSX Transportation, Inc.'s (CSXT) Petition for Declaratory Order filed on November 19, 2025 (CSXT Petition). The CSXT Petition should be denied as premature because a broader pending administrative review may obviate any need for a declaratory order, and because MDE has not taken, and has no plans to take, any enforcement actions that would interfere with CSXT's rail operations. MDE does not contest CSXT's right to operate its Curtis Bay Piers terminal facility in Baltimore, MD (Coal Terminal), and agrees that it cannot unreasonably interfere with CSXT's "just-in-time" rail operations. However, should the Board grant the CSXT Petition, MDE urges the Board to hold that Permit Conditions D(1)–(3) (Permit Condition D) of the Permit-to-Operate (Permit) that MDE granted for the Coal Terminal are not preempted. The Permit Condition D requirements are a valid exercise of MDE's federally-approved air quality regulation program and the well-established right reserved to state and local governments to regulate general public health and safety matters in a manner that does not regulate or interfere with rail transportation regulated by the Board.

BACKGROUND

I. Maryland Department of the Environment's Role in Regulating Public Health and Safety

MDE is responsible for protecting and restoring Maryland's environment and safeguarding the environmental health of Maryland citizens. Its duties encompass enforcement and regulation, long-term planning and research, and technical assistance to industry and communities in their efforts to take responsibility for pollution, waste disposal, and emergency spills of waste or oil.

MDE's responsibilities include monitoring and protecting Maryland's air quality. The Clean Air Act directs each state to adopt and submit to the EPA administrator a state implementation plan (SIP) which provides for implementation, maintenance, and enforcement of national ambient air quality standards (NAAQS) in that state. 42 U.S.C. § 7410. Maryland's EPA-approved SIP incorporates by reference many provisions of the state's Code of Maryland Administrative Regulations (COMAR) air quality regulations. 40 C.F.R. § 52.1070 (incorporating provisions of COMAR 26.11 relevant to this matter). Those regulations detail MDE's requirements for air pollution control and cover general standards, specific pollutants, permit processes, ambient air quality, and emission limits for various industries, among other controls. COMAR 26.11. As relevant here, the regulations establish a broad air quality permitting program that requires a state permit to operate certain emissions sources, one of which is a coal loading or unloading installation. COMAR 26.11.02.13A(38). Maryland's permitting authority spans decades, and Maryland's current SIP has been EPA-approved since 2003. 40 C.F.R. § 52.1070. MDE is responsible for issuing those permits. COMAR 26.11.02.02(C).

MDE also has authority to set conditions as necessary to ensure a source's compliance with the COMAR air quality regulations. COMAR 26.11.02.02H ("The Department may include terms and conditions in any permit or approval issued under this chapter . . . to ensure continuous compliance with this subtitle."); 26.11.02.13B(3) (authorizing MDE to determine whether "permit conditions are necessary to ensure that the source complies continuously with the requirements of the State air pollution control law"). Several of the COMAR regulations are applicable to the Coal Terminal's coal dust emissions. For example, COMAR 26.11.06.03(C) prohibits a person from "caus[ing] or permit[ting] emissions from an unconfined source without taking reasonable precautions to prevent particulate matter from becoming airborne." COMAR 26.11.06.03(D) states that "[a] person may not cause or permit any material to be handled, transported, or stored … without taking reasonable precautions to prevent particulate matter from becoming airborne." The regulations also prohibit operation or maintenance of an installation or premises "in such a manner that a nuisance or air pollution is created." COMAR 26.11.06.08; *see also* COMAR 26.11.06.09. MDE exercises its regulatory authority through its Air and Radiation Administration by issuing permits and permit conditions that ensure facilities like the Coal Terminal remain in compliance. Reply Ex. A ¶ 5 (V.S. Hoagland).

II. CSXT's Coal Terminal near the Curtis Bay Neighborhood

CSXT is a Class I railroad subject to the jurisdiction of the Board. CSXT owns and operates the Coal Terminal, which sits a mere few hundred feet from a densely developed working-class residential community. The community of Curtis Bay grew alongside the Coal Terminal and nearby shipping and industrial facilities, providing nearby homes for workers in these facilities and their families. *See* Maryland Historical Trust Determination of Eligibility

Form, Curtis Bay Survey District, Architectural Survey File, B-5241 (last updated Feb. 4, 2016), available at https://apps.mht.maryland.gov/Medusa/PDF/BaltimoreCity/B-5241.pdf.

Although CSXT asserts that the Coal Terminal has been in use for over 100 years, CSXT Pet. at 1, it does not clarify that storage of coal in piles is only a more recent activity. For example, aerial photographs from the 1950s show the area now used for stockpiling coal at the Coal Terminal was formerly used as a switching terminal. *See* Reply Ex. B (Aerial Photograph AJO-8k-114.tif, U.S. Agriculture Stabilization and Conservation Service (1952-1953)).[1] Images from the early 1970s show the yard in disuse. *See* Reply Ex. C (Aerial Photograph 48.jp2, Baltimore City Planning Department (1972)).[2] Even once the Coal Terminal began to be used as a coal transloading yard, available documentation indicates that coal was not stored in piles at the site. An inspection report attached to the Coal Terminal's 1993 permit explicitly stated that at that time, "[c]oal [was] transferred directly from the rail dump to barges or ships" and that "[t]here [were] no coal stockpiles at this site." Reply Ex. A ¶ 16 (V.S. Hoagland); Reply Ex. G at 6 (1993 Permit).

According to CSXT's representations to MDE, today coal is stored by coal type and shipment, which affects coal pile height. Reply Ex. A ¶ 18 (V.S. Hoagland). CSXT has asserted that this choice hinders it from reducing the maximum coal pile height. *Id*. Coal pile heights also fluctuate based on shipping contracts and external disruptions (e.g., a 2021 explosion at the Coal Terminal, the 2024 Key Bridge collapse, or infrastructure repairs). *Id*.

[1] Available at http://jhir.library.jhu.edu/handle/1774.2/32827.

[2] Available at https://jscholarship.library.jhu.edu/items/47dc29e0-d5c6-408d-b1e7-6c0f86c86236?obo.page=9#p-obo.

In recent years local community members and public health advocates have voiced increasing concerns about public health and safety impacts from the Coal Terminal operations, concerns that have been substantiated by scientists. In late 2021, the Coal Terminal experienced "a major explosion" that "blasted coal dust several blocks into the Curtis Bay community," and which "shattered windows of nearby homes, and caused panic throughout the South Baltimore area." Reply Ex. D at 16 (Final Determination, Appx. B). Following the explosion, the Community of Curtis Bay Association and South Baltimore Community Land Trust initiated a collaboration with neighboring community-based organizations, MDE, and scientific researchers from John Hopkins and the University of Maryland to examine the community's coal dust exposure. *Id*. In December 2023, the team released their preliminary findings showing the presence of coal dust in the Curtis Bay Community. *Id*. This determination was further confirmed in collaboration with coal characterization experts from the University of California, Davis and the University of Cape Town. *Id*. at 16, 22. Other peer-reviewed scientific studies have been published in recent years that have further demonstrated coal dust-related impacts on the Curtis Bay community. *See* Reply Ex. E (Aubourg et al., Community-driven research and capacity building to address environmental justice concerns with industrial air pollution in Curtis Bay, South Baltimore, Front. Epidemiol., 3:1198321 (2023) https://doi.org/10.3389/fepid.2023.1198321); Reply Ex. F (Deanes et al., Relation of wind direction and coal terminal activity patterns with air pollution burden in a community bordering a coal export terminal, Curtis Bay, Maryland, USA, Air Quality, Atmosphere & Health, 18:2805–2821 (2025), https://doi.org/10.1007/s11869-025-01773-w).

III. MDE's Regulation of Air Quality at the Coal Terminal

For decades, as CSXT acknowledges, MDE has regulated the Coal Terminal in the interest of protecting local public health and safety commensurate with the evidence of associated impacts. MDE issued the Coal Terminal its first permit to operate in 1993, which was renewed as amended the following year. Reply Ex. G (1993 Permit). This initial permit required CSXT to "keep all air pollution control equipment, including the water sprays, properly maintained and in good working order so as to assure full and continuous compliance with all applicable regulations." *Id.* at Part B(1). CSXT was also required to submit an annual emission certification with information on the total amount of emissions and any work practice standards that significantly affected emissions. *Id*. at Part A(7). In addition, CSXT had to certify the results of an annual air toxics analysis. *Id*. at Part A(8). When CSXT's permit was revised and renewed for the following year, this permit's term changed to five years, subject to renewal. *Id.* at p. 8–9 (1994 letter attached to 1993 permit). CSXT has subsequently renewed their Permit to Operate periodically over the past several decades. Reply Ex. A ¶ 13 (V.S. Hoagland). CSXT's operating permits have historically remained silent on coal pile height.

The Permit has sought to keep pace with growing concerns over pollution and public health through the addition of new permit conditions. For decades, CSXT's Permit has included a Fugitive Dust Plan to ensure compliance with COMAR 26.11.06.03(D)'s requirement that reasonable precautions be taken to prevent particulate matter from becoming airborne. Reply Ex. A ¶ 19 (V.S. Hoagland); CSXT Pet. Ex. 2 at Appx. 1 (Fugitive Dust Plan). Modifications have been made over the years as necessary to address particulate matter control. Reply Ex. A ¶ 19 (V.S. Hoagland). Additional modifications were made as a result of negotiations following a December 2021 explosion at the Coal Terminal. *Id*.

In approximately 2018, CSXT installed a 30 foot high wind fence along the south side of the property to minimize wind action on the coal storage piles and potential fugitive dust. *Id*. at ¶ 20; CSXT Pet. Ex. 2 at Appx. 1 § 3.4.2 (Fugitive Dust Plan).

IV. MDE's Approval of the Coal Terminal Air Quality Permit Renewal

On July 18, 2023, CSXT submitted its application to renew its State permit to operate before the Permit's previous expiration date. MDE held a public meeting on October 10, 2024, to receive comment on MDE's draft renewal permit conditions. Reply Ex. A ¶ 26 (V.S. Hoagland). The public comment period remained open through December 16, 2024. *Id*. During that period, MDE received comments from individuals, scientists, community groups, and CSXT itself. *Id*. Evidence submitted from scientists included a peer-reviewed scientific article demonstrating the presence of coal dust in residential areas of Curtis Bay, "consistent with longstanding community concerns and lived experiences." Reply Ex. D at 15 (Final Determination, Appx. B). Community members and community groups also submitted comments regarding the impact of the Coal Terminal due to its particular proximity to the Curtis Bay residential community. Reply Ex. H (Final Determination, Appx. A); Reply Ex. I (Final Determination, Appx. D). CSXT submitted voluminous comments, which CSXT includes in full attached to the CSXT Petition. CSXT Pet. Ex. 3. MDE reviewed and considered all of the submitted evidence. Reply Ex. A ¶ 28 (V.S. Hoagland); CSXT Pet. Ex. 4 (Final Determination).

In July 2025, after evaluating the extensive record submitted to it, MDE re-approved CSXT's permit to operate the Coal Terminal. CSXT Pet. Ex. 2 (Permit), Ex. 4 (Final Determination).[3] The renewed Permit includes strengthened permit conditions aimed at

[3] The Final Determination and all Appendices are available at: https://mde.maryland.gov/programs/permits/AirManagementPermits/Pages/CSX-Transportation-Permit.aspx.

increasing overall dust control efficiency and minimizing the transport of coal dust from any coal storage piles into the surrounding community. CSXT Pet. Ex. 4 at 7 of 19 (Final Determination). MDE concluded these additional mitigation measures were necessary due to measurements of fine particulate matter, which were at times above the NAAQS, as well as evidence of coal dust migrating into the surrounding community. *Id.* at 7–9 of 19.

Part of MDE's permit review process includes considering whether a facility will meet the NAAQS. *Id.* at 7 of 19. The NAAQS are developed by public health experts and set at levels that will protect public health with an adequate margin for safety. *Id.* Since approval of CSXT's last permit to operate, MDE gained access to new data allowing MDE to better assess the facility's air quality emissions. Reply Ex. J ¶ 8 (V.S. Frey). In July 2023, CSXT began operation of a fenceline air quality monitoring network that it constructed in compliance with one of its permit conditions. *Id.* at ¶ 12; CSXT Pet. Ex. 2 at Part C(7) (Permit). The network measures particulate matter at eight sites around the facility. CSXT Pet. Ex. 4 at 7 of 19 (Final Determination). MDE analyzed 21 months of data from the network and found that some average concentrations of fine particulate matter measured above the NAAQS and that these concentrations often exceeded the NAAQS when the sensors were downwind of the coal storage areas. *Id.* at 7–8 of 19; Reply Ex. J ¶ 13 (V.S. Frey). MDE, however, cannot make formal findings of NAAQS violations because a formal assessment requires three years of data and CSXT's fenceline monitoring network sensors are not within the Maryland Ambient Air Monitoring Network used to make formal assessments of NAAQS violations. CSXT Pet. Ex. 4 at 7 of 19 (Final Determination); Reply Ex. J ¶ 10 (V.S. Frey). Two of the twelve sensors in CSXT's network, however, are regulatory-grade. CSXT Pet. Ex. 4 at 7 of 19 (Final Determination). Both of those monitors measured fine particulate matter levels *above* the

NAAQS when *downwind* of the coal storage piles and measured levels *below* the NAAQS when *upwind* of the coal storage piles. *Id.* at 7–8 of 19. MDE found this analysis to "complement[] and confirm[]" findings by "community scientists, university scientists, and MDE scientists that indicate[] coal dust is being transported from the facility to the community." *Id*. at 8 of 19.

Due to the "ability of fine particulate matter to cause health impacts at concentrations above the national ambient standard" and "the toxic air pollutant constituents within coal dust," MDE decided to impose additional coal dust control measures. *Id*. at 11 of 19. MDE found the need for further controls well-supported by CSXT's close proximity to the residential community, as well as "nearby major air pollution sources that individually and collectively impact local air quality." *Id*.

Before adding new controls to the Permit, MDE solicited and considered input from CSXT. MDE acknowledged CSXT's concerns about the costs and feasibility of various proposed controls. For example, MDE considered and at CSXT's urging rejected an idea for a total enclosure or physical barrier of the facility due to the anticipated costs and negative impact on the Coal Terminal's coal handling capacity. *Id*. at 14 of 19. Instead, MDE selected a lower-cost option that would "not meaningfully impact operations or terminal capacity," while still providing additional coal dust control. *Id*.

The new permit condition requires construction of a windscreen commensurate with the size of the Coal Terminal's coal piles. CSXT Pet. Ex. 4 at 7 of 19 (Final Determination); CSXT Pet. Ex. 2, Part D (Permit). The windscreen must surround "all coal storage piles either individually or in a single enclosure," except where openings are necessary for vehicular access or for movement of coal via conveyors or rail. CSXT Pet. Ex. 2, Part D(1) (Permit). The maximum coal pile height cannot exceed the height of the windscreen at all times. *Id.* at Part

D(1). Within 120 days of issuance of the Permit, CSXT is required to seek MDE approval of the type of windscreen it intends to use and of its revisions to the Fugitive Dust Plan applicable to when the windscreen is in operation. *Id.* at Part D(2). Within 18 months of MDE's approval of the windscreen, unless the approval specifies a different timeline, CSXT must complete construction and place the windscreen in operation. *Id.* at Part D(3).

The renewed permit also includes general operating conditions which were present in its previous permits and which CSXT does not challenge. For example, CSXT is required to "maintain and operate all installations and associated air pollution control equipment so as to assure full and continuous compliance with all applicable air pollution control regulations and permit conditions." *Id.* at Part C(1). CSXT must control fugitive dust by applying suitable dust suppressants and by complying with the requirements of the facility's Fugitive Dust Plan as included in the Permit. *Id.* at Part C(3), (6). The Fugitive Dust Plan lays out the facility's various control measures for minimizing fugitive dust emissions, including operating practices, physical controls, and water sprays. *Id.* at Appx. 1 (Fugitive Dust Plan). The Permit also places limits on the amount of material certain areas of the facility may transfer in a 12-month period—no more than 500,000 tons of limestone and iron ore and no more than 1,000,000 tons of coal. *Id.* at Part C(4). In addition, CSXT must comply with the facility's approved Fence Line Monitoring Plan, *id.* at Part C(7), and maintain and furnish MDE with records including those regarding the monthly amounts of materials processed, data used to determine toxic air pollutant emissions, and demonstrated compliance for toxic air pollutants. *Id.* at Part E. Finally, in response to the 2021 explosion the renewed permit requires installation of improved water spraying equipment at coal railcar unloading operations. *Id.* at Part D(4).

MDE announced the issuance of the renewed permit with a press release. Following the extensive public engagement throughout the renewal process, the statement assured community members that their concerns had been heard and actions were being taken in the form of "additional measures to control dust and protect the community." CSXT Pet. Ex. 5 at 1. The renewed permit, like many permits that MDE issues, reflects the particular circumstances of the Coal Terminal, including its extreme proximity to the residential community. Reply Ex. A ¶ 28 (V.S. Hoagland). The new permit conditions do not limit or even address rail service. Rather, the animating concern behind the more stringent permit requirements was "protect[ion of[the health of the surrounding community." *Id*.; CSXT Pet. Ex. 5 at 1.

V. CSXT's Challenge of the Permit Renewal Through Currently Pending Administrative Appeals Process and in This Proceeding

In August 2025, CSXT appealed the Final Determination and the imposition of Permit Condition D through a Request for Contested Case Hearing before an Administrative Law Judge of the Maryland Office of Administrative Hearings (ALJ). CSXT challenged Permit Condition D on multiple grounds, including (a) that it was not reasonable and was based on flawed studies; (b) that it was preempted by the ICC Termination Act (ICCTA); (c) that the Coal Terminal's operations do not create a nuisance; and (d) that MDE's permitting renewal process and decision was arbitrary and capricious and did not follow required procedures. Reply Ex. K ¶ 39 (CSX Transportation, Inc., Request for a Contested Case Hearing, *In the Matter of the CSXT Trans., Inc. – Curtis Bay Piers Permit-To-Operate Renewal*, Permit No. 510-2263).

On November 19, 2025, while its administrative appeal was pending, CSXT filed the CSXT Petition in these proceedings, asserting that the conditions requiring the new windscreen (but not the underlying Permit and other concomitant conditions) are preempted. CSXT then filed a request to stay the contested case proceedings pending a decision by the Board, a request

that MDE opposed. On January 13, 2026, the ALJ issued an order postponing the contested case proceedings, based on a determination that "other jurisdictions have deferred to STB on issues dealing with the railroad," and ordering the parties to convene for a status conference on May 5, 2026. *See* Reply Ex. L at 4, 6 (*In the Matter of CSX Transp., Inc.*, OAH No.: MDE-ARMA-012-25-225750 (Jan. 13, 2026)).

MDE hereby submits its Reply in opposition to the CSXT Petition.

ARGUMENT

The Board should deny the CSXT Petition as premature because the state administrative appeal that CSXT initiated may resolve CSXT's claims, and regardless, MDE has not taken, and will not take, any enforcement measure that will unreasonably interfere with rail transportation subject to the Board's jurisdiction. If the Board grants the CSXT Petition, it should determine that MDE's authority to regulate air emissions at the Coal Terminal is part of a federally-approved air quality program that is harmonizable with the ICCTA. To the extent MDE's authority to issue Permit Condition D is an exercise of purely state-based authority, its exercise does not, by its nature, deny or unreasonably delay rail transportation, and therefore is also not preempted. Finally, Permit Condition D is not preempted "as-applied" here because MDE's permitting program is a generally applicable, non-discriminatory public health and safety regulation that does not manage or govern rail transportation.

I. The CSXT Petition Should Be Denied as Premature

CSXT challenges MDE's Permit Condition D based on the preemptive scope of the Board's jurisdiction over "transportation by rail carriers," which "is exclusive," 49 U.S.C. 10501(b), *see* CSXT Pet. at 1, but CSXT's challenge is premature because CSXT's pending challenge of the same issue before a state administrative tribunal may obviate any Board action.

The Board has the authority to issue a declaratory order to eliminate controversy or remove uncertainty. 5 U.S.C. § 554(e); 49 U.S.C. § 1321; *see Delegation of Auth.—Declaratory Order Proceedings*, 5 I.C.C.2d 675, 675 (1989). However, the Board will decline to issue a declaratory order as premature where "any future enforcement is speculative at present." *Ass'n of Am. R.R.—Pet. for Declaratory Order*, FD 36369, slip op. at 10 (STB served Dec. 30, 2020) (*AAR*).

CSXT does not contest MDE's authority to approve and enforce control measures—including the Permit generally—to ensure CSXT's operations meet air quality standards through MDE's federally-approved SIP. CSXT Pet. at 29, (*citing* 42 U.S.C. § 7410(a)(1), (a)(2)). CSXT states that it "is *not* arguing that the ICCTA categorically preempts all of Maryland's COMAR air regulations or Maryland's SIP, into which the U.S. EPA incorporated by reference the COMAR regulations." *Id.* (emphasis in original) (*citing* 42 U.S.C. § 7410; 40 C.F.R. § 52.1070). The CSXT Petition therefore does not require the Board to re-explain settled law that "nothing in section 10501(b) is intended to interfere with the role of state and local agencies in implementing Federal environmental statutes, such as the Clean Air Act." *Joint Pet. for Declaratory Order—Bos. and Me. Corp. and Town of Ayer, MA*, 5 S.T.B. 500, 508 (2001) (*Ayer*); *see also Cities of Auburn and Kent, WA—Pet. for Declaratory Order—Burlington N. R.R. Co.—Stampede Pass Line*, 2 S.T.B. 330, 337 (1997) (*Stampede Pass*), *aff'd sub nom City of Auburn v. U.S.*, 154 F.3d 1025 (9th Cir. 1998) (*Auburn*); *Ass'n. of Am. R.Rs. v. S. Coast Air Quality Mgmt. Dist.*, 622 F.3d 1094, 1098 (9th Cir. 2010) (*South Coast*). Board precedent reflects that any such challenge would be a losing proposition, because the Permit's regulation under the Clean Air Act of harmful emissions from a stationary rail facility, rather than the movement of goods, would likely be harmonized with the ICCTA. *See AAR*, FD 36369, slip op. at 15 (distinguishing

between state regulation of "rail cars in transit" under the Clean Water Act, which would likely be preempted, and regulation of "stationary facilities owned or operated by railroads").

The Board avoids granting petitions for declaratory order prematurely where, as here, the enforcement of state-based laws is based on facts and circumstances yet to occur and that may be better settled in other venues before reaching the Board. *See CSX Transp., Inc. —Pet. for Declaratory Order*, FD 35832, slip. op. at 5 (STB served Feb. 29, 2016). CSXT claims that only Permit Condition D is preempted, but this challenge is premature because there is no clear or imminent dispute regarding MDE's enforcement of the Permit Condition D requirements. As CSXT notes, it has not yet exhausted its administrative remedies, and the parties are properly before an ALJ pursuant to a contested case under which CSXT has challenged Permit Condition D. CSXT Pet. at 11 n.6. The outcome of the state administrative hearing, which addresses issues that go beyond the Board's jurisdiction, could invalidate Permit Condition D or modify it in a manner acceptable to CSXT, thereby obviating the need for the Board to issue a declaratory order. Although those proceedings are currently postponed, they could be easily restarted and even now could be decided in a shorter time than it would take the Board to issue a decision.

Even if the ALJ rules in favor of MDE, enforcement of Permit Condition D is still subject to determination by MDE and will be unlikely to raise jurisdictional questions for the Board. Far from using Permit Condition D to prevent or interfere with CSXT's activities, MDE has *granted* the Permit, and has not taken any actions that would prevent or restrict CSXT's rail service to, from, or at the Coal Terminal. MDE agrees that it is not authorized to terminate CSXT's rail operations. CSXT Pet. Ex. 4 at 7 of 19 (Final Determination). The lack of enforcement of Permit Condition D makes the Board's determination at this juncture too speculative. *AAR*, FD

36369, slip op. at 10 (declaratory orders are granted where "future enforcement efforts are planned or likely to occur.").

CSXT's failure to even allege that MDE has or will take any steps to enforce Permit Condition D in any way that will prevent or interfere with CSXT's rail operations belies the fact that a Board decision is not and likely will never be necessary. *See* CSXT Pet. 1–35. Under circumstances where a petitioner alleges preemption but leaves the Board to speculate on how enforcement will occur or rail transportation will be affected, the Board has previously denied petitions for declaratory order, and should do likewise here. *AAR*, FD 36369, slip op. at 10; *see also CSX Transp., Inc.—Pet. for Declaratory Order*, FD 33388 (Sub-No. 101), slip op. at 6 n.10 (STB served Aug. 27, 2008) (Denying a petition for declaratory order where "CSXT has presented very few facts concerning a potential interference . . . with the rail line," and instead "speculates on its possible future use of this line.").

Accordingly, the Board should decline to grant a declaratory order here where the relevant state processes have not yet run their course.[4]

II. Permit Condition D Is Not Preempted Categorically or As-Applied

Should the Board address the merits of the CSXT Petition, it should rule that Permit Condition D is not preempted. Contrary to CSXT's claims, Permit Condition D is neither categorically preempted by the ICCTA nor preempted as applied here. Permit Condition D is not

[4] Short of denying the petition, the Board should hold these proceedings in abeyance pending final resolution of the state administrative hearing in order to ensure efficient use of the Board's resources and provide it with a complete decisional record below without prejudicing any party. *N. Cnty. Transit Dist.—Pet. for Declaratory Order*, FD 36433, slip op. at 11 (STB served May 23, 2023) (holding proceedings in abeyance pending state proceedings to "promote efficiency" and "allow a more complete and accurate adjudication of the preemption dispute between the parties."). Further briefing in the contested case proceeding will assist the ALJ in better understanding that the Board does not simply handle "issues dealing with the railroad."

categorically preempted because the authority under which it has been imposed is part of a federally-approved program under the Clean Air Act, and because its permitting authority only incidentally affects rail transportation and does not by its nature deny or unreasonably delay CSXT's rail operations. Permit Condition D itself constitutes a reasonable and appropriate mitigation measure to limit air pollution caused by excessive fugitive coal dust, whose emission is not integral to CSXT's "just-in-time" rail operations. And, because Permit Condition D does not manage or govern rail transportation but instead regulates pollution caused by coal piling without preventing or unduly burdening the transportation of coal, Permit Condition D is not preempted as applied to these circumstances. Preemption does not give CSXT free rein to disregard public health and safety measures, such as Permit Condition D, that are tailored to mitigate activities not inherently related to CSXT's "just-in-time" rail service at the physically constrained Coal Terminal. The relief that CSXT requests should therefore be denied.

A. MDE's Authority to Issue Permit Condition D Is Not Categorically Preempted Because This Authority Is Federally Approved and Harmonizable with the ICCTA

CSXT's categorical preemption argument is an attack on MDE's authority to issue conditions as part of its air quality permitting program, but as CSXT admits, MDE's air quality permitting program is a valid federally-approved exercise of the State's authority to regulate air quality. CSXT Pet. at 29. Because MDE's air quality regulations are part of a federally-approved Clean Air Act program, it is not subject to preemption and is harmonizable with the ICCTA.

1. CSXT Challenges MDE's Federally-Approved Authority to Regulate Air Quality, Which is Subject to Harmonization with the ICCTA

MDE's authority to regulate air quality at the Coal Terminal is part of its federally-approved SIP under the Clean Air Act, and preemption simply does not apply "because it is possible to harmonize the ICCTA with those federally recognized regulations." *Id.* at 1098; COMAR 26.11.02.13A(38), B(3) (authorizing permits for coal loading/unloading facilities).

Applicable precedent reflects that categorical preemption applies to "the permitting process itself, not the length or outcome of that process in particular cases." *See Green Mountain R.R. v. Vermont*, 404 F.3d 638, 644 (2d Cir. 2005); *Union Pac. R.R. v. Chicago Transit Auth.*, 647 F.3d 675, 679 (7th Cir. 2011) (explaining that categorical preemption analysis is most appropriate for "rule[s] of general applicability," rather than types of regulation "specifically limited in scope to the ownership or use of one particular piece of property."). This sensible distinction recognizes that the focus of categorical preemption centers on whether the law "allows" or gives a regulator "the ability" to deny or delay rail transportation activities that are regulated by the Board, rather than dissecting the fact-laden application of a law, regulation, or permitting process in a particular case. *See Green Mountain*, 404 F.3d at 643–44.

CSXT's categorical preemption claim is therefore properly understood to be a challenge to MDE's air quality permitting authority, rather than the specific implementation of that authority through the Permit Condition D requirements, since MDE has acted pursuant to the "permitting process itself," which is a "rule of general applicability." *See id.* at 644; *Chicago Transit Auth.*, 647 F.3d at 679. Properly understood in this way, CSXT's categorical preemption claim fails, because MDE's permitting and conditioning authority is part of a federally-approved SIP under the Clean Air Act and therefore harmonizable with the ICCTA.

The Clean Air Act "establishes a system of State Implementation Plans ('SIPS'), whereby states submit, subject to the [EPA's] review and approval, proposed methods for managing air quality. Once approved by the EPA, these plans '[h]av[e] the force and effect of federal law.'" *Safe Air for Everyone v. U.S. EPA*, 488 F.3d 1088, 1091 (9th Cir. 2007) (quoting *Trs. for Alaska v. Fink*, 17 F.3d 1209, 1210 n.3 (9th Cir. 1994). "[T]o the extent that state and local agencies promulgate EPA-approved statewide plans under federal environmental laws (such as 'statewide implementation plans' under the Clean Air Act), ICCTA generally does not preempt those regulations because it is possible to harmonize the ICCTA with those federally recognized regulations." *South Coast*, 622 F.3d at 1098 (citation omitted). "If an apparent conflict exists between ICCTA and [the Clean Air Act], then the courts must strive to harmonize the two laws, giving effect to both laws if possible." *Id.* at 1097 (citing *Ayer*, 5 S.T.B. at 509 n.28).

2. MDE's Authority to Impose Air Quality Conditions in General and the Windscreen Condition Specifically Is Harmonizable with the ICCTA

MDE imposed Permit Condition D in order to ensure ongoing overall compliance with the region's NAAQS standards, which are federally imposed. Results from Federal Equivalent Method (FEM) regulatory air monitors in CSXT's own Fenceline Monitoring Network "measured average PM2.5 levels above the NAAQS when downwind of the coal storage piles." CSXT Pet. Ex. 4 at 7–8 of 19 (Final Determination). While the individual measurements from the FEM monitors could not lead MDE to formally conclude that NAAQS standards had been violated based solely on coal emissions from the Coal Terminal, it did lead MDE to conclude that the Coal Terminal emissions were contributing to increases in pollutant levels that would likely contribute to a NAAQS violation. *Id.* at 8 of 19; Reply Ex. J ¶¶ 13–14 (V.S. Frey).

Assessments of formal NAAQS violations are calculated based on longer term exposure using averages from three-years' worth of data and must be based on data collected from FEMS *within* the Maryland Ambient Air Monitoring Network. *See* Reply Ex. J ¶¶ 10, 14 (V.S. Frey). However, even though short term increases are not a NAAQS violation per se, contributions of particle pollution from CSXT operations, particularly near the facility, often cause a localized burden of total PM2.5 at or above the NAAQS violation threshold that can cause adverse health effects. *Id.* ¶ 14. This is particularly the case in Curtis Bay, which is "believed to represent the highest concentration of air pollution sources anywhere in Maryland." CSXT Pet. Ex. 4 at 9 of 19 (Final Determination). Accordingly, MDE determined that Permit Condition D was necessary in order for CSXT's operations to maintain compliance with overall NAAQS standards. Id. at 11 of 19; Reply Ex. J ¶¶ 9, 13–14, 16–17 (V.S. Frey).

MDE's authority to regulate air quality at the Coal Terminal is harmonizable with the ICCTA. Harmonization of the ICCTA and federal environmental laws such as the Clean Water Act involves consideration of the impact on interstate commerce. A federally-approved state environmental permitting scheme is preempted where it applies to aspects of rail operations that are "inherently instrumentalities of interstate commerce," such as "rail cars in transit." *AAR*, FD 36369, slip op. at 15 (discussing Clean Water Act). This is because "subjecting them to differing regulatory requirements as they pass from one state to the next is likely to be incompatible with the free flow of interstate commerce that Congress envisioned when enacting § 10501(b)." *Id.* On the other hand, "non-discriminatory application to discharges from certain types of stationary facilities owned or operated by railroads . . . are generally not preempted because, although they may differ from state to state, they do not typically conflict with § 10501(b)'s goal of preventing differing regulations from interfering with the free flow of interstate commerce." *Id.*

Here, neither the Permit nor Permit Condition D interfere with "inherent[] instrumentalities of interstate commerce," e.g. "rail cars in transit," and do not "subject [CSXT's operations] to differing regulatory requirements as they pass from one state to the next," *see id.* Instead, the Permit and Permit Condition D specifically address "discharges from certain types of stationary facilities owned [and] operated by [CSXT]." *Id.* This is because although air quality permitting of dust emissions and rail coal terminals "may differ from state to state, they do not typically conflict with § 10501(b)'s goal of preventing differing regulations from interfering with the free flow of interstate commerce." *Id.*

3. CSXT's Categorical Preemption Argument Fails Because It Misapplies Applicable Law

CSXT argues that because the requirement to build a windscreen is not included in the SIP, it is not federally approved, CSXT Pet. at 30, but as discussed previously, CSXT mistakenly focuses on the outcome, rather than the process, in assessing what must be federally approved. *See Green Mountain*, 404 F.3d at 644. That specific measures at specific sites are not expressly approved by the EPA would defeat the purpose of delegating permitting authority to states under the Clean Air Act. It would also render other permit conditions that CSXT is not challenging, such as spraying water to reduce coal dust, CSXT Pet. at 11 n.7, potentially categorically preempted and unenforceable, a determination that could have disastrous implications for the protection of public health and wellbeing both at Curtis Bay and around the country.

CSXT labels the idea "that all permits issued in accordance with a state's SIP [are] federal law which require[] harmonization with ICCTA" an "absurd result," *id.* at 30, because that would mean "thousands of state permits around the country . . . would be federal law and shielded from preemption," *id.* at 32. But nothing is absurd about the delegation of federal

authority to State agencies; that is precisely what the Clean Air Act does, and why the Board recognizes state implementation of the Clean Air Act as an exception to preemption. As the Board has noted, the Clean Air Act's legal framework sanctions state air quality permitting authority because it "gives individual states the responsibility of developing and enforcing air quality programs that meet or exceed the national standards within their borders." *Stampede Pass*, 2 S.T.B. at 337.

Nor does the case law suggest state permits, or their conditions, issued pursuant to federally-approved rules, are categorically preempted. CSXT points to cases discussing *AAR* to support its contention that MDE's authority to issue conditions should not be considered federally-approved, CSXT Pet. at 30–32, but *AAR* does not stand for that proposition. In *AAR* the Ninth Circuit held that a rule enacted by a California air quality regulator regulating idling train emissions as a pollution source did "not have the force and effect of federal law" and therefore did not need to be harmonized as federal law. *South Coast*, 622 F.3d at 1095, 1098. But the court's analysis makes clear the dispositive issue there was that while "[o]nce approved by EPA, state implementation plans have 'the force and effect of federal law,' … the [air quality regulator's] rules *ha[d] not* become a part of California's EPA-approved state implementation plan." *Id.* at 1098 (emphasis added). Here, however, the applicable MDE regulations *have* been approved by the EPA as part of the State's SIP. Other cases that CSXT cites discussing *AAR* either do not shed additional light or appear to misread that case. *See* CSXT Pet. at 32 (quoting *BNSF Ry. v. Clark Cnty*, 11 F.4th 961, 968 (9th Cir. 2021).

CSXT arrives at the wrong conclusion about categorical preemption because it misapplies the law to incorrectly focus on the outcome of a federally-approved air quality permit, rather than the authority granted to issue that permit and any associated conditions. Instead,

applicable precedent makes clear that MDE's Permit Condition D is not categorically preempted because it is authorized under a federally-approved Clean Air Act SIP.

B. MDE's Authority to Issue Permit Condition D Is Also Not Categorically Preempted Because It Does Not By Its Nature Deny or Delay Rail Transportation

CSXT characterizes categorical preemption as applying to the condition in Permit Condition D to implement a windscreen, CSXT Pet. at 16, 20, but as noted *supra* at 20, this is not the correct framing because categorical preemption applies to "the permitting process itself, not the length or outcome of that process in particular cases." *See Green Mountain*, 404 F.3d at 644; *Chicago Transit Auth.* 647 F.3d at 679. Thus, CSXT's focus on the "outcome," i.e. the windscreen requirement, is not correct. As properly understood, CSXT's categorical preemption claim challenges MDE's authority to issue Permit Condition D as part of the Permit, but this challenge fails because MDE's authority to issue conditions does not *by its nature* serve as a "precondition to operations" nor "could [it] be used to deny CSXT the ability to conduct some part of its rail and transloading operations," as CSXT argues. CSXT Pet, at 16, 19.[5]

The ICCTA "categorically" preempts "any form of state or local permitting or preclearance that, *by its nature*, could be used to deny a railroad the ability to conduct some part of its operations or proceed with activities that the Board has authorized."[6] *CSX Transp., Inc.*—

[5] Even assuming CSXT is correct in challenging a windscreen requirement, rather than MDE's authority to issue this condition, as categorically preempted, this argument fails because there is nothing about the requirement to impose a windscreen at a coal storage facility that *by its nature* could be used to deny the ability to conduct some part of its rail transportation services. Indeed, the fact that CSXT *already* has constructed a windscreen on the southern portion of its property demonstrates there is nothing inherent in windscreens that interferes with rail transportation. *See* CSXT Pet. Ex. 2 at Appx. 1 § 3.4.2 (Fugitive Dust Plan).

[6] CSXT concedes, and MDE agrees, that the other basis for categorical preemption, where a state or locality regulates matters such as the construction or operation of common carrier rail

Pet. for Declaratory Order, FD 34662, slip op. at 3 (May 3, 2005) (emphasis added) (*CSX Transp.*); *see also Ayer*, 5. S.T.B. at 507; *Green Mountain*, 404 F.3d at 644; *Chicago Transit Auth.*, 647 F.3d at 679 ("Categorical preemption occurs when a state or local action is preempted on its face despite its context or rationale."). Under this rubric permitting requirements are categorically, or *per se*, preempted where they impermissibly "giv[e] the local body the ability to deny the carrier the right to construct facilities or conduct operations" or "allow[] a local body to delay construction of railroad facilities almost indefinitely." *Green Mountain*, 404 F.3d at 642. In contrast, where regulation only incidentally impacts rail transportation, such permitting schemes are not categorically preempted, even if they may apply to a railroad. *See Stampede Pass*, 2 S.T.B. at 338.

First, MDE's authority to issue Permit Condition D does not serve as a precondition to operation of the Coal Terminal. In *Stampede Pass*, the Board explained a number of different ways in which an environmental regulation might be enforced without serving as a precondition to operation:

> A railroad that violated a local ordinance involving the dumping of waste could be fined or penalized for dumping by the state or local entity. The railroad also could be required to bear the cost of disposing of the waste from the construction in a way that did not harm the health or well being of the local community.

Stampede Pass, 2 S.T.B. at 339. As expressly acknowledged in the Final Determination, MDE is not authorized to terminate CSXT's rail operations under its air quality permitting process, CSXT Pet. Ex. 4 at 7 of 19 (Final Determination), and its available remedies instead include financial penalties. COMAR 26.11.02.05A; Md. Code Ann., Environment §§ 2-609(a)(2), 2-610, 2-610.1. MDE's conditioning authority is therefore the type of police power that is

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facilities that are directly regulated by the Board, is not at issue here. CSXT Pet. at 16; *see CSX Transp.*, FD 34662, slip op. at 3 (describing both bases for categorical preemption).

permitted in the service of protecting public health and safety. The Board has found these types of requirements permissible. *See Ayer*, 5 S.T.B. at 511 (finding reasonable such conditions as "us[ing] state or local best management practices when [railroads] construct railroad facilities … [and] implement[ing] appropriate precautionary measures at the railroad facility, so long as the measures are fairly applied").

Second, MDE's conditioning authority does not operate to deny any rail transportation that CSXT conducts at the Coal Terminal, because nothing suggests that the objects of this authority—measures intended to reduce emission of fugitive coal dust from standing piles—are properly considered to be "transportation" by "rail" subject to the Board's jurisdiction. Categorical preemption applies to activities and facilities that are an integral part of rail transportation, not activities that are only incidentally related to rail transportation. *See, e.g., In re Appeal of Vermont Ry.*, 769 A.2d 648, 654–55 (Vt. 2001) (finding that local zoning regulations of railroad's salt shed operation were not preempted to the extent that they concerned traffic issues and potential environmental contamination); *Emerson v. Kansas City S. Ry. Co.*, 503 F.3d 1126, 1129–30 (10th Cir. 2007) (nuisance claims caused by railroad's failure to maintain a drainage ditch not preempted); *Fla. E. Coast Ry. Co. v. City of W. Palm Beach*, 266 F.3d 1324, 1326 (11th Cir. 2001) (*Fla. E. Coast*) (holding that application of local zoning and occupational license ordinances against a company leasing property from a railroad does not constitute "regulation of rail transportation" and is not preempted by the ICCTA); *Flynn v. Burlington Northern Santa Fe Corporation*, 98 F. Supp. 2d 1186, 1190 (E.D. Wash. 2000) (noting that "facilities ancillary to the[] railroad operations" such as "truck transfer facilities" are not subject to federal preemption); *Jones v. Union Pacific R.R. Co.*, 94 Cal. Rptr. 2d 661, 669–71

(2000) (excessive idling and horn blowing near the plaintiff's home did not have a transportation purpose).

Here, creating massive piles of coal that have been found to unnecessarily pollute the adjacent working-class residential community does not serve any transportation purpose. While activities conducted by a railroad on its property may have some incidental connection to a railroad's operations, CSXT's argument for preemption of *any* state or local regulation of environmental impacts "has no obvious limit" and "would lead to absurd results." *See Emerson*, 503 F.3d at 1131. Under CSXT's logic, a railroad could justify any type of pollution as bearing on the economic aspects of the railroad's operations by providing "a cheap way to be rid of an unwanted" pollutant, even where not necessary to serve its common carrier obligation. *See Emerson*, 503 F.3d at 1132. Put another way, there is "no plausible interpretation of the term 'transportation' [that] includes," *Gordon v. New Eng. Cent. R.R., Inc.*, No. 2:17-cv-00154, 2017 U.S. Dist. LEXIS 202405, at *20 (D. Vt. Dec. 8, 2017), the need to allow unchecked emissions of coal dust from huge coal piles at a "just-in-time" facility where coal is supposedly "transferred directly from railcars to oceangoing vessels or coastal barges." CSXT Pet. at 7–8.

Contrary to CSXT's constant suggestion, preemption's goal is not simply to protect a railroad's time, money, or convenience. *See Gordon*, 2017 U.S. Dist. LEXIS 202405, at *23; *Emerson*, 503 F.3d at 1132; *Fla. E. Coast*, 266 F.3d at 1336 ("[T]he Supreme Court consistently has recognized the focus of the ICC's jurisdiction to be protection of the general public rather than individual private entities."). Instead "[t]he purpose of § 10501(b) is to provide uniform regulation of rail transportation and to ensure the free flow of interstate commerce, particularly by preventing a patchwork of differing regulations across states." *AAR*, FD 36369, slip op. at 11 (quotation marks and citations omitted). "What matters is the degree to which the challenged

regulation burdens rail transportation." *South Coast*, 622 F.3d at 1097–98 (*quoting N.Y. Susquehanna & W. Ry. Corp. v. Jackson*, 500 F.3d 238, 252 (3d Cir. 2007); *see also Franks Inv. Co. LLC v. Union Pac. R.R. Co.*, 593 F.3d 404, 410 (5th Cir. 2010) (en banc) (distinguishing between regulation of rail transportation and state and local laws with only incidental effects on rail transportation).

CSXT alleges that MDE's Permit Condition D allows MDE to deny it the right to operate because MDE's permit process is "subjective, discretionary," and "riddled with 'open-ended delays,'" CSXT Pet. at 19–20, but this is not the case. Instead, MDE has undertaken a process necessary to properly assess a specific health threat and has appropriately tailored Permit Condition D to meet the requirements for addressing that threat. MDE's process to approve the Permit was in line with the serious and substantial public concern regarding the levels of pollution emanating from the Coal Terminal. The approval right that MDE "has granted itself," CSXT Pet. at 19, is merely to ensure that the windscreen complies with Permit Condition D. And there is nothing subjective or discretionary about the requirement to implement a windscreen of the same height as the coal pile causing pollution, or to ensure the material used for the wind screen is designed to prevent incursion of dust. *See* CSXT Pet. Ex. 2 at 9–10 of 57 (Permit).

Regarding MDE's process, much of the additional time taken to grant the Permit is attributable to granting CSXT time to address community concerns. It is therefore disingenuous for CSXT to accuse MDE of "open-ended delays," CSXT Pet. at 19–20, when these delays reflect MDE's efforts to accommodate CSXT.

CSXT touts many of the measures it has implemented to address emissions issues at the Coal Terminal, such as its fenceline monitoring system, CSXT Pet. at 18, but these measures are

as much due to MDE's and the community's efforts to ensure CSXT complies with air quality standards. These measures have been imposed through MDE's air quality permitting process, which is federally approved and does not, by its nature, unreasonably interfere with CSXT's rail transportation services. For the same reason, Permit Condition D is also not categorically preempted.

C. Permit Condition D Is Not Preempted As Applied to the Coal Terminal Because it Does Not Manage or Govern Rail Transportation.

As applied to these circumstances, the ICCTA does not preempt MDE's imposition of the requirement to implement a windscreen to trap excessive coal dust harmful to neighboring residents because this is a generally applicable, non-discriminatory measure that does not manage or govern CSXT's "just-in-time" rail service in any meaningful way. Instead, this is a valid exercise of the State's authority to regulate a public health and safety risk specifically tailored to that risk, and that only incidentally affects the movement of coal to, from, and at the Coal Terminal. CSXT's arguments regarding constrained access and operations that it asserts may result from compliance with Permit Condition D are either unreasonable or stem from CSXT's own attempts to exceed the limitations inherent in the safe operation of the Coal Terminal.

1. Permit Condition D Is Enforceable as a Generally Applicable Regulation Governing Environmental Pollution That Only Incidentally Affects Rail Transportation

Even if a state or local law is not categorically preempted, it may still be preempted "as applied" where it "may reasonably be said to have the effect of managing or governing rail transportation." *Jackson*, 500 F.3d at 252; *see also Ayer*, 5 S.T.B. at 507–508. However, state and local laws that have merely "a more remote or incidental effect on rail transportation" are not

preempted under the as-applied analysis. *Jackson*, 500 F.3d at 252. As-applied preemption analysis is inherently fact-specific. *See Franks Inv. Co.*, 593 F.3d at 414.

The Board and courts have repeatedly "recognized that ICCTA likely would not preempt local laws that prohibit the dumping of harmful substances or wastes, because such a generally applicable regulation would not constitute an unreasonable burden on interstate commerce." *South Coast* 622 F.3d at 1097 (citing *Stampede Pass*, 2 S.T.B. at 339; *see also Fla. E. Coast Ry.*, 266 F.3d at 1337). Examples where an exercise of state and local law against hazards caused by rail facilities but not rail transportation have not been preempted include: regulation of a railroad's storage of salt on its property to prevent environmental contamination, *In re Appeal of Vermont Ry.*, 769 A.2d at 654–55; claims related to the improper disposal of railroad ties and vegetation debris, *Emerson*, 503 F.3d at 1132–34; and claims related to discharges from maintenance and fueling facilities, *Humboldt Baykeeper v. Union. Pac. R.R.*, No. C 06-02560 JSW, 2010 U.S. Dist. LEXIS 52182, at *9–10 (N.D. Cal. May 27, 2010). These examples are substantively indistinguishable from MDE's Permit Condition D, which mitigates a hazard emanating from a railroad property that is caused not by rail transportation itself but by activities incidental to rail transportation, *i.e.* coal piles.

These examples of permissible regulation of railroad property with merely incidental effect on rail transportation, like Permit Condition D, are distinguishable from examples where the Board and courts have held state and local regulations to be preempted because they unduly burdened rail transportation itself. The latter cases reflect that the Board and courts require a sufficient impact of the regulation over "transportation" as defined under the ICCTA, such as tracks and track embankments, railcars, locomotives, or vehicles moving goods. *See*, *e.g.*, *Norfolk S. Ry. v. City of Alexandria*, 608 F.3d 150, 158–60 (4th Cir. 2010) (ordinance limiting

trucks entering transloading facility); *Ayer*, 5 S.T.B. at 507–08 (zoning decision prohibiting use of property for transloading automobiles); *Borough of Riverdale—Pet. for Declaratory Order—The New York Susquehanna and Western Railway Corporation*, FD 33466, slip op. 5–7 (STB served Sept. 10, 1999) (enforcement of zoning prohibiting transloading facility); *CSX Transp. v. City of Sebree*, 924 F.3d 276, 283–86 (6th Cir. 2019) (regulation of approval to raise grades at specific crossings); *City of Lincoln v. STB*, 414 F.3d 858, 861–63 (8th Cir. 2005) (condemnation of a portion of active railroad right-of-way). Here, MDE is not seeking to deny or delay use of the property for transportation of coal, but merely seeks to impose reasonable mitigation measures to address impacts not directly related to CSXT's "just-in-time" rail service.

For example, in *City of Alexandria*, municipal regulation of truck access to a railroad transloading facility, "including limiting what could be hauled, specifying a hauling route through the City, and restricting the days and times for such hauling," was held to be preempted. *City of Alexandria*, 608 F.3d at155 n.3, 158–60. In discerning whether "rail transportation" was affected, the court relied on the fact that "transloading [via trucks] is bundled with the transportation services that [the railroad] provides to ethanol shippers." *Id.* at 159 n.11 (quotation marks and citations omitted).

Contrast *City of Alexandria* with MDE's requirement to install a windscreen, which does not have the effect of "managing" or "regulating" any service bundled with CSXT's rail service, such as trains entering or exiting the yard, the "just-in-time" transfer of coal to ships, or the entrance or exit of ships from the Coal Terminal. MDE has not even placed any limit on the piling of coal—it merely requires CSXT to implement a mitigation measure commensurate with its operations. *See CFNR Operating Co. v. City of Am. Canyon*, 282 F. Supp. 2d 1114, 1118

(N.D. Cal. 2003) ("Nor does CFNR claim that it cannot continue to use the rail tracks. It can even continue to deliver to Apex so long as Apex complies with the City's regulations.").

2. Permit Condition D's Incidental Effects on the Coal Terminal Does Not Unreasonably Burden CSXT Merely Because Compliance Will Cost Money and Require Conformance with Existing Physical Limitations

CSXT argues that construction of a windscreen will unreasonably interfere with its rail operations because it will require "a temporary shutdown or reduction in operations" at the Coal Terminal, CSXT Pet. at 21, and maintaining that windscreen "will permanently interfere with and unduly burden" operations, *id.* at 22. But CSXT's complaints are merely the "cost of doing business" at a physically constrained site whose unusual proximity to residential areas requires measures to address the public health and safety. *See Jackson*, 500 F.3d at 253–54; CSXT Pet. Ex. 4 at 14 of 19 (Final Determination). CSXT itself notes the real issues: the "constrained layout" and "the Terminal's lack of available space," where the Coal Terminal "occupies a much smaller footprint than other coal terminals around the country." CSXT Pet. at 22–23. Yet it balks at the suggestion that it might need to accommodate it operations to the capacity limits at the site, *see id.* at 25, and suggests it is helpless in handling the orderly delivery of shipping requests that *always* must be executed with an understanding of the capacity limitations of CSXT's system, *id.* at 25–26. Complying with mitigation measures to ensure the safe operation of a physically constrained site so that it does not jeopardize public health does not unreasonably burden interstate commerce—otherwise, there would be "no obvious limit" to a railroad's attempts to find "a cheap way to be rid of an unwanted" hazard. *See Emerson*, 503 F.3d at 1132. As to reductions in operations due to construction, similar reductions caused by addressing the hazards of coal at the Coal Terminal are not unknown; disruptions were also required after the

coal-dust ignited explosion of a tower in 2021. *See* CSXT Pet. Ex. 3 at 294 of 1445 (Final Determination Appx. C).

CSXT calls many aspects of Permit Condition D unreasonable, completely ignoring the significant flexibility that MDE has provided in implementing a windscreen. CSXT complains about the height of the windscreen, CSXT Pet. at 22–23, but the only height requirement is set commensurate with the size and impact of the piles themselves, which are within CSXT's own control. CSXT calls the 18-month timeframe for constructing the windscreen "infeasible," CSXT Pet. at 22, but MDE has worked extensively in the past with CSXT to implement mitigation measures, *see* Reply Ex. A ¶ 27 (V.S. Hoagland); CSXT Pet. Ex. 4 at 14 of 19 (Final Determination), and is willing to work collaboratively on a schedule to implement a windscreen as well. A mitigation measure without a timeline for implementation it is no measure at all, since the responsible party could delay indefinitely. And CSXT states that a windscreen would affect local customers to the south of the Terminal, CSXT Pet. at 21–22, but MDE has given CSXT the maximum amount of flexibility in constructing a windscreen needed to address such concerns, CSXT Pet. Ex. 2, Part D (Permit) (providing general requirements for the windscreen, but giving CSXT agency to design the windscreen).

CSXT also argues that an "MDE-dictated" windscreen will create operational safety hazards, such as "work hazards for the bulldozer operators" and a lack of adequate clearance for bulldozers and other equipment, which "could become trapped between the wall and the coal." CSXT Pet. at 23–24, but those would be safety issues of CSXT's own making. MDE has worked with CSXT to provide flexibility while imposing a well-defined and concrete mitigation measure that is in keeping with how it regulates emissions at facilities within its jurisdiction. *See* Reply Ex. A ¶¶ 27, 29 (V.S. Hoagland); CSXT Pet. Ex. 4 at 14 of 19 (Final Determination).

Rather than introducing a new risk to the site, as was the case in the precedent cited by CSXT, MDE is requiring mitigation of a risk to public health and safety caused by emissions from coal dust piles. *Cf.* CSXT Pet. at 23–24, *citing City of Lincoln*, 414 F.3d at 861–63 (municipality's proposed condemnation of a linear segment of railroad right-of-way to create a recreational trail preempted). The safety hazards that CSXT argues would result are not from imposition of a windscreen, but rather from storing more coal than the site can safely handle without creating public health risks.

3. Permit Condition D Does Not Discriminate Against Rail Operations, But Is Tailored to Public Health and Safety Concerns at the Terminal

CSXT next argues that Permit Condition D is discriminatory against rail, relying on statements MDE made to the local community and the "novel" nature of utilizing windscreens to control air pollution. CSXT Pet. at 14, 26–29. Windscreens are not a "novel approach" to mitigating coal dust, either in general or at the Coal Terminal, where CSXT has *already* installed a windscreen along the southern boundary of its property. CSXT Pet. Ex. 2 at Appx. 1 § 3.4.2 (Fugitive Dust Plan). The fact that MDE has not yet implemented a windscreen requirement as a mitigation measure for a coal transloading facility merely speaks to the unique physical attributes of the Coal Terminal, including its unusual proximity to a residential neighborhood. *See* CSXT Pet. Ex. 4 at 14 of 19 (Final Determination) (stating the terminal is "uniquely" close to the community "with fewer than 900 feet separating the edge of the storage piles and the nearest residential building). CSXT alleges that MDE has unfairly singled out CSXT's transloading facilities, CSXT Pet. at 28, but the Coal Terminal is one of only a dozen or so terminals around the country that are responsible for handling and exporting coal from this country and, to MDE's understanding, one of if not the closest to a residential neighborhood. Reply Ex. A ¶ 10 (V.S.

Hoagland); CSXT Pet. Ex. 4 at 14 of 19 (Final Determination). The Consol Marine Terminal, which also handles coal and is subject to MDE air quality regulations, is located five times farther away from any residential area. Reply Ex. A ¶ 11 (V.S. Hoagland). Moreover, public submissions indicate that some other coal terminals around the country do respond to the particular localized risks by fully enclosing coal piles, *see* Reply Ex. I at 7–8 (Final Determination, Appx. D), a measure that would be more onerous than a windscreen. The windscreen requirement is not therefore a discriminatory measure that "will interfere with CSXT's ability to uniformly operate its rail lines," CSXT Pet. at 26, but rather the non-discriminatory application of a condition tailored to meet the specific and unique needs of the site. MDE's concern is the air quality impacted by coal piles emitting dust at the Coal Terminal, and would be MDE's concern regardless of whether the coal was carried there by truck, rail, or ship, or not transported at all. The windscreen "address[es] state concerns generally" regarding air quality emissions, "without targeting the railroad industry." *Jackson*, 500 F.3d at 254.

Nor do MDE's press statements to the community to alleviate their concerns about the ongoing coal dust emissions from the Coal Facility amount to a discriminatory regulation, as CSXT argues it must. *See* CSXT Pet. at 14–15, 28–29. It is MDE's Final Determination, not its press statements, that provides MDE's rationale for issuing the Permit. And, even if the press statements were to be taken as indicative of MDE's rationale, they do not reflect an intent to discriminate against rail. Holding CSXT to a "higher standard" than it has in the past by imposing its "most protective permit ever issued for this site" does not amount to discrimination. *See* CSXT Pet. Ex. 5 at 1. Rather, MDE is fulfilling its mandate and protecting a community that expressed public health and safety concerns, as affirmed through investigations by scientists and MDE itself. Based on the Coal Terminal's proximity to the community, the persistent presence

of coal dust, and the elevated ambient air quality measurements, MDE determined additional pollution controls in the form of a windscreen were necessary. And though CSXT complains that the process MDE undertook to better understand and address the public health and safety was discriminatory, CSXT Pet. at 28, it was anything but. Much of the additional time taken to issue the Permit was at CSXT's own request, to allow it to rebut the evidence of pollution caused by coal dust emissions from the Coal Terminal. *See* CSXT Pet. Ex. 3 (Final Determination, Appx. C).

CONCLUSION

MDE's Permit Condition D requiring a windscreen to trap excessive coal dust harmful to neighboring residents is a valid exercise of MDE's federally approved authority to regulate air quality and its State-based authority to regulate a public health and safety risk, is specifically tailored to that risk, and only incidentally affects rail transportation. Accordingly, because this is a generally applicable, non-discriminatory measure that does not manage or govern CSXT's "just-in-time" rail service, it is not preempted by the ICCTA. CSXT should not be entitled to argue that its own convenience or its attempts to exceed the limitations inherent in the safe operation of the Coal Terminal are protected by preemption.

WHEREFORE, and in view of the foregoing, MDE respectfully requests the Board deny the CSXT Petition as premature, or in the alternative determine that MDE's Permit and the Permit Condition D are not preempted by the ICCTA.

Respectfully submitted on January 30, 2026.

/s/ Allison I. Fultz
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Counsel for Maryland Department of the Environment

CERTIFICATE OF SERVICE

I certify that on January 30, 2026, I caused to be served a copy of the foregoing Motion for Extension of Time upon all parties of record in this proceeding by email.

/s/ Allison I. Fultz

Dated: January 30, 2026

EXHIBIT A

Christopher R. Hoagland Verified Statement

BEFORE THE
SURFACE TRANSPORTATION BOARD

Finance Docket No. 36886

CSX TRANSPORTATION, INC. –
PETITION FOR DECLARATORY ORDER

REPLY OF THE MARYLAND DEPARTMENT OF THE ENVIRONMENT IN OPPOSITION TO CSXT'S PETITION FOR DECLARATORY ORDER

VERIFIED STATEMENT OF CHRISTOPHER R. HOAGLAND

I, Christopher R. Hoagland, hereby affirm that:

1. I am the Director of the Air and Radiation Administration of the Maryland Department of the Environment ("Department"). The facts set out in this verified statement are based on my personal knowledge and/or my review of records maintained by the Air Monitoring Program and the Department in the ordinary course of business, and are true to the best of my knowledge, information, and belief.

2. I am over eighteen (18) years of age and if called upon to do so, could testify competently about the facts set forth in this Verified Statement.

3. I was first employed by the Department in 2015 as an economist in the Climate Change Program, and in 2019 I was promoted to Climate Change Program Manager. I served in that role until 2021, when I began a new role as a Senior Policy Advisor at the U.S. Environmental Protection Agency Office of Policy. In 2022, I returned to the Department to serve as the Air Director, which is my current position.

4. As Air Director, I manage the Department's Air and Radiation Administration, including all air quality and permit functions, as well as staff management.

5. One way that the Department regulates air quality in the state of Maryland is through the air quality permitting process. The Air and Radiation Administration issues an Air Quality Permit to Operate to sources that are listed in COMAR 26.11.02.13 (Sources Subject to State Permits to Operate). The purpose of an operating permit is to set conditions and/or operating limitations to ensure compliance with regulatory requirements and Air Quality Construction Permit conditions applicable to the facility. Recordkeeping, reporting and monitoring conditions are also included to document that a facility operates in continuous compliance with environmental laws and permit conditions. Upon review of each operating permit renewal request, the Department considers whether existing permit conditions are adequate to provide the assurance of continuous compliance or whether additional permit conditions are needed. A facility applies for an initial operating permit, which is valid for a period of up to five years. Prior to the permit's expiration, a facility must timely apply for a renewal of the operating permit.

6. The Air and Radiation Administration is responsible for issuing permits with conditions sufficient to ensure that the continued operation of stationary sources will not exceed applicable air quality limits or regulations or cause a nuisance. If the Department determines that a source's existing controls are insufficient to maintain compliance with applicable air quality requirements, it is the Department's responsibility to impose additional reasonable controls or deny the permit.

7. The Air and Radiation Administration's Compliance Program can request operational conditions be added to a Permit to Construct while it is under review prior to issuance and/or added to a State Permit to Operate when that permit is under review for re-issuance. Outside the Permit to Construct and State Permit to Operate, the Department also issues consent orders to ensure compliance.

8. If dust controls are needed at a facility with a Permit to Operate, the Department employs a Fugitive Dust Control Plan. The Department and a facility with a Permit to Operate work collaboratively to determine dust controls that will prevent particulate matter from becoming airborne. The Department can modify a Fugitive Dust Control Plan when the Department determines that an existing Fugitive Dust Control Plan is not adequate to control emissions of particulate matter. Additionally, a facility can request changes, typically operational changes, for Department approval at any time. A Fugitive Dust Control Plan can also be issued in conjunction with a Permit to Construct a source of air emissions.

9. CSX Transportation, Inc. ("CSXT") operates Curtis Bay Piers, a coal export loading and unloading facility located in the Curtis Bay community at 1910 Benhill Ave, Baltimore, MD 21226 ("Facility"). "Coal or ore export loading or unloading installations" are among those sources required to obtain, and have in current effect, a State permit to operate. COMAR 26.11.02.13(A)(38) (Sources Subject to State Permits to Operate). Therefore, CSXT is subject to the requirement to secure a State Permit to Operate (hereinafter, "Permit to Operate"). Additionally, as a stationary source of particulate matter emissions, specifically coal dust, Curtis Bay Piers must comply with state air quality control laws regulating particulate matter.

10. Curtis Bay Piers is one of only a dozen or so coal terminals around the country that are responsible for handling and exporting coal from this country. It is one of two coal terminals located in Baltimore.

11. To my knowledge, Curtis Bay Piers is one of the closest, if not *the* closest coal terminal to a residential neighborhood. Baltimore's other coal terminal, the Consol Marine Terminal, is located roughly 5 times farther away from any residential area.

12. As Air Director, I am familiar with the Department's ongoing regulatory relationship with the Facility.

13. The Department first issued a Permit to Operate to CSXT for Curtis Bay Piers in 1993. This initial permit required CSXT to "keep all air pollution control equipment, including the water sprays, properly maintained and in good working order so as to assure full and continuous compliance with all applicable regulations." *See* Reply Ex. G, CSXT Permit to Operate, Part B(1) (issued October 1, 1993). CSXT was also required to submit an annual emission certification with information on the total amount of emissions and any work practice standards that significantly affected emissions. *Id*. at Part A(7). In addition, CSXT had to certify the results of an annual air toxics analysis. *Id*. at Part A(8). CSXT's permit was revised and renewed in 1994. *Id*. at 8–9 (letter from September 1994 attached to the 1993 permit). In the 1994 permit, CSXT's permit term was increased to five years, subject to renewal. *Id*. CSXT has subsequently renewed their Permit to Operate periodically over the past several decades.

14. CSXT's operating permits have historically remained silent on coal pile height.

15. CSXT stores nine large piles of coal covering an estimated 12.21 acres at the Facility. The coal from these piles is ultimately loaded on barges and ships for transport. CSXT has informed the Department that the height of coal stockpiles fluctuate, but can be up to 100 feet high.

16. It is my understanding that CSXT has not always stockpiled coal at the Facility. A Department inspection report from July of 1993 associated with issuance of CSXT's 1993 State Permit to Operate noted: "The coal exporting facility consists of three railcar dumpers, covered conveyor belts, and a telescoping loading spout. The raildump is equipped with water sprays to

control fugitive dust. Coal is transferred directly from the raildump to barges or ships. There are no coal stockpiles at this site." Reply Ex. G.

17. Stockpiling at the Facility appeared to commence following infrastructure upgrades in the mid-1990s.

18. According to CSXT's representations to the Department, coal is stored by coal type and shipment, which affects coal pile height. CSXT has asserted that this choice hinders it from reducing the maximum coal pile height. Coal pile heights also fluctuate based on shipping contracts and external disruptions (e.g., a 2021 explosion at the Coal Terminal, the 2024 Key Bridge collapse, or infrastructure repairs).

19. For decades, the Facility's Permit to Operate has included a Fugitive Dust Plan to ensure compliance with COMAR 26.11.06.03(D)'s requirement that reasonable precautions be taken to prevent particulate matter from becoming airborne. Modifications have been made over the years as necessary to address particulate matter control. Additional modifications were made as a result of negotiations following a December 2021 explosion at the Coal Terminal.

20. In approximately 2018, CSXT installed a 30 foot high DustTamer Wind Fence for 315 linear feet along the south side of the property to effectively reduce the wind speeds and minimize potential fugitive dust.

21. I have also been personally involved in several more recent permitting and enforcement matters for the Facility. In 2022, I oversaw enforcement of air quality violations resulting from an explosion that occurred at the Facility in December 2021. This also resulted in the issuance of a Permit to Construct to perform repairs on the Facility and the negotiation of a Fence Line Monitoring Plan requiring CSXT to better track particulate matter emissions from the site. In September 2024, I oversaw enforcement of air quality violations relating to the release of

a large dust cloud from the Facility during track repair operations on site. I have also been heavily involved in negotiations, meetings, and public proceedings relevant to the Department's renewal of CSXT's State Permit to Operate and inclusion of additional operating conditions to address the emission of particulate matter, specifically coal dust, from the Facility. The discussions of this permit included countless communications and meetings between myself and my staff and CSXT, as well as meetings with Curtis Bay community members and advocates and scientists. I also attended all formal public proceedings that occurred during the renewal process.

22. This matter involves the most recent renewal of the Permit to Operate, in which the Department imposed new dust control requirements based on the Department's determination that CSXT's current operational controls were not sufficient to meet the regulatory requirement that reasonable precautions must be taken to prevent particulate matter from becoming airborne.

23. Since the last renewal of CSXT's Permit to Operate, the Department has received numerous complaints from Curtis Bay residents and community advocates reporting the presence of black coal dust in the community adjacent to Curtis Bay Piers. Department employees have observed dust resulting from operations at Curtis Bay Piers and have also observed dark dust on playground equipment within 1/3 mile of Curtis Bay Piers at Curtis Bay Park. To further examine the suspected fugitive dust problem, the Department engaged with community members, community advocates, and scientists from the University of Maryland and Johns Hopkins to complete a *Collaborative Investigation of Coal Dust, Air Pollution, and Health Concerns in Curtis Bay, South Baltimore Maryland*,[1] (hereinafter, the "Collaborative Study"), which gave the Department even more evidence that coal dust was leaving Curtis Bay Piers and entering the

[1] The Collaborative Study is available at: https://mde.maryland.gov/programs/permits/AirManagementPermits/Documents/FINAL_Full_CB%20Collab_%20Report.pdf.

community. The Collaborative Study was used to develop two additional scientific peer-reviewed and published articles that definitively showed that there is coal dust in the Curtis Bay community and that the significant coal piles at the Facility which border the community are more than likely the source of coal dust. Reply Ex. D at 7-13 of 24 ((Final Determination, Appendix B – Comments from Scientists);[2] Reply Ex. F (Deanes, et al., Relation of wind direction and coal terminal activity patterns with air pollution burden in a community bordering a coal export terminal, Curtis Bay, Baltimore, Maryland, USA, Air Quality Atmosphere & Health, 18:2805–2821 (2025)).

24. Additionally, the Department evaluated data provided by CSXT from CSXT's Fence Line Monitoring Network. The data indicated that there were increased particulate matter concentrations at the fence line that correlated with downwind impacts from the Facility. This further supported that additional controls addressing fugitive dust emissions emanating from the Curtis Bay Piers are necessary.

25. Although CSXT's State Permit to Operate is not subject to mandatory public review, the Department elected to allow enhanced public participation, including public comment and a public hearing, due to the neighboring Curtis Bay community concerns about the operation of the CSXT coal terminal and its impact on their health and welfare, the existing pollution burden on the community from other large industrial sources in the area, and the fact that the Curtis Bay community is one with significant environmental justice concerns.

26. The Department held a public meeting on October 10, 2024, to receive comment on the Department's draft renewal permit conditions. The public comment period remained open through December 16, 2024. During that period, the Department received comments from

[2] The Final Determination and all appendices are available at: https://mde.maryland.gov/programs/permits/AirManagementPermits/Pages/CSX-Transportation-Permit.aspx.

individuals, scientists, community groups, and CSXT itself. The Department reviewed and considered all of these comments.

27. During the Department's development of the renewed Permit to Operate, the Department also met with CSXT on multiple occasions to coordinate and develop conditions including dust mitigation measures for CSXT's renewed permit. For example, the Draft Permit to Operate that the Department published on September 4 and September 11, 2024, in the Baltimore Sun, included a requirement for CSXT to install and operate a system to apply water to rail cars loaded with coal at the point such cars enter the property line of the Facility. This condition was removed following discussions with CSXT in which they indicated that installing water sprays at the property line would not affect coal dust transport. The Draft Permit Condition D required a "physical barrier," but this language was changed in coordination with CSXT, who claimed that a physical barrier such as a wall would be technically difficult, potentially impossible given the site area and conditions, and if not, prohibitively expensive.

28. After this period of public comment and negotiation with CSXT, and after considering all of the evidence before it as documented in its Final Determination, the Department selected a new permit condition to address the Curtis Bay Piers' close proximity to the residential community and the danger coal dust emissions pose to public health. The new permit condition requires construction of a windscreen commensurate with the size of the coal piles at the Curtis Bay Piers Facility.

29. The new permit condition is not unique. Adoption of this permit condition is consistent with the Department's practice and authority to select conditions that ensure a stationary source will not exceed applicable air quality limits or regulations or cause a nuisance. For example, to adequately control emissions from a crushing and screening plant for concrete, brick, block, and

recycled asphalt pavement, the Department has previously included a permit condition limiting stockpile height to no more than 35 feet because the plant's water sprays only reached 35 feet. In another example, as part of a settlement to resolve air emissions violations and in order to control fugitive dust from a gypsum wallboard manufacturer, the Department required installation of a steel roof over the storage pile area, rebuilding of walls to completely enclose a storage pile area, and installation of a large walled structure to completely cover the pile and area where material was being broken down.

30. The new windscreen permit condition is similarly targeted towards controlling fugitive dust emissions and ensuring the Curtis Bay Piers facility is in compliance with all air quality regulations.

I solemnly affirm this 30th day of January, 2026, under the penalties of perjury that the contents of this document are true to the best of my knowledge, information, and belief and that I am qualified and authorized to file this verified statement.

/s/ Christopher R. Hoagland
Christopher R. Hoagland
Director, Air and Radiation Administration
Maryland Department of the Environment

EXHIBIT B

1953 Aerial Photograph of Curtis Bay



EXHIBIT B – 1



EXHIBIT B – 2

EXHIBIT C

1972 Aerial Photograph of Curtis Bay



EXHIBIT C - 1



EXHIBIT C - 2

EXHIBIT D

MDE Final Determination Appendix B
(Scientist Comments)

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Public Comments on Draft Renewal State Permit to Operate for CSX Transportation, Inc. – Curtis Bay Piers (Permit No. 510-2263)

1 message

Chris Heaney <cheaney1@jhu.edu> Mon, Dec 16, 2024 at 5:14 PM
To: "shannon.heafey@maryland.gov" <shannon.heafey@maryland.gov>
Cc: Matthew Aubourg <maubour1@jh.edu>, Chris Heaney <cheaney1@jhu.edu>, Chris Hoagland -MDE- <chris.hoagland@maryland.gov>

Dear Ms. Shannon Heafey,

Attached please find our public comment on the Draft Renewal State Permit to Operate for CSX Transportation, Inc. – Curtis Bay Piers (Permit No. 510-2263).

We look forward to your confirmation of receipt and inclusion of the attached into the public comment.

Kind regards,

Chris.
Christopher D. Heaney, PhD, MS
Associate Professor
Environmental Health & Engineering, Epidemiology (jt), International Health (jt)
Johns Hopkins Bloomberg School of Public Health
Office: W7033B / **Lab:** E6649
Director, Environmental Health Microbiology & Immunology Lab (EHMIL)
Director, Salivary Biomarkers of Infectious Diseases (SBID) Program
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E-mail: cheaney1@jhu.edu / Website

FINAL CSX Coal Terminal Public Comment.pdf
12583K

EXHIBIT D - 1

VIA EMAIL
December 16, 2024

Ms. Shannon Heafey
Air Quality Permits Program
Air and Radiation Administration
1800 Washington Boulevard
Baltimore, Maryland 21230
shannon.heafey@maryland.gov

RE: Public Comments on Draft Renewal State Permit to Operate for CSX Transportation, Inc. – Curtis Bay Piers (Permit No. 510-2263)

Dear Ms. Heafey,

We appreciate the opportunity to comment on the CSX Transportation, Inc. Curtis Bay Piers Draft Permit-to-Operate. For years, community members in Curtis Bay have raised nuisance, health, and quality of life concerns regarding routine operations at the open-air CSX coal terminal, and their experiences with the accumulation of dark, black dust on and in their homes and neighborhood. Following an explosion at the CSX coal terminal on December 30, 2021[1-3], the Community of Curtis Bay Association (CCBA) and South Baltimore Community Land Trust (SBCLT) initiated a community-driven research collaboration between academic scientists at Johns Hopkins University, University of Maryland, College Park, University of California at Davis, and the Maryland Department of the Environment to improve understanding of the potential impacts of the coal terminal's routine operating activities on changes in air pollution burden in Curtis Bay.

This public comment aims to provide information about the consistency and coherence of the scientific evidence – across varied analytic and observational platforms – with community lived experience with black dust accumulation, which residents attribute to coal dust. Key findings of analytic outcomes are summarized as follows:

- Aubourg et al., 2024 in *Science of the Total Environment* (PMID: 39396779, DOI: 10.1016/j.scitotenv.2024.176842) confirmed the presence of coal dust in the Curtis Bay community at two residential locations–~1100 feet and ~3/4 of a mile from the coal terminal. Passive settled dust was sampled for a 3-day period near residents' homes and the local high school.
- Preliminary multi-pollutant air sensors research that identified greater particulate matter (PM) of aerodynamic diameter ≤ 1 µm (PM_1), $PM_{2.5}$, PM_{10}, total suspended particles (TSP), and black carbon air pollution burden in the Curtis Bay community when

downwind of the coal terminal and any bulldozer activity was visible at the coal terminal, and highest air pollution burden when both occurred jointly (both downwind and with visible bulldozer activity).

Below and attached, further information is provided on the scientific and analytic inputs in response to Curtis Bay community concerns.

Use of electron microscopy to determine presence of coal dust in Curtis Bay community

In October 2024, peer-reviewed collaborative research to investigate the presence of coal dust in residential areas of the Curtis Bay community was published in the *Science of the Total Environment* journal.[4] Collaborators and co-authors included community members from CCBA and SBCLT, as well as academic researchers from Johns Hopkins University; University of California, Davis; University of Maryland; and University of Cape Town. Academics included experts in materials and particle characterization, coal dust compositional and health impacts analysis, exposure assessment, epidemiology, air quality, atmospheric sciences, and community-engaged research.

The published work sought to investigate community-identified concerns with residential black dust accumulation and to determine the presence/absence of coal dust in the settled dust in the community. See ***Attachment A*** for a full copy of the peer-reviewed and published research, summarized as follows.

First, passive settled dust samples were collected for a 3-day period from two residential areas, 345 m and 1235 m from the coal terminal, using conductive carbon tape. Then, we used scanning electron microscopy and energy dispersive X-ray spectroscopy (SEM-EDX) of standard reference coal material and positive control coal material from the coal terminal in Curtis Bay to optimize the elemental and morphological classification criteria for coal dust: particle size (>5 µm), mineral-like morphology, and elemental composition of ≥75 % carbon, ≤20 % oxygen. Thirdly, we developed and implemented a manual SEM-EDX protocol to identify coal particles in the passive settled dust collected on conductive carbon tape in the neighborhood.

The manual SEM-EDX analysis confirmed the presence of coal dust sampled at both residential locations. The furthest sampling location was almost ¾ of a mile from the coal terminal at local Benjamin Franklin High School. Measured coal dust particle loading at the proximal and distal sites were 13.2 and 3.4 coal particles/mm^2, respectively.

These findings are consistent with community observations of black dust at their homes and attributions of the black dust to coal dust accumulation.

Relation of wind direction and coal terminal activity patterns with air pollution burden in Curtis Bay community

Below, we provide scientific information from preliminary work regarding the relation of wind direction and coal terminal activity patterns with particulate matter (PM: PM_1, $PM_{2.5}$, PM_{10}, total suspended particles [TSP]) and black carbon (BC) air pollution burden in the Curtis Bay community. Below we provide an overview of the preliminary findings that we believe are pertinent to the scientific information gaps related to the concerns raised by Curtis Bay community members over the years about black dust accumulation and potential explanatory factors for its accumulation.

From July 5, 2022 to July 16, 2023, we measured PM_1, $PM_{2.5}$, PM_{10}, TSP, and BC ($\mu g/m^3$) at 1-minute time intervals, concurrently with wind speed, wind direction, and visible bulldozer activity (camera-based) at the coal terminal at equivalent time scales. Relationships between local air pollution and orientation (downwind of coal terminal vs. not) and camera-based observations of visible bulldozer activity on coal piles vs. none were evaluated using conditional fixed effects regression models. The graphical abstract highlights overall associations we observed (**Figure 1)**.

Across a 10-node hyperlocal air monitoring network, we collected 2,121,793 PM and 360,325 BC 1-min records. In comparing mean PM and BC concentrations during 1.) Not downwind, no visible bulldozer activity, 2.) Not downwind, visible bulldozer activity, 3.) Downwind, no visible bulldozer activity, and 3.) Downwind, visible bulldozer activity, mean concentrations were all that their highest during downwind and visible bulldozer activity periods (**Figure 2**). When downwind of the coal terminal, PM was 0.67 to 5.2 $\mu g/m^3$ higher (p<0.0001) and BC was 0.11 $\mu g/m^3$ higher (95% CI=0.10, 0.12) (**Table 1**). When bulldozer activity was visible, PM was 0.44 to 2.5 $\mu g/m^3$ higher (p<0.001) and BC was 0.09 $\mu g/m^3$ higher (95% CI=0.08, 0.10) (**Table 2** and **Figure 3**). The associations between bulldozer activity and air pollutant concentrations were ~2-2.5 times higher downwind of the coal terminal vs. not (all p-interaction<0.001) (**Table 2** and **Figure 3**). Particulate matter and BC air pollution burden was greater in Curtis Bay when downwind of the coal terminal and any bulldozer activity was visible at the coal terminal, and highest when both occurred jointly (**Tables 1** and **2**; **Figures 2** and **3**). Further, the magnitude of associations for each factor on its own (downwind; bulldozer activity) and both factors occurring jointly (interaction) appeared to be higher at monitoring locations proximal to (<0.5 km) compared to farther away (>0.5 km) from the coal terminal.

These preliminary results, which involved integration of camera-based observations of activity patterns at the coal terminal with monitoring of changes in air pollution burden in Curtis Bay, underscore the utility of time-resolved documentation and information about coal terminal activity patterns to answer questions of public health concern to neighbors of the facility. This approach can be extended to address community concerns with the potential impact of coal terminal activities on changes in other air pollutants (e.g., volatile organic compounds, methane) that could have additional implications for public health in Curtis Bay but are not currently reported.

Conclusions

Coal dust was identified in residential and community spaces of the Curtis Bay community[4], and elevated PM and BC air pollution is related to being located downwind of the coal terminal and when there is visible bulldozer activity occurring at the terminal. Highest increases in PM and BC occurred when jointly downwind of the coal terminal and with visible bulldozer activity at the coal terminal. The information herein is consistent with the lived experiences of Curtis Bay community members who have described ongoing, repeated patterns of black dust accumulation at their homes and in their neighborhood and recorded visual observations of transient fugitive black dust plumes at the coal terminal.

Adverse nuisance, public health, and quality of life implications due to impaired community-level air quality have been well-documented.[5-9] Additionally, the Curtis Bay community is overburdened by the cumulative impacts of economic hardships, high vacancy rates, historical pollution burden, and documented health disparities such as higher mortality due to chronic obstructive pulmonary disease and lung cancer compared to both Baltimore City and Maryland state[10].

Overall, our scientific findings — confirming coal dust is present in accumulated black dust in Curtis Bay and demonstrating a relation of downwind direction and coal terminal bulldozer activity with increased particulate matter (PM) and black carbon (BC) air pollution burden in Curtis Bay — are consistent with and provide strong scientific support for Curtis Bay community members' observations and concerns related to coal dust exposure in their neighborhood. The coherence of this scientific information, across varied analytic and observational platforms, raises questions about whether a permit for the continued operation of a coal terminal of this size and scale should be granted. The data suggest that the goals of environmental protection and promotion of the public health and well-being of the Curtis Bay community are not consistent with continuing operation of this facility.

If the permit is renewed and coal terminal operations do continue, conditions added to the permit should be considered to mitigate black dust, coal dust, and air pollution burden and associated nuisance, health, and quality of life impacts in Curtis Bay. These conditions could include, but are not limited to:

- Full enclosure of the coal terminal coupled with strategies to mitigate windblown and mechanically generated dust exposure via changes in the operating practices at the coal terminal;
- Expansion of publicly accessible reporting of time-resolved information about coal terminal activity patterns;
- Expansion of publicly accessible real-time air pollution burden monitoring (onsite and off-site) to include not just PM, but also black carbon, CO, NO, NO_2, VOCs, CH_4, and

settled dust characterization to provide timely and ongoing assurance that mitigation strategies are protective of neighboring communities.

If strategies to mitigate proximate air pollution burden were to be put in place, data should be collected on a daily basis so that air pollution monitoring and settled dust characterization can be assessed to provide ongoing assurance that mitigation strategies are protecting neighboring communities. These data should be collected both onsite and off-site in neighboring communities and made publicly available in real-time or within 24 hours after collection to assure timely public notification. Our work demonstrates the utility of particle characterization (e.g., SEM-EDX) and inclusion of multiple air pollutants in addition to particulate matter in order to address proximal community concerns with black dust, coal dust, and air pollution burden associated with activities at the coal terminal and, at minimum, these data should be collected and shared as set out above.

Respectfully submitted,

Christopher D. Heaney, MS, PhD
Matthew A. Aubourg, MSPH

Figure 1. Graphical abstract of relation of wind direction and coal terminal activity patterns with air pollution burden in Curtis Bay, Baltimore, Maryland, USA, 2022-2023.

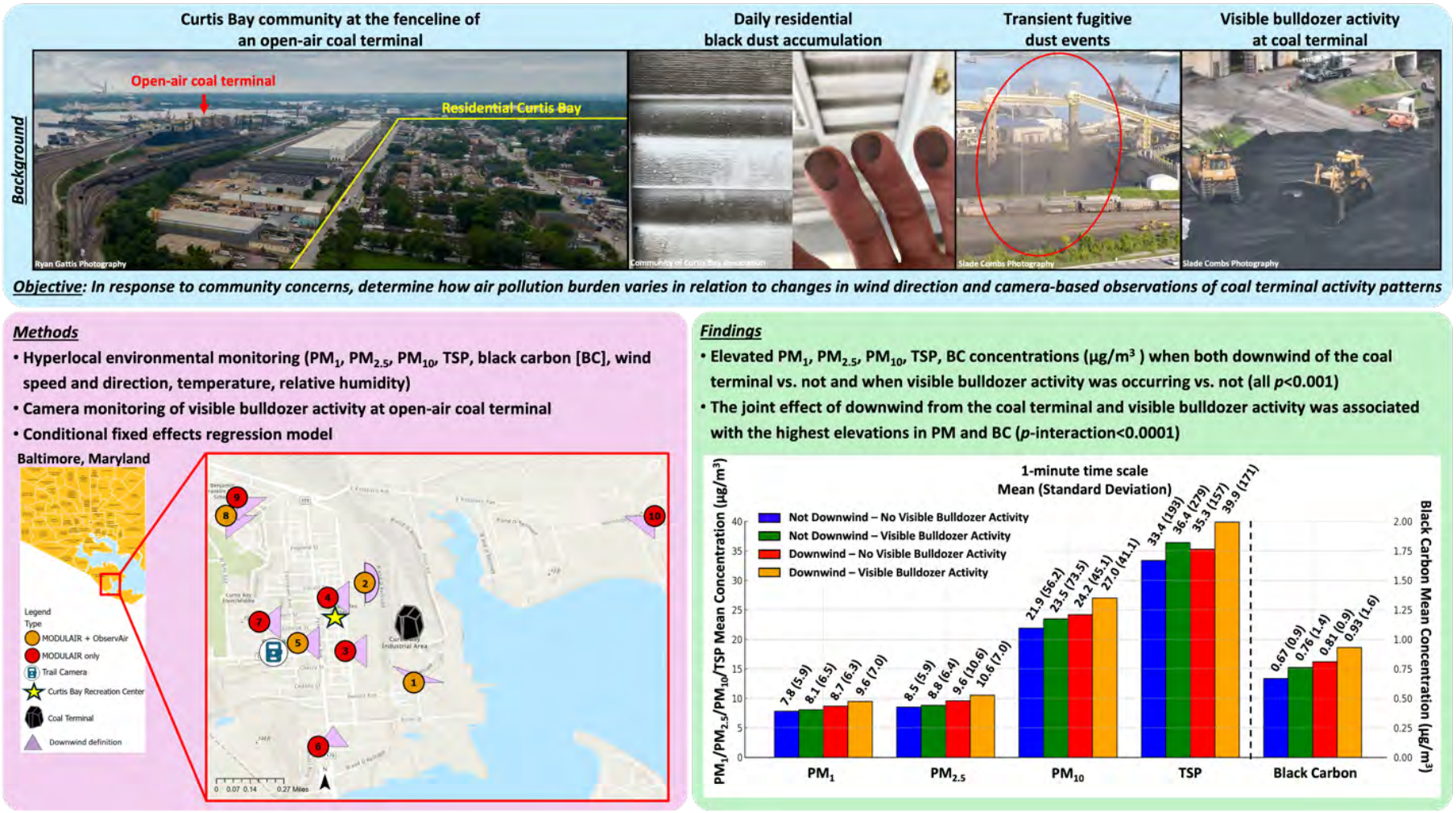
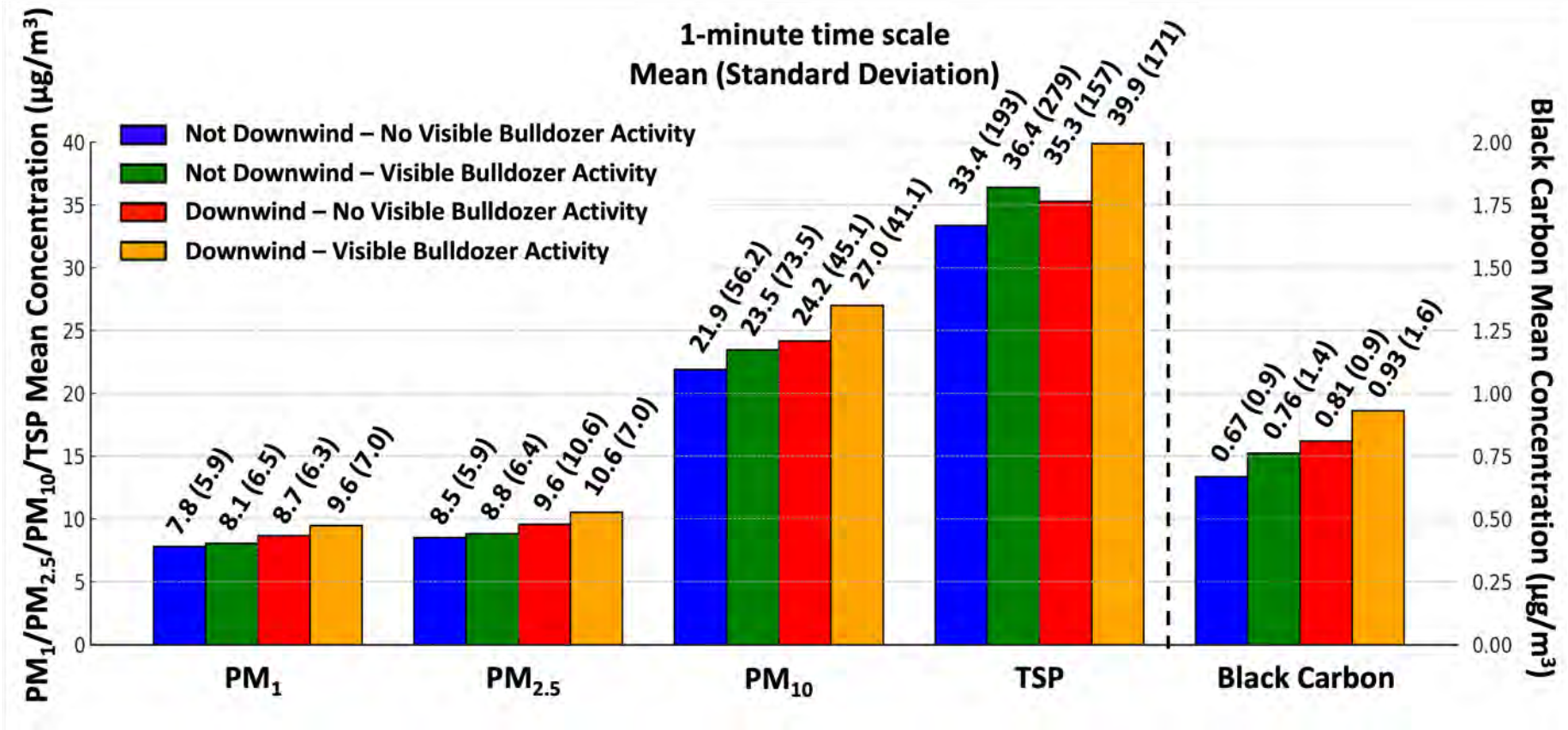
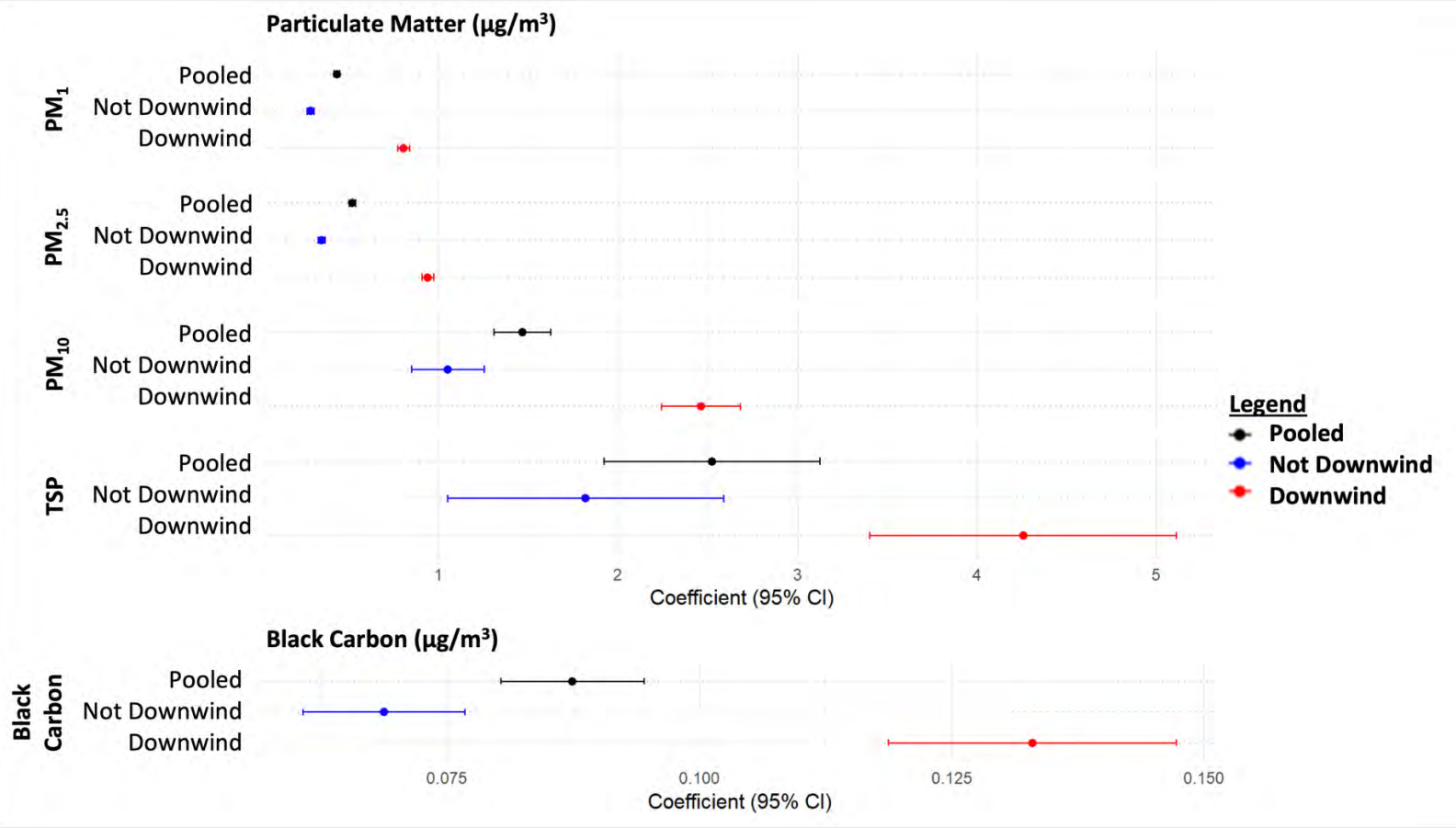


Figure 2. Figure 2. Mean concentrations of PM stratified by wind direction and visible bulldozer activity, Curtis Bay, Baltimore, Maryland, USA, 2022-2023.



Note: Not downwind: Time periods when monitor was not downwind of coal terminal. Downwind: Time periods when monitor was monitor was downwind of coal terminal.

Figure 3. Forest plot showing magnitude of beta coefficient and 95% confidence interval (CI) estimates of the relation between any visible bulldozer activity at the coal terminal and changes in PM_1, $PM_{2.5}$, PM_{10} , and total suspended particles (TSP) and black carbon (BC) stratified by time periods that were downwind of the coal terminal versus not at 1-minute average time intervals, Curtis Bay, Baltimore, Maryland, USA, 2022-2023.



Note. Binary any visible bulldozer activity versus none was defined as: If a 1-minute time period had any visible bulldozer activity = 1; if a 1-minute time period did not have any visible bulldozer activity = 0. All *p*-interaction<0.001 for PM_1, $PM_{2.5}$, and PM_{10}, TSP, and BC.

Table 1. Relation between monitor being downwind of the coal terminal and pollutant concentration (1-min time scale), Curtis Bay, Maryland, USA, 2022-2023.

	No. of records	Mean of pollutant (SD)	Beta Coefficient[a]	95% CI	*t*-value	*p*-value
PM_1 (μg/m^3)						
Downwind of coal terminal yes=1; no=0)	2,035,601	8.30 (6.3)	0.67	0.65, 0.69	70.1	<0.0001
$PM_{2.5}$ (μg/m^3)						
Downwind of coal terminal (yes=1; no=0)	2,032,244	9.1 (6.7)	0.95	0.93, 0.97	95.3	<0.0001
PM_{10} (μg/m^3)						
Downwind of coal terminal (yes=1; no=0)	2,032,244	23.5 (57.7)	3.99	3.8, 4.2	43.4	<0.0001
TSP (μg/m^3)						
Downwind of coal terminal (yes=1; no=0)	2,032,244	35.6 (215.0)	5.2	4.5, 6.0	15.1	<0.0001
Black Carbon (μg/m^3)						
Downwind of coal terminal (yes=1; no=0)	360,325	0.76 (1.23)	0.11	0.10, 0.12	27.7	<0.0001

[a]The beta coefficient is the increase in air pollutant (per μg/m3) when wind was blowing downwind of the coal terminal versus not downwind. Coefficients are derived from conditional fixed effects linear regression models adjusted for temperature (ºCelsius), wind speed (mph), solar radiation (watts per square meter), NO (ppb), and time of day (AM/PM).

Note. PM=particulate matter; TSP=total suspended particles; SD=standard deviation; CI=confidence interval.

Table 2. Relation between any visible bulldozer activity at the coal terminal and air pollutant levels, stratified by wind direction (1-min time scale), Curtis Bay, Maryland, USA, 2022-2023.

	No. of records	1-min mean air pollutant (SD)	Beta coefficient[a]	95% CI	t-value	*p*-interaction
Any visible coal terminal bulldozer activity (yes=1; no=0)						
PM_1 (µg/m^3)[b]	**2,035,601**	**8.299 (6.35)**	**0.437*** **	**0.421, 0.453**	**52.1**	
Wind direction (downwind of coal terminal)	579,095	9.000 (6.64)	0.804***	0.772, 0.836	49.4	<0.0001
Wind direction (not downwind of coal terminal)	1,456,506	8.020 (6.207)	0.285***	0.266, 0.304	29.4	
$PM_{2.5}$ (µg/m^3)[b]	**2,032,244**	**9.106 (6.704)**	**0.525*** **	**0.508, 0.542**	**59.7**	
Wind direction (downwind of coal terminal)	577,981	9.991 (7.003)	0.94***	0.906, 0.973	55.4	<0.0001
Wind direction (not downwind of coal terminal)	1,454,263	8.754 (6.548)	0.349***	0.329, 0.369	34.3	
PM_{10} (µg/m^3)[b]	**2,032,244**	**23.46 (57.69)**	**1.487*** **	**1.328, 1.645**	**18.4**	
Wind direction (downwind of coal terminal)	577,981	25.41 (43.60)	2.46***	2.244, 2.683	22.0	<0.0001
Wind direction (not downwind of coal terminal)	1,454,263	22.69 (62.40)	1.05***	0.847, 1.254	10.1	
TSP (µg/m^3)[b]	**2,032,243**	**35.47 (215.1)**	**2.52*** **	**1.923, 3.125**	**8.2**	
Wind direction (downwind of coal terminal)	577,981	37.34 (163.1)	4.26***	3.402, 5.111	9.8	<0.001
Wind direction (not downwind of coal terminal)	1,454,262	34.72 (232.6)	1.82***	1.051, 3.587	4.6	
Black carbon (µg/m^3)[c]	**360,325**	**0.761 (1.228)**	**0.089*** **	**0.082, 0.096**	**24.6**	
Wind direction (downwind of coal terminal)	111,802	0.878 (1.308)	0.133***	0.119, 0.147	18.3	<0.0001

Wind direction (not downwind of coal terminal)	248,523	0.709 (1.187)	0.069***	0.061, 0.077	16.8

[a]The beta coefficient is the increase in air pollutant (per µg/m^3) when any bulldozer activity was versus was not observed. Coefficients are derived from conditional fixed effects linear regression models adjusted for temperature (ºCelsius), wind speed (mph), solar radiation (watts per square meter), NO (ppb), and time of day (AM/PM).
[b]Models include data from air monitoring locations 1 through 10.
[c]Models include data from air monitoring locations 1, 2, 5, and 8.
*p-value <0.05, **p-value <0.01, ***p-value <0.001
Note. PM=particulate matter; TSP=total suspended particles; SD=standard deviation; CI=confidence interval.

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Use of electron microscopy to determine presence of coal dust in a neighborhood bordering an open-air coal terminal in Curtis Bay, Baltimore, Maryland, USA

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Abbreviations: US, United States; $PM_{2.5}$, Particles of aerodynamic diameter $\leq$ 2.5 μm; MDE, Maryland Department of the Environment; BSPH, Johns Hopkins Bloomberg School of Public Health; JHU-MCP, Johns Hopkins University Materials Characterization and Processing Facility; UMD, University of Maryland; SEM-EDX, Scanning electron microscopy and energy dispersive X-ray spectroscopy; NIST, National Institute of Standards and Technology; SRM, Standard reference material; L, Length of longest visible dimension; At.%, Atomic weight percent; FOV, Field of view.

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HIGHLIGHTS

- Coal terminal neighbors in Curtis Bay, MD raised concerns about coal dust exposure..
- Settled dust sampled in 2 residential areas up to 1235 m from coal terminal
- SEM-EDX analysis confirmed presence of coal dust in both residential samples.
- Provides evidence of coal dust presence in a community neighboring coal terminal

GRAPHICAL ABSTRACT



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ABSTRACT

Background: Despite decreasing US consumption, over 90 million metric tons of coal were exported by the US in 2023, requiring significant infrastructure for transport, handling, and storage of coal at export terminals. Residents in Curtis Bay, Baltimore, Maryland, USA live at the fenceline of an open-air coal terminal and have, for decades, reported rapid accumulation of black dust at their homes. Community-level exposure to coal dust originating from coal handling and storage terminals has remained largely unexplored.
Objectives: To investigate community-identified concerns and use a community-driven approach to determine the presence/absence of coal dust on Curtis Bay surfaces.
Methods: Passive settled dust samples were collected from two residential areas, 345 m and 1235 m from the coal terminal, using conductive carbon tape. Scanning electron microscopy and energy dispersive X-ray spectroscopy (SEM-EDX) of standard reference coal material and positive control material from the coal terminal in Curtis Bay were used to optimize the morphological and elemental classification criteria for coal dust. A manual SEM-EDX protocol was developed to identify coal particles in settled dust collected on conductive carbon tape in community settings.
Results: SEM-EDX analysis confirmed presence of coal dust sampled at both residential locations. Estimated coal dust particle loading at the proximal and distal site were 13.2 and 3.4 coal particles/mm^2, respectively. The coal dust particles identified met specific criteria, including size (>5 μm), morphology, and elemental composition (≥75 % carbon, ≤20 % oxygen).
Discussion: These findings are consistent with longstanding community concerns and lived experiences regarding the presence of coal dust in Curtis Bay, which neighbors a major open-air coal terminal. This approach has potential for other communities neighboring coal terminals to assess similar concerns with residential coal dust exposure.

1. Introduction

Despite waning consumption of fossil fuels in the United States (US), the global consumption of coal reached a record high in 2023 (Energy Institute, 2023; International Energy Agency (IEA), 2026). In the US, significant amounts of coal–over 90 million metric tons in 2023–are destined for export (U.S. Energy Information Administration (EIA), 2024a). This material is stockpiled at coal terminals where there is substantial infrastructure in place for coal transport, handling, and storage.

Recent studies have identified coal transport as a significant contributor to local fine particulate matter air pollution (Ostro et al., 2023a; Ostro et al., 2023b; Jaffe et al., 2015) and increased mortality and morbidity (Ostro et al., 2024). Jha and Muller (2018) found that coal handling and storage at coal stockpiles increase adult and infant mortality by 1.1 % and 3.2 %, respectively, for every 10 % increase in fine particulate matter (particles of aerodynamic diameter ≤ 2.5 μm or $PM_{2.5}$) generated within an approximately 40 km radius (Jha and Muller, 2018). Coal terminals, transport infrastructure, and other industrial operations are often sited in low-income communities and communities of color, contributing to both public health and environmental justice concerns. Most of the scientific literature on coal exposure has focused on occupational exposures of coal miners (Petsonk et al., 2013; Hendryx et al., 2020a; Liu and Liu, 2020; Leonard et al., 2020) with little research addressing harmful exposure to coal dust in communities near coal mining areas. Studies have determined that areas and communities proximal to coal mines have elevated exposure to particulate matter and heavy metals (Rout et al., 2013; Kurth et al., 2014; Hendryx et al., 2020b; Huertas et al., 2012), adversely impacting health outcomes and quality of life (Higginbotham et al., 2010; Cortes-Ramirez et al., 2018; Hendryx, 2009; Hendryx and Entwhistle, 2015). In communities proximal to open-air handling and storage of other materials (distal from extraction activities), the presence of fugitive dust has been documented both by fenceline residents' testimonies and via exposure studies (Ostro et al., 2023b; Hendryx et al., 2016; Jereb et al., 2009; Sorte et al., 2018). Despite this, there remains a paucity of research regarding community-level exposure to coal dust and associated environmental health impacts originating from coal handling and storage infrastructure, not in proximity to coal mining areas.

In 2023, Baltimore, Maryland was the second largest exporter of coal in the US, with approximately 30 million metric tons of coal leaving the Port of Baltimore, a nearly eight-fold increase since 2002 (U.S. Energy Information Administration (EIA), 2024b). The open-air coal terminal operated by CSX Corporation in Curtis Bay, South Baltimore, has an

annual throughput capacity of over 12 million metric tons of coal "with room to grow" (CSX Corporation, n.d.). Alongside homes, local schools, and community spaces, a high density of industrial activity is located in Curtis Bay. These include the open-air coal terminal, heavy diesel truck traffic (Dickerson et al., n.d.), the largest medical waste incinerator in the US (Maryland Department of the Environment, 2024), oil and gas processing and storage, and other industrial land uses. The open-air coal terminal is located approximately 300 m from nearby homes and the community's recreation center (Fig. 1).

Residents in Curtis Bay living at the fenceline of this coal terminal have raised concerns about numerous environmental health issues, including exposure to coal dust in their neighborhood. For decades, Curtis Bay residents have reported black dust on outdoor and indoor surfaces of their homes and property (Dickerson et al., n.d.; Community of Curtis Bay Association (CCBA) et al., 2023; South Baltimore Community Land Trust (SBCLT), 2023; Sierra Club Maryland Chapter, 2013). On December 30, 2021, a major explosion at the coal terminal blasted coal dust several blocks into the Curtis Bay community, shattered windows of nearby homes, and caused panic throughout the South Baltimore area (Kazanjian, 2022; South Baltimore Community Land Trust, 2023). This emergency event also energized action and coordination efforts to investigate the community health and quality of life impacts of living at the fenceline of the open-air coal terminal during its routine day-to-day operation (Community of Curtis Bay Association (CCBA) et al., 2023; Aubourg et al., 2023). Curtis Bay residents have recorded on camera fugitive dust emissions and activities at the coal terminal since the 2021 explosion (Shen, 2024; South Baltimore Community Land Trust (SBCLT), 2024a). In the following sections, we describe the development and application of a protocol to determine the presence-absence of coal dust in passive settled dust samples collected in the Curtis Bay community.

2. Materials and methods

2.1. Study setting

Following the December 2021 explosion at the coal terminal, the Community of Curtis Bay Association (Community of Curtis Bay Association (CCBA), 2024) and South Baltimore Community Land Trust (South Baltimore Community Land Trust (SBCLT), 2024b) initiated a collaboration with neighboring community-based organizations, the Maryland Department of the Environment (MDE) Air and Radiation Administration, researchers from the Department of Environmental Health and Engineering at the Johns Hopkins Bloomberg School of Public Health (BSPH), the Johns Hopkins University Materials Characterization and Processing Facility (JHU-MCP), and the Department of Atmospheric and Oceanic Sciences and the Advanced Imaging and Microscopy Laboratory at the University of Maryland (UMD). In December 2023, this collaborative team released a report of preliminary findings from a community-led investigation of the presence of coal dust in the Curtis Bay community, utilizing neighborhood-level air monitoring, statistical source apportionment techniques, and preliminary analysis (scanning electron microscopy and energy dispersive X-ray spectroscopy [SEM-EDX]) of passive settled dust samples (Community of Curtis Bay Association (CCBA) et al., 2023). SEM imaging allows for determination of the size and morphology of particles while EDX analysis provides particle elemental composition. Following the December 2023 report, additional exposure and coal characterization experts from the University of California Davis Air Quality Research Center and the University of Cape Town Minerals to Metals Initiative supported further development of analytical procedures described herein.

2.2. Sample collection

Sampling was conducted in residential areas of Curtis Bay in South Baltimore, Maryland, USA. Samples were collected 345 m (Location A) and 1235 m (Location B) from the centroid of the coal terminal property boundary (Fig. 2). Location A was near several homes, a community recreation center, and two major residential diesel truck routes. Location B, further from the coal terminal, was near the local elementary and high schools, within a dense residential area, and near community green spaces.

Field sampling kits included an $8 \times 40\ mm^2$ segment of double-sided, adhesive conductive carbon tape (Ted Pella, Inc., Redding, CA, US) sealed inside a labeled PetriSlide (Millipore, Merck KGaA, Darmstadt, DE). At each sampling location, a member of the study team adhered the segment of carbon tape to an outdoor, horizontal surface using gloves and tweezers cleaned with 70 % ethanol. Surfaces were cleaned before adhering the tape. The carbon tape was left exposed to collect settled dust for a three-day period (October 26–29, 2023) in which the coal terminal was in operation. The three-day sampling period was selected to reflect community members' decades-long observations of rapid black dust accumulation at their homes. A laboratory blank was obtained during assembly of sampling kits by exposing carbon tape to ambient air in the biosafety cabinet where all sampling kits were assembled. A field blank was obtained at each sampling location by exposing the carbon



Fig. 1. Drone photograph of the community of Curtis Bay, Baltimore, Maryland, USA, depicting industrial facilities and activities, including the open-air coal terminal and heavy diesel truck traffic, proximal to residential areas. Image credit to Ryan Gattis, October 26, 2023.

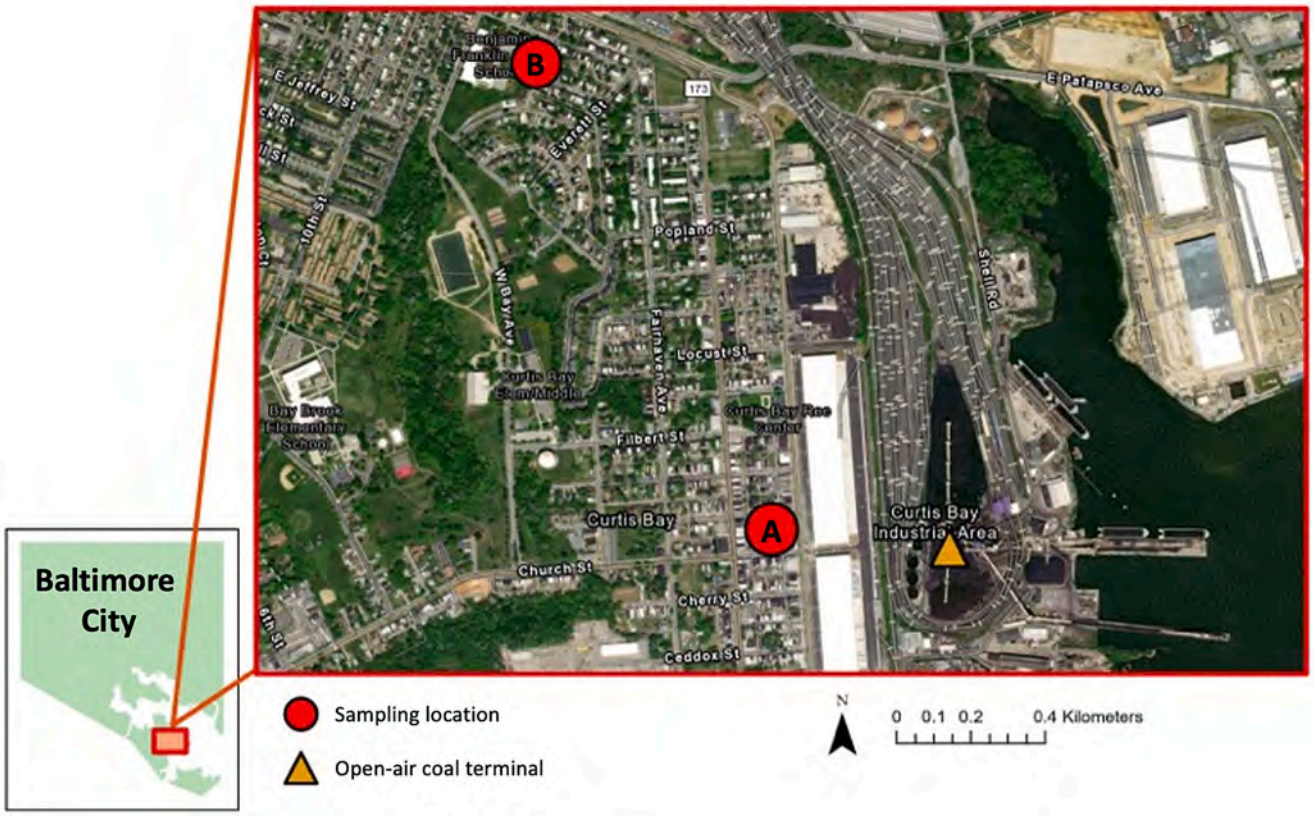

Fig. 2. Approximate passive settled dust sampling locations in residential areas of the Curtis Bay community (red circles) and the open-air coal terminal (orange triangle). Basemap source: Esri Community Map Contributors, City of Baltimore, Baltimore County Government, County of Anne Arundel, VGIN, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc., METI/NASA.

tape to ambient air for 30 s. Following the three-day sampling period, a member of the study team carefully removed the conductive carbon tape from its surface and resealed it in the corresponding PetriSlide, using new gloves and tweezers cleaned with 70 % ethanol. PetriSlides were sealed with tape and placed in individual packaging prior to, during, and following the sampling period. Sealed samples were stored at room temperature until analysis.

2.3. SEM-EDX analytical protocol

2.3.1. SEM-EDX instrumentation

Samples were analyzed in the JHU-MCP using a JEOL JSM-IT700HR InTouchScopeTM Field Emission SEM (JEOL US, Inc., Peabody, MA, US). Imaging was exclusively performed by secondary electrons. Energy dispersive X-ray analysis was conducted using an EDAX Octane Elect Plus silicon drift detector (Ametek, Inc., Berwyn, PA, US). Semi-quantitative analyses were performed using the EDAX APEX software using a supplied ZAF analysis routine.

Results for the optimization of coal particle classification criteria were independently confirmed via SEM (Hitachi SU-70 Schottky Field Emission Gun SEM; Hitachi High-Tech Corporation, Minato-ku, Tokyo, JPN) and EDX (Bruker XFlash 6160; Bruker Corporation, Billerica, MA, US) at UMD.

Elemental composition analyses via EDX presented here are semi-quantitative in accuracy and precision. No attempt was made to account for particle shape effects on differential absorption, shadow effects of large particle interferences, and thickness effects due to particle size. These effects will increase the variability of the analyses and possibly shift carbon-oxygen ratios.

2.3.2. Optimization of coal particle classification criteria

To evaluate the potential influence of the carbon tape substrate and optimize the elemental classification criteria for a coal particle, we conducted comparative SEM-EDX analyses of two positive control coal materials on a beryllium planchette (essentially free from carbon) and conductive carbon tape. This methodology was informed by standard practice in auto-SEM systems. Analyses via EDX were collected for 30 s per particle. Positive controls included National Institute of Standards and Technology (NIST) subbituminous coal standard reference material (SRM; 2682c) and a composite coal sample from the coal terminal in Curtis Bay. The SEM was operated under high vacuum conditions at 15 kV accelerating voltage and an ideal working distance of approximately 10 mm. Beam current ranged from 15 to 35 nA to optimize for SEM-EDX analysis of coal particles. Particle size by length of longest visible dimension (L) was obtained using ImageJ software (Schneider et al., 2012). Observed particles, ranging from approximately L = 500 nm to 100 μm, were analyzed for carbon, oxygen, sodium, magnesium, aluminum, silicon, phosphorus, sulfur, calcium, and iron. Three criteria were used to characterize coal particles: size, elemental composition, and morphology.

2.3.2.1. Particle size and elemental composition. Coal dust contains a heterogenous mixture of carbonaceous, mineral, and other particle types with varying levels of carbon and oxygen content (Raju and Rom, 1998). Elemental compositional analysis of carbon tape without coal had carbon content of 94 atomic weight percent (At.%) and oxygen content of 6 At.%.

Through analysis of NIST SRM on the beryllium planchette, we found an average carbon content of 82 ± 3 (2σ error) At.% and oxygen content of 17 ± 2 At.%, averaged across all measured particles (Fig. 3). When analyzed on carbon tape, larger NIST SRM particles had average carbon

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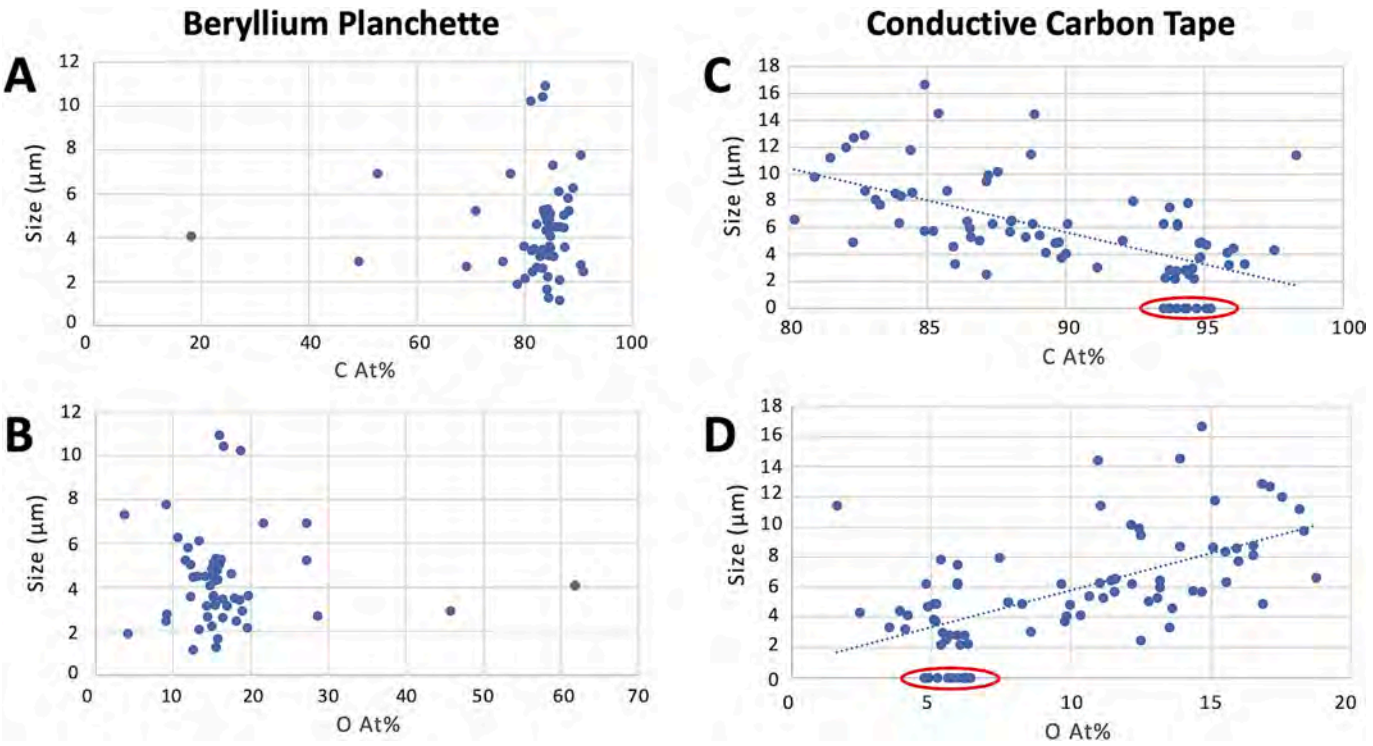

Fig. 3. Carbon and oxygen content analyses of National Institute of Standards and Technology (NIST) subbituminous coal standard reference material (SRM 2682c) on a beryllium planchette (A and B) and conductive carbon tape (C and D). Carbon analyses shown in panels A and C. Oxygen analyses shown in panels B and D. Analyses of conductive carbon tape circled in red. *Note.* At.% = atomic weight percent. C = carbon. O = oxygen.

content of 87 ± 1.4 At.% and oxygen content of 13 ± 1.2 At.%, somewhat higher in carbon and lower in oxygen than NIST on the beryllium planchette (Fig. 3). Smaller particles (< 5 µm) had an average carbon and oxygen content of 93 ± 1.4 and 7 ± 1.3 At.%, respectively, which was significantly different from small particles of NIST SRM on the beryllium planchette (Fig. 3). Analyses of conductive carbon tape are circled in red (Fig. 3). This demonstrates the effect of increasing influence of the carbon tape background upon measured carbon and oxygen content as particle size decreases. For small coal particles, there is a possibility of electron penetration through the particle into the carbon tape substrate, or the electron beam interaction volume can surpass the particle edge, influencing measurements of carbon and oxygen composition via EDX.

Analysis of positive control coal material from the open-air coal terminal in Curtis Bay on the beryllium planchette yielded two groups of particles: (1) those with carbon = 75–97 At.% and oxygen = 3–20 At.% (average carbon = 83 ± 3.9 At.%, oxygen = 14 ± 2.8 At.%), and (2) those with much lower carbon and higher oxygen content. This second group represents analyses of inorganic minerals. There was no strong compositional trend with particle size observed (Fig. 4).

Analyses of coal terminal positive control coal material on conductive carbon tape also yielded no clear trend of carbon and oxygen composition with size (Fig. 5). However, the average L < 5 µm particle had carbon = 93 ± 1.6 At.% and oxygen = 7 ± 1.5 At.%. Larger coal particles (L > 5 µm) had a wider range of carbon (average: 89 ± 2.7 At.%) and oxygen (10 ± 2.2 At.%) compositions, but most were in the range of carbon = 88–97 At.% and oxygen = 3–11 At.% (Fig. 5).

A Monte Carlo simulation of electron scattering of NIST bituminous coal SRM resulted in electron penetration depth of approximately 2 µm at 15 kV accelerating voltage (Fig. S1). These findings also informed our decision to restrict SEM-EDX particle analysis on conductive carbon tape to particles of L > 5 µm. Even though the Monte Carlo simulations indicate L = 3 µm may be sufficient (Fig. S1), we selected a more conservative size cutoff since coal particles can have length dimensions

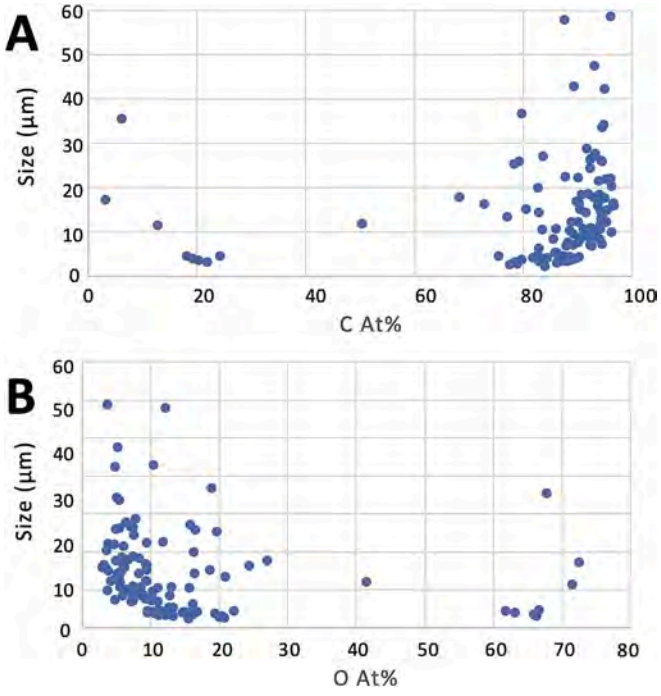

Fig. 4. Carbon (A) and oxygen (B) content analyses of positive control coal material from the open-air coal terminal in Curtis Bay, Baltimore, Maryland, USA on a beryllium planchette. *Note.* At.% = atomic weight percent. C = carbon. O = oxygen.

longer than thickness. Coal particles with L < 5 µm may have been collected on field samples and yet excluded from analysis by this size cutoff; therefore, the number of coal particles identified is likely a conservative estimate.

EXHIBIT D - 18

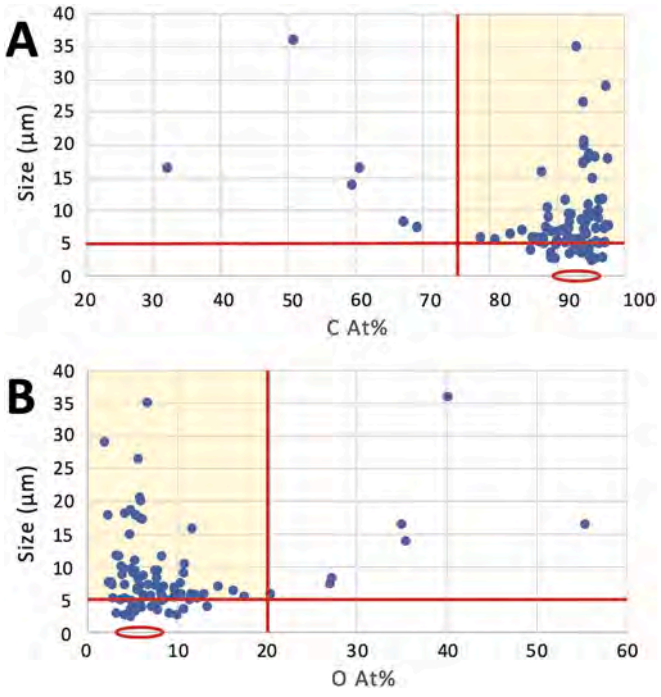

Fig. 5. Carbon (A) and oxygen (B) content analyses of positive control material coal from the open-air coal terminal in Curtis Bay, Baltimore, Maryland, USA on conductive carbon tape. Particle size (longest visible dimension >5 µm) and elemental compositional (carbon ≥75 At.% and oxygen ≤20 At.%) limits shown by red lines bounding the yellow bow of accepted coal composition and size for the coal dust classification criteria. Red circles represent analyses of the carbon tape substrate. *Note.* At.% = atomic weight percent. C = carbon. O = oxygen.

On both the beryllium planchette and carbon tape, the average measured carbon and oxygen content by At.% of coal particles were similar. The comparative analysis of positive control coal material sourced from the coal terminal determined carbon ≥75 At.% and oxygen ≤20 At.% as coal dust compositional limits (red lines and yellow box in Fig. 5). Adhering to these compositional limits, a minor fraction (approximately 7 %) of positive control coal particles were eliminated from being considered coal. The compositional limits also align with relevant literature setting coal compositional criteria for SEM-EDX analysis (Sarver et al., 2021; Sellaro et al., 2015). These limits also acknowledge the observed and well-documented heterogeneous nature of coal dust, containing carbonaceous particles, silicates, minerals, soil, and other particle types (Raju and Rom, 1998). The selected elemental compositional limits aim to optimize the selection of carbonaceous coal particles and exclude non-coal particles that were present in standard reference and positive control material, as well as expected in field samples. Therefore, these elemental compositional criteria conservatively identify coal dust particles, minimizing false positive identification of coal particles in field samples.

2.3.2.2. Particle morphology. Consistent with relevant literature (Sellaro et al., 2015; Kamanzi et al., 2024; Rawat and Yadav, 2020; Zazouli et al., 2021; LaBranche et al., 2021), coal particles in both positive coal materials were found to have a mineral-like morphology (e.g., angular and rough, not spherical or fibrous) (Figs. S2 and S3). In the manual analytical protocol described herein, we quantitatively assessed the coal particle morphology to distinguish particles with equivalent elemental composition to that of the coal particles, but clearly reflect the morphology of non-coal particles (Fig. 6). For example, we observed a fibrous particle on a field sample that, when analyzed via EDX, possessed elemental composition consistent with the size limit and coal particle compositional criteria (carbon = 84 At.%, oxygen = 16 At.%; Fig. 6). However, the fibrous morphology greatly differs from expected mineral-like coal particle morphology (Fig. 6); therefore, this particle was excluded from identification as a coal particle.

In summary, the size limit (L > 5 µm), primary elemental compositional limits (carbon ≥75 At.%, oxygen ≤20 At.%), and mineral-like morphology were determined to identify coal particles in this analysis of passive settled dust collected on carbon conductive tape.

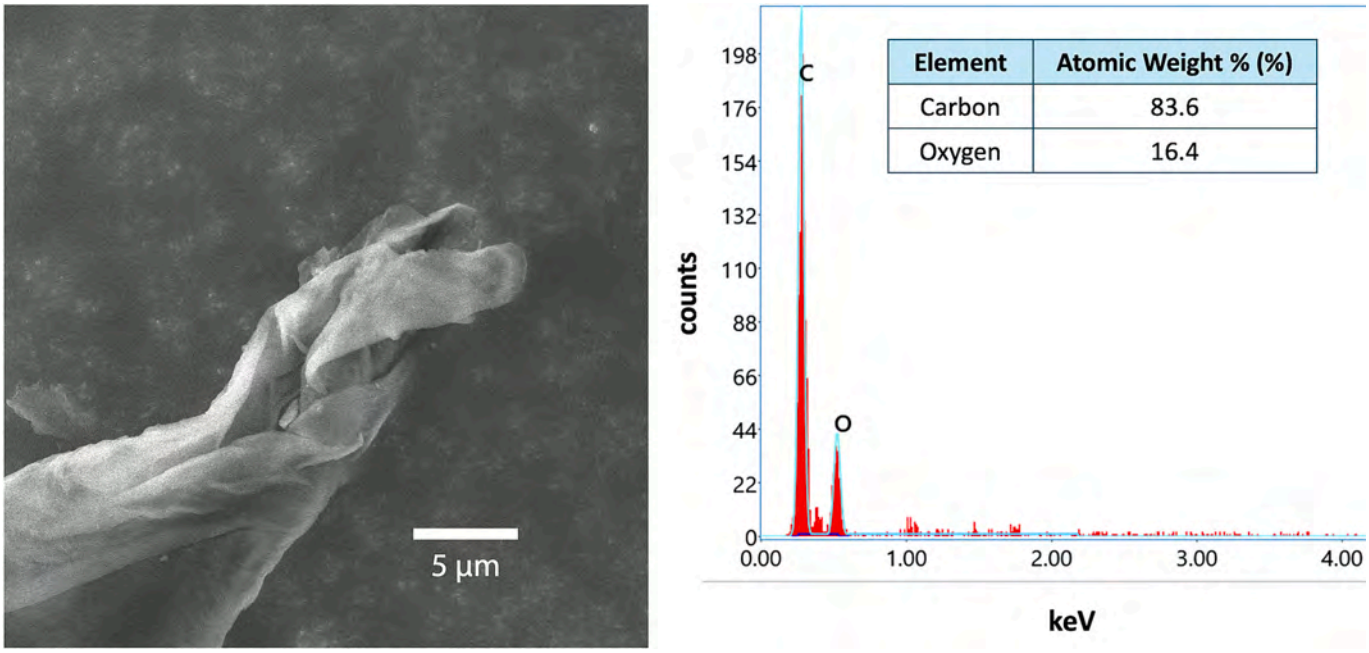

Fig. 6. High magnification image (secondary electrons) (left) and elemental composition (right) of a fibrous particle observed on a field sample. Measured elemental composition was consistent with expected coal dust composition, however, morphology differed from expected mineral-like morphology of coal dust. *Note.* The 5 µm scale bar in the coal particle image. keV = kilo-electron-volts.

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2.4. SEM-EDX procedure to analyze settled dust samples

2.4.1. Sample preparation

At a cleaned workspace, free from any positive control material, sections of conductive carbon tape (approximately 8 × 8 mm^2) were cut from field collection, laboratory blank, or field blank samples and mounted on an aluminum SEM stub (Ted Pella, Inc., Redding, CA, US). Mounted samples were stored in sealed and labeled individual stub mailing tubes (Ted Pella, Inc., Redding, CA, US) when not under the SEM. All samples were handled with gloves and cleaned tools. Samples were not coated prior to SEM-EDX analysis.

2.4.2. Particle selection and SEM-EDX analysis

To begin the analysis, the SEM operator saves nine area positions at pre-specified locations focused at a magnification of 33× (Fig. S4). SEM-EDX operating parameters used are presented in Table 1. At each area position, focused images at magnifications of 250× and 500× are captured. In each area position at a magnification of 500 X, individual particles are selected in an anti-clockwise fashion from the center of the field of view (FOV) (Fig. S5). A group of ten particles (L > 5 μm) are selected, then analyzed via EDX.

Coal particles were identified using the classification criteria described in Section 2.3.2. For selected particles identified as coal dust, the SEM operator notes the particle number, area position number, particle L in μm, and particle morphology, then captures a higher magnification image of the coal particle.

If no coal particle is identified in a group of ten, the next ten particles in the FOV are selected, continuing in an anti-clockwise fashion. Once all particles (L > 5 μm) in the 500 x FOV have been selected and analyzed, the operator repeats the preceding steps in the next saved area position.

Analysis of each sample stops when (1) at least five coal particles are identified or (2) 100 total particles (regardless of type) are analyzed–-whichever stop limit is reached first. If these stop limits are not reached after analyzing particles in the first nine area positions, the operator saves a new set of nine area positions in a 33× magnification FOV that does not overlap with the previous FOV. Samples with light particle loading are analyzed using a slightly amended protocol described in Supplementary Text S1.

An operator from the JHU-MCP independently (at the time of analysis and reporting) analyzed laboratory and field blanks and blinded field samples using the SEM-EDX analytical protocol described herein (see Section 2.4).

2.5. Data analysis

Each FOV at magnification of 500× used to analyze settled dust particles has an area of 0.066 mm^2. After reaching a stop limit (see Section 2.4.2), the SEM operator can calculate the number of coal particles identified out of the total number of particles analyzed and total area analyzed (mm^2). The total number of coal dust particles per mm^2 analyzed can be used to compare the density or loading of identified coal dust particles between different samples and/or sampling locations.

This protocol and analysis can be used to determine: (1) the presence-absence of coal dust particles in settled dust passively collected on conductive carbon tape; (2) the fraction of coal particles out of the total number of particles analyzed; and (3) approximate loading of settled particles and/or coal particles per mm^2 analyzed on each sample.

Table 1
Scanning electron microscope (SEM) and energy dispersive X-ray spectrometer (EDS) operating parameters used.

	SEM	EDS
Electron mode	Secondary electrons	
Accelerating voltage	15 kV	
Beam current	15 nA	
Vacuum mode	High vacuum	
Working distance	10 mm	
Collection time	–	10 s
Brightness/contrast	Adjust as needed	

3. Results

On the proximal sample obtained from Location A, 345 m from the coal terminal, eight area positions, equaling an area of 0.53 mm^2, were required to identify at least five coal particles (Table 2). Across the eight area positions, 82 total particles were analyzed, regardless of type. The approximate total particle loading on this sample was 155 particles/mm^2 (Table 2). Out of the 82 particles analyzed, seven were positively identified as coal particles (Figs. 7; S6–S10). The high magnification image and elemental composition is shown for one of the seven coal particles (Fig. 7). The fraction of settled coal particles observed was approximately 9 %, and the measured coal dust loading was 13.2 coal particles/mm^2 (Table 2; Fig. 9).

On the distal sample obtained from Location B, 1235 m from the coal terminal, 27 area positions, equaling an area of 1.78 mm^2, were required to identify at least five coal particles (Table 2). Across the 27 area positions, 78 total particles were analyzed, regardless of type (Table 2). The approximate total particle loading on this sample was 44 particles/mm^2 (Table 2). Out of the 78 particles analyzed, six were positively identified as coal particles (Figs. 8; S11–S15). The high magnification image and elemental composition is shown for one of the six coal particles (Fig. 8). The fraction of settled coal particles observed was approximately 8 %, and the coal dust loading was 3.4 coal particles/mm^2 (Table 2; Fig. 9).

No coal particles were identified on the laboratory blank nor field blanks from either sampling location.

4. Discussion

Coal particles were identified on settled dust samples proximal (Location A) and distal (Location B) to the open-air coal terminal in the community of Curtis Bay in Baltimore, Maryland, USA. At each sampling location, the fraction of particles identified as coal dust among the total particles characterized was 9 % and 8 %, respectively. To contextualize this finding, Sellaro et al. identified primarily carbonaceous particles–defined as carbon ≥70 At.%; oxygen ≤30 At.%–similar to the elemental compositional criteria employed herein–as comprising an average of 12 %, 25 %, and 40 % of the total particles observed from sampling at a roof bolter, belt drive, and intake locations, respectively, of an underground coal mine in Central Appalachia (Sellaro et al., 2015).

Although our interest was in the identification and characterization of coal dust particles, the sampling and SEM-EDX analytical approach described can be adapted to select and characterize other particle types of interest. For example, some settled dust particles analyzed matched the coal dust elemental composition but failed to be morphologically characterized (e.g., fibers, round soot spheres, and pollen). Steel, aluminum, and other non-carbonaceous particles were also observed on settled dust samples, reflective of the various industrial operations present in Curtis Bay.

This study had several strengths. First, as community-driven research, the sampling and analytical methods were responsive to and guided by Curtis Bay residents' questions regarding the presence of coal dust in the community. Curtis Bay and South Baltimore community members from the South Baltimore Community Land Trust, Community of Curtis Bay Association, and Benjamin Franklin High School drove research questions and objectives, collaborated with academic partners in pilot testing and field collections, co-wrote this manuscript, and facilitated public dissemination of our findings at community meetings and discussions. Second, the systematic SEM-EDX protocol to determine the presence-absence of coal dust optimizes SEM-instrument time while achieving sufficient coverage of the mounted sample area. Third, the estimated coal dust loading metric can support comparisons between

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Table 2
Summary of findings from analysis of settled dust samples collected passively over a 3-day sampling period (October 26–29, 2023) in Curtis Bay, Maryland, USA.

		Total			Coal-specific		
Distance from coal terminal (m)	Number of area positions analyzed[a]	Total area of sample analyzed (mm^2)[b]	Total number of particles analyzed	Total particle loading (pt/mm^2)[c]	Number of coal particles identified	Fraction of coal particles (%)[d]	Coal dust loading (coal pt/mm^2)[e,f]
345	8	0.53	82	155	7	9	13.2
1235	27	1.78	78	44	6	8	3.4

[a] Number of area positions required to reach an analytical stop limit (i.e., five coal particles identified or 100 total particles analyzed).
[b] Each 500× magnification field of view was 0.066 mm^2 area.
[c] Pt = number of particles.
[d] Number of coal particles identified divided by the total number of particles analyzed.
[e] Coal pt = number of coal particles.
[f] Number of coal particles identified divided by the total area of the sample analyzed.

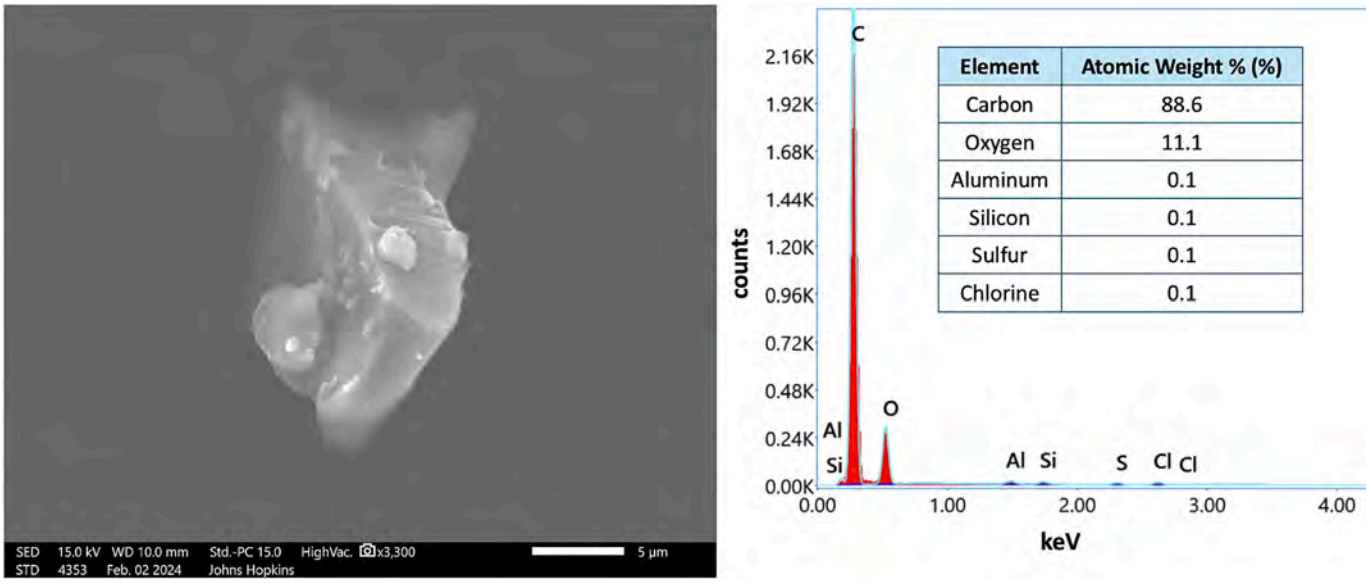

Fig. 7. High magnification image (secondary electrons) (left) and elemental composition (right) of one out of seven positively identified coal particles observed at Location A (345 m from coal terminal). This was the 1st particle in the 7th area position analyzed. *Note.* The 5 µm scale bar in the coal particle image. keV = kilo-electron-volts.

sites relative to local sources of coal dust. Importantly, this study addresses the paucity of information about the presence of coal dust in community settings and the lack of systematic, practical methods to fill this knowledge gap. Additionally, the sampling and analytical methods described herein can be adapted to other particle types or pollution sources of interest in a community setting.

Our study had some limitations. First, using the manual SEM-EDX protocol described, we were unable to determine the presence of L < 5 µm size coal particles (see Section 2.3.2). Other available analytical electron microscopy approaches (e.g., transmission electron microscopy) and automated or computer-controlled SEM-EDX procedures (Johann-Essex et al., 2017a; Johann-Essex et al., 2017b; Sarver et al., 2024) can be used to analyze L < 5 µm size coal particles, even in the nanoparticle size range. This study does confirm the presence of L > 5 µm coal dust and we expect coal dust to contribute to a fraction of ambient and settled fine particulate matter (Ostro et al., 2023b; Junge, 1955). These finer L < 5 µm size particles can travel deeper into the human respiratory tract and cause more severe health impacts than larger coarse particles. However, cytotoxic health effects of coarse size (average D50 = 10.9 ± 1.8 µm) coal particles, driven by physical particle characteristics, have been observed (Kamanzi et al., 2024). Second, it is challenging to produce quantitative data about the total number and precise proportion of settled coal particles using a manual SEM-EDX analysis protocol of settled dust samples. An automated SEM-EDX system with particle identification and analysis capabilities can provide this quantitative data and further information about individual particle composition and structure (Kamanzi et al., 2024; Johann-Essex et al., 2017a; Kamanzi et al., 2022). These systems require specialized–at times proprietary–software and prerequisite reference lists for particle compositional characterization.

Despite these limitations, this study confirms the presence of coal dust in settled dust samples collected from residential areas of Curtis Bay. Future studies could use auto-SEM-EDX systems to obtain quantitative data and assess the concentration, flux, and spatiotemporal variability of coal dust accumulation in the Curtis Bay community using both passive (Wagner et al., 2001; Leith et al., 2007) and active aerosol sampling methods. Further consideration of particle fate and transport and environmental conditions with inclusion of background sampling sites outside of Curtis Bay could assist with coal dust source identification in the community setting. Future research can use the coal dust loading metric and particle counts to establish a statistical comparison in the community-level deposition of coal particles varying by distance from suspected sources and sampling duration. In this study, the coal dust loading sampled further from the coal terminal appeared to be lower than the coal dust loading at the proximal sampling site, however, we are unable to establish a statistically significant difference.

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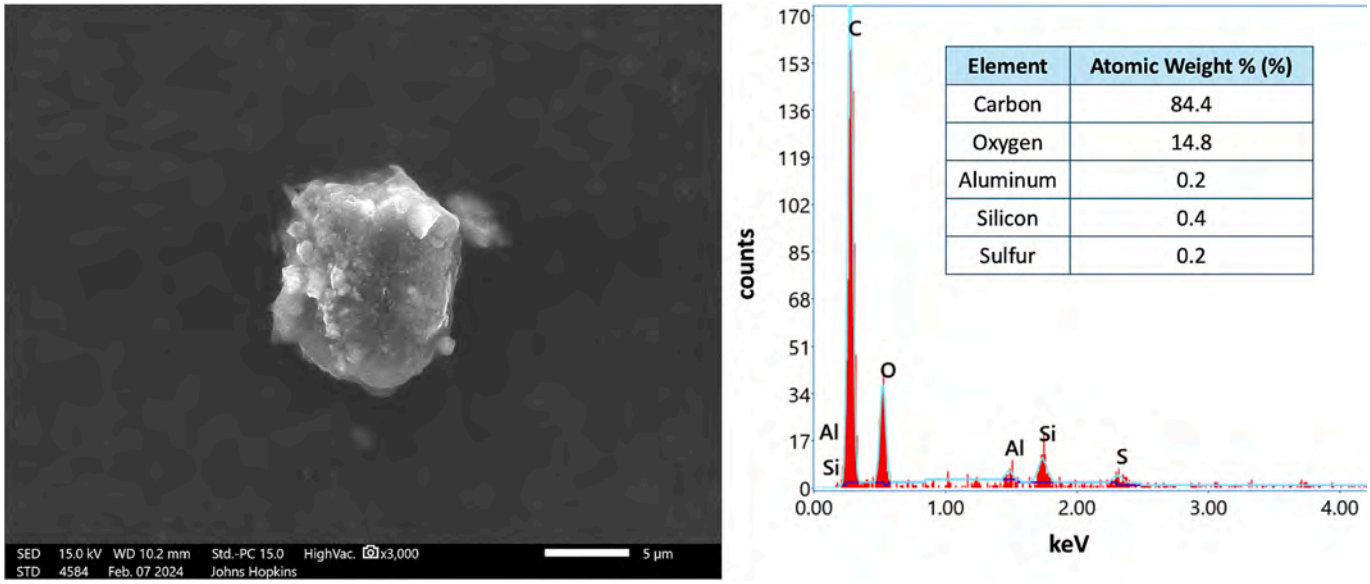

Fig. 8. High magnification image (secondary electrons) (left) and elemental composition (right) of one out of six positively identified coal particles observed at Location B (1,235 m from coal terminal). This was the 1st particle in the 5th area position analyzed. *Note*. The 5 µm scale bar in the coal particle image. keV = kilo-electron-volts.

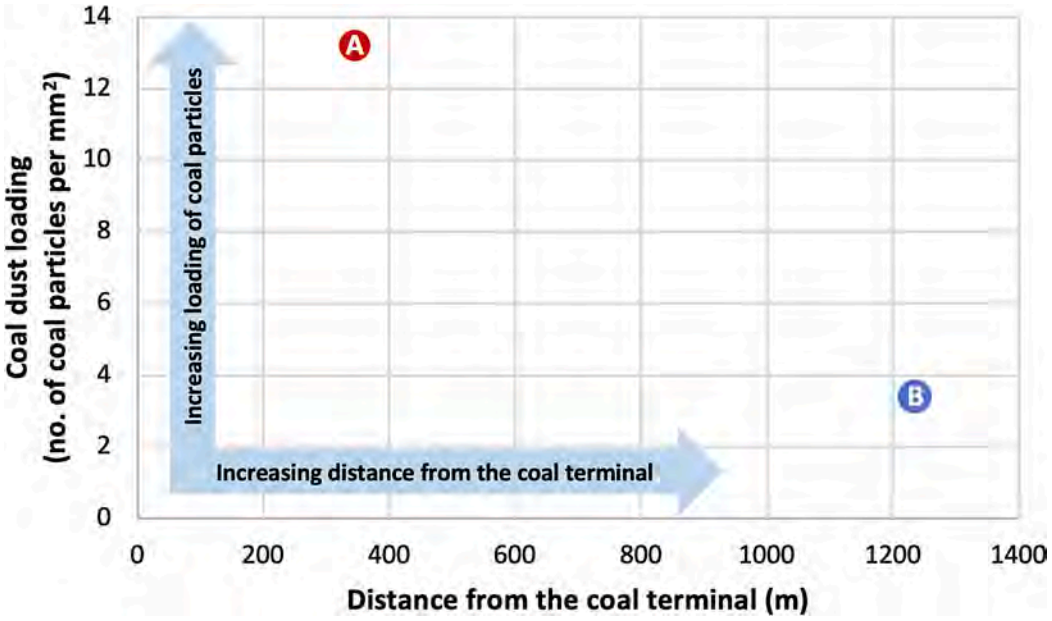

Fig. 9. Coal dust loading observed on each settled dust sample collected passively over a 3-day sampling period (October 26–29, 2023) in Curtis Bay, Maryland, USA. Coal dust loading of 13.2 coal particles/mm^2 was observed at Location A, 345 m from the coal terminal (red circle). Coal dust loading of 3.4 coal particles/mm^2 was observed at Location B, 1235 m from the coal terminal (blue circle).

5. Conclusion

This study involved the development and application of an SEM-EDX protocol to systematically characterize the presence-absence of coal dust in passive settled dust samples collected in a residential community bordering a coal terminal. We confirmed the presence of coal dust in residential areas of the Curtis Bay community at sampling locations proximal to (345 m) and distal from (1235 m) an open-air coal terminal. These findings respond to decades-long concerns of Curtis Bay community members about coal dust presence in their community. The approach described herein may have practical utility for other communities neighboring coal terminals to collect settled dust samples and generate information about the presence of coal dust using reproducible and standardized methods for particle analysis.

CRediT authorship contribution statement

Matthew A. Aubourg: Writing – review & editing, Writing – original draft, Visualization, Resources, Project administration, Methodology, Investigation, Data curation, Conceptualization. **Kenneth J.T. Livi:** Writing – review & editing, Writing – original draft, Supervision, Resources, Methodology, Investigation, Formal analysis, Data curation. **Gregory G. Sawtell:** Writing – review & editing, Writing – original draft, Supervision, Resources, Project administration, Methodology, Investigation, Funding acquisition, Conceptualization. **Carlos C. Sanchez-Gonzalez:** Investigation. **Nicholas J. Spada:** Writing – review &

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editing, Methodology, Investigation. **Russell R. Dickerson:** Writing – review & editing, Methodology, Investigation. **Wen-An Chiou:** Writing – review & editing, Investigation. **Conchita Kamanzi:** Writing – review & editing, Methodology. **Gurumurthy Ramachandran:** Writing – review & editing. **Ana M. Rule:** Writing – review & editing. **Christopher D. Heaney:** Writing – review & editing, Writing – original draft, Visualization, Supervision, Resources, Project administration, Methodology, Investigation, Funding acquisition, Conceptualization.

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Declaration of competing interest

MAA serves as an unpaid member of the board of directors of the South Baltimore Community Land Trust, starting on June 24, 2024. The other authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.scitotenv.2024.176842.

Data availability

De-identified data will be made available upon request.

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Community-driven research and capacity building to address environmental justice concerns with industrial air pollution in Curtis Bay, South Baltimore

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Introduction: Curtis Bay (CB) is an environmental justice (EJ) community in South Baltimore. With a high concentration of industrial polluters and compounding non-chemical stressors, CB has experienced socioeconomic, quality of life, and health burdens for over 100 years. Today, these polluters include the open-air CSX Coal Terminal, waste-to-energy incinerators, and heavy diesel traffic through residential areas. The Community of Curtis Bay Association, Free Your Voice, and South Baltimore Community Land Trust are local organizations enacting a vision for equitable, healthy, and community-led development without industrial encroachment. In response to community-identified EJ concerns and an explosion at the CSX Coal Terminal, CB community groups partnered with academic researchers to develop a community-driven hyperlocal air monitoring and capacity building approach. This paper describes this approach to characterizing hyperlocal air quality in CB, building bridges between community residents and regulatory agencies, and nurturing a cohesive and effective community-academic partnership toward EJ.

Methods: Using hyperlocal air monitoring, we are collecting real-time air pollution (particulate matter, black carbon, and ground-level gas species) and meteorological data from 15 low-cost sensors in residential and industrial areas of CB. We also use trail cameras to record activities at the CSX Coal Terminal. We merge air pollution and industrial activity data to evaluate the following: overall air quality in CB, multi-air pollutant profiles of elevated events, spatiotemporal changes in air quality in the community, patterns of industrial activity, and potential correlations between air quality and observed industrial activity. Members of our partnership also lead a high school course educating students about the history and ongoing efforts of the EJ movement in their community. Students in this course learn how to employ qualitative and quantitative data collection and analysis methods to bring scientific support to community EJ concerns.

Abbreviations
EJ, Environmental justice; LCS, Low-cost sensor; CEnR, Community-engaged research; CB, Curtis Bay; CCBA, Community of Curtis Bay Association; SBCLT, South Baltimore Community Land Trust; CSI EJ, Community Science and Innovation for Environmental Justice Initiative; BFHS, Benjamin Franklin High School; FYV, Free Your Voice; MDE, Maryland Department of the Environment; TU, Towson University.

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Results and Discussion: Our hyperlocal air monitoring network and community-academic partnership are continuing to evolve and have already demonstrated the ability to respond to community-identified EJ issues with real-time data while developing future EJ leaders. Our reflections can assist other community and academic groups in developing strong and fruitful partnerships to address similar EJ issues.

KEYWORDS

community-driven research, capacity building, environmental justice (EJ), environmental racism, hyperlocal air monitoring, industrial air pollution, community-academic partnerships, Baltimore

1. Introduction

Dr. Robert Bullard coined the term "human sacrifice zone" to describe communities presently inundated by environmental justice (EJ) issues and polluting industries while continuing to "attract new polluters" (1). Environmental justice is the indelible right to equitable environmental protection under the law; the ability to live safe, healthy, and productive lives; and possessing the decision-making power to effect positive environmental change. Communities afflicted by environmental injustice are often called EJ, fenceline, or frontline communities. "Frontline" connotes and invokes imagery of a battlefield. Yet, these battlegrounds are homes, community centers, schools, and playgrounds, predominantly in communities of color and lower socioeconomic status (SES). Similarly to a battlefield, however, the causalities and impacts upon quality of life are very real.

Fenceline communities are directly adjacent to or near industrial facilities and mobile pollution sources, placing residents at higher magnitude and duration of exposure to toxic pollution (i.e., air, water, and soil contamination) (2, 3). Polluting sources include diesel truck traffic, oil and natural gas extraction, waste management facilities, concentrated animal feeding operations, chemical manufacturers, and many other industries. Some emitted pollutants are shared between multiple source types (e.g., particulate matter (4, 5)) and others are unique to certain polluters or industries (e.g., hydrogen sulfide (6) and volatile organic compounds (7)). Ambient air pollution in fenceline communities is of particular concern to community members, researchers, and regulators. Air pollutants can invade nearby households, cause short- and long-term health impacts, and can reduce air quality far from their source.

Increased exposure to and the effects of industrial air pollution disproportionately impact communities of color and lower SES in the United States (US) (8–10). Historically inequitable and racist zoning, permitting, and siting practices have placed industrial polluting sources in vulnerable communities and driven people of color and/or low SES into industrialized areas (11, 12). Emissions from industrial polluters are often un- or under-regulated by local and state regulatory bodies (3, 13) which places environmental and health burdens upon communities structurally and historically dis-empowered in decision-making. Fires, toxic leaks, explosions, and other emergencies at industrial facilities also present health and safety hazards to fenceline residents (14, 15). As a result, already vulnerable communities are suffocated by the cumulative impacts of these environmental hazards and compounding non-chemical stressors (e.g., limited healthcare access, food insecurity, financial instability, and mental and psychosocial stressors) (16, 17).

The US environmental justice movement stems from the bravery and activism of community members in impacted neighborhoods, but has leveraged the power of scientific research to inform data-driven decision-making (18, 19). Fenceline and community air monitoring collect air quality data to address air pollution in EJ communities. Air monitoring technology has continued to develop with the proliferation of low-cost sensing technologies. Low-cost sensors (LCSs) are affordable, easy to deploy, and require low energy inputs while still providing high quality spatiotemporal air quality data (20, 21). Low-cost sensors have helped usher air monitoring out of its highly technical silo and into the hands of fenceline residents as tools bringing truth to power (22–24). Community science and community-engaged research (CEnR) as participatory approaches to air monitoring have evolved in parallel to LCS availability (25, 26).

Community-engaged research approaches center the knowledge and intrinsic power within a community and its residents (27). Community stakeholders possess understanding and lived experience that can shape research methods at all stages of a study. To acknowledge and combat a history of exploitative and transactional relationships between academic institutions and marginalized communities (28, 29), CEnR emphasizes co-learning amongst all team members and maintains community participation in the research process and dissemination (30, 31). Community science and CEnR in fenceline communities can generate robust locally and culturally relevant data for EJ efforts.

The community of Curtis Bay (CB) in South Baltimore, Maryland is a quintessential example of a human sacrifice zone and has been the chosen site of polluting industries for over 100 years. Curtis Bay community members have expressed concerns about industrial air pollution and its effect upon individual and community health for decades. Local industries, including multiple waste incinerators, coal-fired power plants, and heavy diesel traffic, are thoroughly documented in scientific literature as drivers of poor air quality (32–36).

Curtis Bay residents have long observed and identified the impact of air pollution in their daily lives. Strong, eye-watering odors, an uncanny feeling of "thick air," and dust-blackened clothes while line-drying outdoors are some examples of these observations. Residents discussed keeping their windows closed for over a decade living in the community to prevent coal dust from entering their homes. Community members also note several friends, family members, and neighbors who have fallen

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TABLE 1 Age-adjusted mortality rates due to heart disease, lung cancer, chronic lower respiratory disease, and cancer of all kinds in the Curtis Bay area (includes Curtis Bay, Brooklyn, and Hawkins Point neighborhoods) compared to the rest of Baltimore City.

	Age-adjusted mortality rate (Deaths per 10,000)	
	Curtis Bay Area	Baltimore City
Heart Disease	36.1	24.4
Lung Cancer	8.3	5.9
Chronic Lower Respiratory Disease	8.4	3.6
Cancer (all kinds)	24.2	21.2

ill or passed away from cancer and respiratory issues—health outcomes known to be related to industrial air pollution. Corroborating community lived experience, age-adjusted mortality rates in the CB area due to heart disease, lung cancer, chronic lower respiratory disease, and cancer of all kinds exceed complimentary rates in the rest of Baltimore City (Table 1) (37).

On December 30, 2021, there was an explosion at the CSX Curtis Bay Coal Terminal. This facility is less than 1,000 feet from the community recreation center and nearby residences (38). The explosion shattered the windows of nearby homes. In response to the explosion, the Community of Curtis Bay Association (CCBA) and the South Baltimore Community Land Trust (SBCLT) requested community-engaged technical support from the Community Science and Innovation for Environmental Justice (CSI EJ) Initiative at Johns Hopkins Bloomberg School of Public Health and the University of Maryland Center for Community Engagement, Environmental Justice, and Health.

We designed a hyperlocal (limited to the local Curtis Bay geographical area) air monitoring network to bring scientific, data-driven, and responsive support to longstanding community concerns about industrial air pollution. Partners from Towson University, the CSI EJ research team, and SBCLT led a class at Curtis Bay's Benjamin Franklin High School (BFHS) to bring students into this monitoring project and the local EJ movement. Community leadership and participation is embedded at every stage in this air monitoring, youth empowerment, and capacity building approach to addressing EJ concerns in CB. This paper describes our community-driven approach to characterizing hyperlocal air quality in CB and developing effective partnerships to incite regulatory action.

2. Methods

2.1. History of environmental injustice in the Curtis Bay area

The threat of environmental injustice in the CB area can be traced back to a critical expansion or acceleration of rail in 1882 with the establishment of the Baltimore and Ohio Railroad coal pier (39)—known today as the CSX Curtis Bay Coal Terminal. Baltimore and Ohio Railroad sold CSX the open-air coal pier in the 1950s. The CSX Coal Terminal along with the nearby CNX Marine Terminal handled a combined 13.8 million short tons of coal in 2010 (40). Today, the CSX Coal Terminal alone has the capacity to move 14 million tons of coal annually (41). The expansion of coal has impacted the overall quality of life and environment of CB.

Two case examples of industrial overburden eventually displacing residents are the communities of Wagner's Point—a historically White community originally dedicated in the 1920s to canning—and Fairfield—a historically Black community where residents mainly worked on the Fairfield shipyards during the WWII era (42). Wagner's Point and Old Fairfield were dubbed the "industrial peninsula" as chemical and fertilizer companies joined wartime industry to encroach upon the communities. During this period of industrialization, land was bought by corporations and by Baltimore City, displacing residents, predominantly of color and low SES (42). Residents were offered minor remuneration as property value was low due to surrounding industrial zoning and related safety concerns. Residents of color who remained in the community were the "last hired, first fired" or never employed at all by the developing industrial facilities (42). Fairfield Homes, a public housing development, was predominantly White until the first Black family arrived in 1953. A few years later, the housing and broader community was nearly 100 percent Black. Residents in the Fairfield community did not receive basic sanitation services or plumbing until 1976. These two communities suddenly became engulfed by industries in the 1980s and 1990s and eventually the city of Baltimore offered a small monetary compensation for the last residents of Fairfield (42, 43). Here, we can see the ways in which industry encroaches upon community, social support systems, and eventually displaces residents.

Wartime industry was gradually replaced by expansion of waste industries in the industrial peninsula, coupled by City-wide divestment. The 1940s to 1990s are marked by this transition to waste-to-energy industries. Notably, the Baltimore Refuse Energy System Company's and the Curtis Bay Medical Waste Services' incinerators were established in 1983 and 1991, respectively. The Baltimore Refuse Energy System Company Incinerator alone can burn 2,250 tons of waste per day and consumes around 700,000 tons of waste per year (44). Garbage and medical waste incineration emissions—including particulate matter (PM), toxic dioxins, heavy metals, and greenhouse gases—are significant threats to human health and exacerbate climate change and ecological degradation (45–47). This expansion of waste-to-energy industries intensified concerns regarding respiratory health of the community and quality of life.

In 2011, a group of students from BFHS in CB learned about plans to build the nation's largest waste-to-energy incinerator a mile away from their school, marketed as a positive, renewable energy initiative (48). The proposed site for the incinerator was the same land where past Fairfield and Wagner's Point communities once resided prior to their displacement by industry. The students were already meeting after school to better understand the social and environmental conditions in their neighborhoods. After hearing about the incinerator and researching the associated negative community health impacts, they delved into Curtis Bay's history as an industrial "sacrifice zone." The students called their group Free Your Voice (FYV)

EXHIBIT E - 3

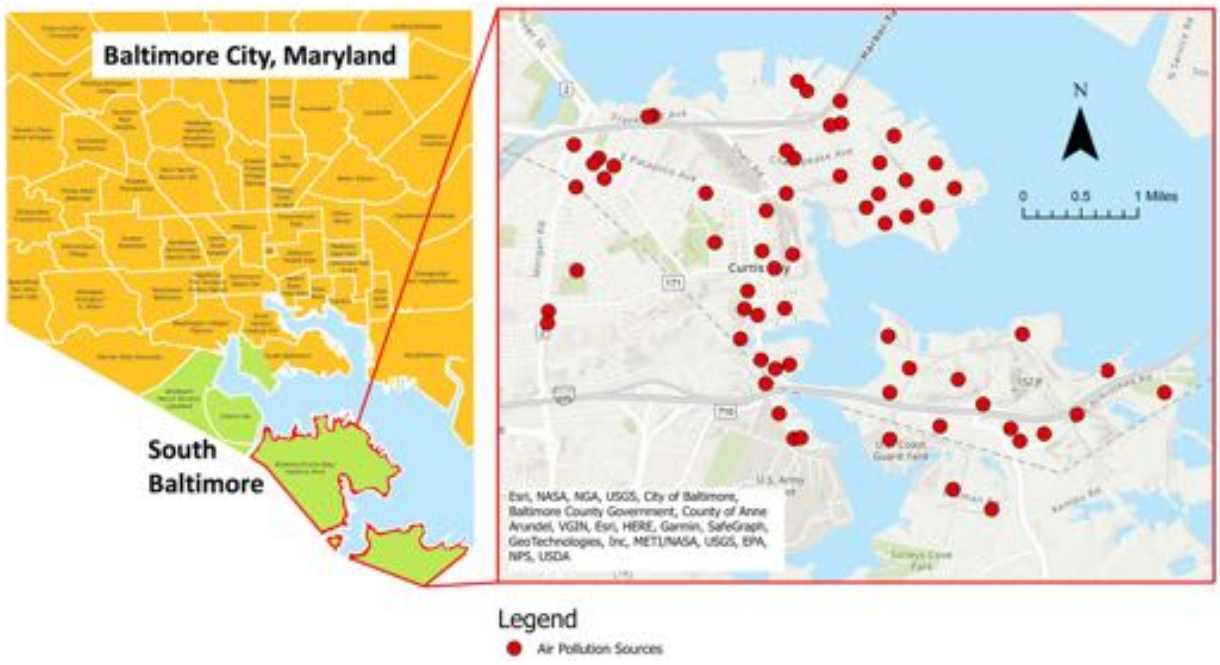

FIGURE 1
Clustering of Maryland Department of the Environment-regulated stationary sources of air pollution (red dots) in the Curtis Bay area.

(43, 49). Seeing blatant connections between past injustice and current realities, they worked to successfully organize a political campaign called "Stop the Incinerator." After canvassing the community, getting public entities to divest from buying cheap energy, and pressuring the Maryland Department of the Environment (MDE) to pull the facility's permits, they eventually halted the construction of the incinerator.

The courageous efforts of FYV led to the establishment of SBCLT. South Baltimore Community Land Trust is a 501(c)(3) focused on housing justice and zero waste which uses resident- and worker-led tools to advance community-defined development. Alongside CCBA, SBCLT developed a vision for CB community development centered on equitable community ownership of land and a just transition to zero waste in defiance of the prevailing waste-to-energy industry (50). The continued, overwhelming industrial presence in CB was of significant concern with years of documented nuisance complaints, high rates of poor health outcomes, and emergent events placing the health and safety of the community at risk. Other South Baltimore communities have been impacted by the same industry-related concerns within and outside of CB. Free Your Voice, SBCLT, and CCBA have built cross-community collaboration as part of the SB7 Coalition to form a concerted effort toward community empowerment and development (51).

2.2. Site description: Curtis Bay area today

As of 2017, the population size of the CB area (Brooklyn/Curtis Bay/Hawkins Point community statistical area) is 14,626 people (37). The median household income is $32,598 with 32.1% of households living below the poverty line (52). 68.3% of residents in the CB area are people of color, primarily Black/African American (35.8%). There are 1,013.2 vacant lots per 10,000 housing units which exceeds that of Baltimore City by 335.9 lots per 10,000 units (37). There is a significant industrial presence in the community with 80.9% of land area zoned for industrial use (37). There are around 70 MDE-regulated stationary sources of air pollution in CB (**Figure 1**), which emit a suite of harmful air pollutants, including the US Environmental Protection Agency's criteria air pollutants, volatile organic compounds, methane, and airborne heavy metals (53, 54). According to the US Environmental Protection Agency EJScreen and compared to all US census tracts, CB is in the 99th percentile for proximity to Risk Management Program sites; 96th percentile for proximity to hazardous waste facilities; 93rd percentile for wastewater discharges; 90th percentile for proximity to Superfund/National Priority List sites; and 80th to 90th percentiles for ozone exposure, diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index (55).

In 2007 and 2008, 20.6 and 21.6 million pounds, respectively, of toxic air pollutants were emitted by polluters in CB—the greatest quantity of toxic air pollutants from stationary sources in the US (56). After improved pollution control technology was implemented at nearby coal—fired power plants, the magnitude of toxic pollutions dropped to 2.2 million pounds. Still, the CB zip code had the greatest magnitude of air pollution in Maryland state.

2.3. Developing research objectives

Our community-academic team compiled observations and community issues by attending community meetings and discussing long-standing concerns. Prolonged and on-the-ground activities in

EXHIBIT E - 4

CB exposed academic team members to community EJ concerns firsthand such as industrial malodors and constant diesel truck traffic in residential areas. Together, the community-academic team developed primary research objectives based on community-identified issues alongside research capabilities of the academic partners.

2.3.1. Short-term objectives

- Measure levels of air pollution in CB in terms of the following pollutants:
  - Particulate matter [PM_1, $PM_{2.5}$, PM_{10}, and total suspended particles (TSP or PM_{40})]
  - Carbon monoxide (CO)
  - Carbon dioxide (CO_2)
  - Nitric oxide (NO)
  - Nitrogen dioxide (NO_2)
  - Ground-level ozone (O_3)
  - Black carbon (BC)
  - Volatile organic compounds (VOCs)
- Determine the frequency, magnitude, and duration of elevated air pollution events in CB
- Estimate cumulative and source-specific impacts of industrial facilities on air quality in CB, including CB residents' concerns with the CSX Coal Terminal
- Use ground-truthing methods combining air pollutant concentration measurements and visual confirmation of industrial activity patterns for:
  - Air pollution source identification
  - Real-time health and safety alerts for community residents during emergent events
  - Data-driven enhancements to enforcement and compliance practices for ten industrial facilities seeking permit renewal in the next 3 years
- Develop a model and training materials for youth engagement in the local EJ movement with advocacy, leadership, and scientific skills building
- Cultivate multi-directional educational opportunities and co-learning between CB residents, researchers, students, and environmental regulators

2.3.2. Mid- to long-term objectives

- Characterize cumulative impacts of stationary and mobile air pollution in CB
- Develop a sustainable, community-operated hyperlocal air monitoring network in CB
  - Create and implement training activities and education materials
  - Build infrastructure and organization for network longevity
- Utilize air monitoring data generated to inform and strengthen industrial permitting practices, bringing about structural permit reform and improving long-term community health
- Expand air monitoring network into other South Baltimore communities with shared and unique environmental health and justice concerns

Toward these objectives, we developed a community-driven hyperlocal network to monitor overall air quality and flag events of elevated air pollution. Community members can inform our team about observed environmental hazards such as chemical spills or dust plumes to isolate air quality data during and near the event. As the monitor maintenance and data analysis process is refined amongst our team, community members and local students will be trained to operate the network, analyze data, and develop visualizations such as air quality time series. Thereby, the hyperlocal air monitoring network will become a community-owned and -operated tool for pursuing EJ and improving community health.

2.4. Academic role in facilitating regulatory agency partnerships

Discussions with community residents revealed sentiments of mistrust in local and state environmental regulatory agencies. In 2008, MDE removed the only regulatory air monitor from near the CB area. When pressed by community residents to justify this decision, MDE did not provide a response. Some mistrust also stems from the perceived slow response and lack of communication following the explosion at the CSX Coal Terminal. Additionally, the long-term persistence of stationary and mobile industrial polluters in the community with seemingly little oversight influences community skepticism.

Leading up to our partnership, MDE acknowledged their failure to adequately staff and resource EJ issues in CB and South Baltimore. The MDE Air and Radiation Administration provides technical support in developing and maintaining the monitoring network, as well as data cleaning, quality control, and analysis. Regular meetings with the Air and Radiation Administration open a direct line of communication and cooperation between CB community representatives and regulatory stakeholders. Community partners give input in all parts of discussion to ensure decision-making power and transparency.

From the community perspective, the collaboration with MDE provides timely information and a space to interpret data and synthesize findings. This contributes to a greater level of empowerment within the CB community, particularly related to pushing MDE to set stronger standards and address longstanding EJ concerns. At the same time, the collaboration highlights the extent of the gaps in MDE's approach to regulating polluting industries in CB—in other words, there is still much work to be done.

We receive additional and essential technical support from the manufacturers of the air monitoring technology used in this initiative (QuantAQ, Inc. and Distributed Sensing Technologies, LLC). Representatives from the manufacturers join regular meetings and have visited the hyperlocal air monitoring network to provide on-the-ground technical support.

2.5. Hyperlocal air monitoring network

The Maryland Department of the Environment currently operates a regional ambient air monitoring network across

EXHIBIT E - 5

Maryland state comprised of stations recording meteorological conditions, concentrations of ground-level criteria air pollutants, and air toxics (57). The nearest regulatory air monitor to CB is over 10 miles away and can characterize regional air quality and conditions, rather than community-level. The concentration distance decay of some pollutants of concern in the community (e.g., PM_{10} and black carbon) occurs in the order of tens to hundreds of meters (58). Therefore, a hyperlocal air monitoring network is required to measure community-level air quality instead of regional conditions measured by the MDE network. The hyperlocal network detects temporally shorter and geographically localized elevated air pollution events. The first node of the network was deployed in May 2022.

2.5.1. Air quality monitoring with low-cost sensors in Curtis Bay

Multiple air monitor types were selected for this network to widen the set of pollutant parameters monitored while addressing pollutants of community concern (Table 2).

QuantAQ MODULAIR (QuantAQ, Inc., Somerville, MA) sensors ($n = 10$) comprise the majority of instruments in the hyperlocal network (Figure 2A). Using an on-board optical particle counter and nephelometer, the MODULAIR provides real-time measurements of PM (PM_1, $PM_{2.5}$, and PM_{10}) with 24 particle size bins ranging from 0.35 to 40.0 µm allowing for measurement of TSP. The MODULAIR also measures ground-level gas species—namely CO, CO_2, NO, NO_2, and O_3—and environmental conditions (temperature and relative humidity). Each MODULAIR is connected to a sonic anemometer (Davis Instruments Corp., Hayward, CA) to record wind speed and direction. Each parameter measurement is uploaded via LTE to the QuantAQ Cloud at 1-minute resolution and is accessible to all members of the community-academic team.

TABLE 2 Air quality monitors used and air pollutants/parameters measured in the community-driven hyperlocal air monitoring network.

Monitor	Parameters Measured	Manufacturer
MODULAIR with co-located sonic anemometer	• Particulate matter (PM_1, $PM_{2.5}$, PM_{10}) • Total suspended particles (TSP or PM_{40}) • Carbon monoxide (CO) • Carbon dioxide (CO_2) • Nitric oxide (NO) • Nitrogen dioxide (NO_2) • Ozone (O_3) • Temperature • Relative humidity • Wind speed • Wind direction	QuantAQ, Inc.; Somerville, MA
ObservAir	• Particulate matter (PM_1, $PM_{2.5}$, PM_4, PM_{10}) • Black carbon (BC) • Carbon monoxide (CO) • Nitrogen dioxide (NO_2) • Temperature • Relative humidity	Distributed Sensing Technologies, LLC; Richmond, CA

We also use Distributed Sensing Technologies (DSTech) ObservAir monitors (Distributed Sensing Technologies, LLC, Richmond, CA) ($n = 3$) to measure concentrations of BC, PM_1, $PM_{2.5}$, PM_4, PM_{10}, gases (CO and NO_2), and environmental conditions (temperature and relative humidity) (Figure 2B). Measurements are uploaded via LTE at 1-minute resolution and data is accessible to all members of the community-academic team. ObservAir monitors are co-located with MODULAIRs to correlate wind speed and direction data.

Air monitors are distributed around the CB community in residential and industrial areas (Figure 3). All monitors in the network are powered using solar panels except for one residential site directly connected to power due to deployment location constraints. Hosts (community residents and local businesses) and monitoring sites are identified and contacted by the community partners. We inform agreeing hosts about the project, obtain their oral consent, and give a cash incentive for their participation and to offset any associated costs. Monitoring sites are selected by their proximity to polluters of community concern, gap filling for air dispersion modelling, and feasibility of deployment. We use an iterative process for determining monitoring locations to meet the needs of hosts or improve deployment conditions.

Academic team members conduct weekly inspections and maintenance while responding to technical issues affecting data completeness (i.e., inadequate cellular connectivity, power outages due to lack of solar exposure, and other malfunctions). In some instances, community residents hosting monitors provide information about monitor status from visual inspection and conduct guided troubleshooting themselves.

2.5.2. Ground-truthing with low-cost cameras and community lived experience

The community-driven hyperlocal network of air monitors is a component of our ground-truthing method and strategy. Ground-truthing methods combine *in situ* visual observations with collected measurements. This contributes further data for source identification and improved communication of findings to lay and technical stakeholders.

Two CamPark T86 trail cameras (CamPark Electronics Co., Ltd, Hong Kong) are stationed at sites where the CSX Coal Terminal is clearly visible. The camera primarily used for data collection is located to the west of the coal terminal and has a full view of the facility from North to South (Figure 4A). The second camera is co-located with MODULAIR and ObservAir monitors near the northern edge of the facility (Figure 4B).

The day and night-vision trail cameras photograph the coal terminal every minute. Photos are stitched together into a time lapse video weekly. Academic research team members watch the time lapse videos and record terminal activity patterns (trains, ships, bulldozers, cranes, visible smoke or dust), coal pile height and width, and presence of fog (Tables 3, 4; Figure 5) as closely as possible to 1-minute resolution. The time lapse analysts conduct interrater agreement analysis by calculating percent agreement between five days of the same footage.

EXHIBIT E - 6



FIGURE 2
QuantAQ MODULAIR (QuantAQ, Inc.) (**A**) and Distributed Sensing Technologies ObservAir (Distributed Sensing Technologies, LLC) (**B**) air quality monitors are used in the community-driven hyperlocal air monitoring network.

Observations and testimonies from community team members and CB residents also provide context to air quality data. For example, community residents noted the presence of fog in the area when determination from trail camera footage was not possible. This information was incorporated into data quality control processes.

2.5.3. Data analysis

We merge the air quality data and the transcribed CSX Coal Terminal activities/coal pile conditions by date and time to 1-minute resolution using R data analysis and statistical software (version 4.1.2) (59). We use the tidyverse (60) package for data cleaning and wrangling, while we use the ggplot2 (61) and openair (62) packages for data visualization of air quality and terminal activity trends. Using the combined dataset, the community-academic team evaluates overall air quality in CB, multi-air pollutant profiles of elevated events, spatiotemporal changes in air quality in the community, patterns of industrial activity, and potential correlations between air quality and observed activity. The team identifies probable sources of elevated air pollution events using the framework shown in **Table 5** and via discussion with MDE and air monitor manufacturer representatives.

We maintain data quality using the following quality assurance and quality control approaches: co-locate MODULAIR and ObservAir monitors with regulatory (or regulatory-grade) monitors to develop correction factors, apply data cleaning criteria, discuss potential confounding factors (e.g., relative humidity and local fog events) with MDE technical team, and apply flags to adjust dataset for confounders.

QuantAQ has their own data cleaning and correction process for the MODULAIR which involves flagging data points where sensors have failed, correcting for aerosol density and environmental factors (e.g., hygroscopic growth) (for particles), and flagging the first hour of data after the monitor has re-started (for gases) (Dr. David H. Hagan, oral communication, June 23, 2023) (63, 64). In addition to these procedures, our data team has worked with MDE to establish a fog flag for PM_{10} and TSP data. This flag is "raised" when relative humidity is greater than or equal to 80%, PM_{10} concentrations are greater than or equal to 200 $\mu g/m^3$, and when TSP concentrations are greater than or equal to 500 $\mu g/m^3$. Flagged PM_{10} and TSP data are disregarded in the final dataset.

DSTech also accounts for changes in relative humidity and temperature in their data processing (65). Further, there are also corrections applied as the sampling filter becomes saturated and light attenuation decreases (66–69). Finally, DSTech employs a digital low pass filter with the goal of "decreas[ing] measurement noise" (70). We cleaned ObservAir BC data by disregarding measurements when they are equal to -5 $\mu g/m^3$, when there are low battery voltage readings (battery voltage less than or equal to

EXHIBIT E - 7

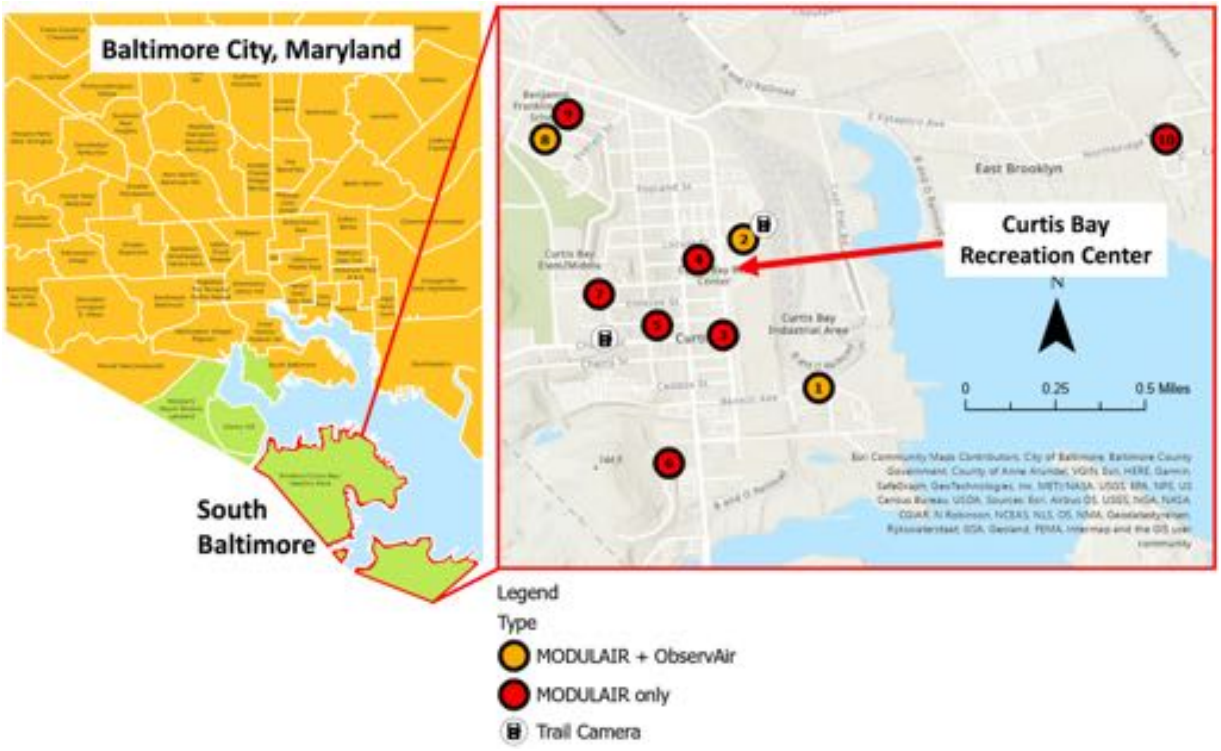

FIGURE 3
Community-driven hyperlocal air monitoring network in Curtis Bay, South Baltimore, Maryland. Monitoring sites with co-located MODULAIR and ObservAir monitors shown in orange. Monitoring sites with only MODULAIR monitors deployed shown in red. Locations of the two trail cameras are displayed with the camera icon. Locations are numbered from nearest to farthest distance from the CSX Curtis Bay Coal Terminal—an industrial polluter of primary community concern.

7.5 volts), during the first hour after the monitor has been off for more than 15 min, and when there are rapid changes in relative humidity with respect to time (when there is a 5-minute absolute instantaneous change in relative humidity greater than 0.03% while BC concentrations are <–0.4 μg/m^3 or BC concentrations are −5 μg/m^3).

2.6. Engaging youth in local environmental justice efforts: capacity building and community organizing

A core component of our approach is to establish this hyperlocal network with project sustainability and community capacity building as a priority. Team members from CSI EJ and Towson University (TU) co-lead an EJ course at BFHS which is a continuation of FYV and a partnership that TU has cultivated for five years. Interested students in the 11th and 12th grades submitted applications and were selected by BFHS teachers/staff to participate in a semester-long course where they earn community service hours and three college credits. We utilize an iterative process for the course curriculum and activities, responsive to students' interests and research questions.

Students are introduced to the long history of environmental injustices and community-led victories in CB. They are taught principles and practices of community science, applying methods of five-sense ethnography, and recording scientific observations. The team also instructs about how to utilize both qualitative and quantitative data collection activities to contribute to the local EJ movement. For the first component of their final project, the students developed and administered a school-wide survey about youth perceptions of environmental injustice in their communities. This survey is a precursor to a larger health panel study planned by the community-academic team. In the second component of the final project, the students analyzed air quality data from a MODULAIR air monitor deployed at their school (Location 9 in Figure 3). They have developed dissemination products conveying their new understanding of criteria air pollutants, EJ concerns in CB, and their own data visualizations of air quality at their school. Students are invited to use their new skills to join ongoing EJ work in the community and continue their training.

3. Results and discussion

3.1. Agreement between co-located air monitors

We conducted two types of co-locations: regulatory and intercomparison. This was done for four pollutants: BC, $PM_{2.5}$, PM_{10}, and CO. Regulatory co-locations took place at sites with

EXHIBIT E - 8



FIGURE 4
(A) Image of CSX Coal Terminal captured from the trail camera to the west of the terminal. (B) Image of CSX Coal Terminal captured from the trail camera to the north of the terminal.

regulatory (Howard County Near Road, MD) or regulatory-grade instruments (Pocomoke City, MD), while the intercomparisons took place at Location 8 in the CB hyperlocal air monitoring network (Supplementary Table S1). When comparing low-cost sensors to regulatory monitors, we observed good agreement for all pollutants except PM_{10}. Upon further data exploration, we plan to use these results to calculate correction factors for our data. For the low-cost sensor intercomparisons, we observed excellent agreement.

Please see Supplementary Material and Supplementary Figures S1–5 for information about agreement between air pollutants (BC, $PM_{2.5}$, PM_{10}, and CO) using regulatory or regulatory-grade monitors at MDE Ambient Air Monitoring Network sites and from co-located deployments of our QuantAQ MODULAIR and DSTech ObservAir LCSs. For intercomparison between LCSs, please see Supplementary Figures S6–9.

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TABLE 3 Activities at the CSX Coal Terminal visually observed with trail cameras and transcribed using the described notation.

Activity/Variable	Notation
Trains present at the coal terminal	1 = trains present at coal terminal
	0 = no trains present at coal terminal
Trains entering the coal terminal premises	1 = trains traveling southbound into the coal terminal
	0 = no trains traveling southbound into the coal terminal
Trains leaving the coal terminal premises	1 = trains traveling northbound out of the coal terminal
	0 = no trains traveling northbound out of the coal terminal
Ships present at the coal terminal	1 = ships present at coal terminal
	0 = no ships present at coal terminal
Ships approaching or being loaded at the coal terminal	1 = ship approaching or being loaded at coal terminal
	0 = no ship approaching or being loaded at coal terminal
Ships leaving the coal terminal premises	1 = ship leaving the coal terminal
	0 = no ship leaving the coal terminal
Sprinkler system activated, spraying on the coal piles to minimize fugitive dust	1 = sprinkler system active
	0 = sprinkler system not active
Sprinkler system in operation north of the central tower	1 = sprinkler system in operation north of the central tower
	0 = sprinkler system not in operation north of the central tower
Sprinkler system in operation south of the central tower	1 = sprinkler system in operation south of the central tower
	0 = sprinkler system not in operation south of the central tower
Crane in operation at the coal terminal	1 = crane in operation
	0 = crane not in operation
Bulldozers in operation at the coal terminal	1 = bulldozers in operation
	0 = no bulldozers in operation
Bulldozers in operation north of the central tower	1 = bulldozers in operation north of the central tower
	0 = no bulldozers in operation north of the central tower
Bulldozers in operation south of the central tower	1 = bulldozers in operation south of the central tower
	0 = no bulldozers in operation south of the central tower
Visible smoke or dust originating from the coal terminal	1 = visible smoke or dust originating from the coal terminal
	0 = no visible smoke or dust originating from the coal terminal
Visible smoke or dust originating from north of the central tower	1 = visible smoke or dust originating from north of the central tower
	0 = no visible smoke or dust originating from north of the central tower
Visible smoke or dust originating from south of the central tower	1 = visible smoke or dust originating from south of the central tower
	0 = no visible smoke or dust originating from south of the central tower
Visible fog	1 = visible fog
	0 = no visible fog

TABLE 4 Description of notation used for height and width of every visible coal pile at the CSX Coal Terminal.

Variable	Notation
Height of coal pile at each visible stacking tower	1 = height of coal pile is at or above half the height of the central stacking tower
	0 = height of coal pile is below half the height of the central stacking tower
Width of the coal pile at each visible stacking tower	N/A = camera view of coal pile is obstructed
	"." = no coal pile at stacking tower
	0 = coal pile width is <50% the distance to the adjacent tower
	1 = coal pile width is >50% to <100% of the distance to the adjacent tower
	2 = coal pile width is at or beyond adjacent tower
	3 = coal pile joins with an adjacent coal pile

3.2. Ground-truthing example: industrial fire event in Curtis Bay

The hyperlocal network and ground-truthing methods have demonstrated data-driven responsiveness to emergent community concerns in addition to informing about overall air quality.

An industrial fire occurred on February 23, 2023, at approximately 6:30 PM EST near Location 1 of our network (Figure 3, Supplementary Video S1). The industrial area where the fire occurred is a few hundred meters away from CB residences. Community residents asked SBCLT and CCBA for information about the fire as they took their children home from the nearby community recreation center. The community-academic team then utilized the ground-truthing approach to pinpoint visual observation of the fire using trail camera footage (Figure 6A, Supplementary Video S1) and a parallel multi-pollutant signature of the event (Figure 6B). The MODULAIR and ObservAir at Location 1 detected simultaneous elevated levels of BC ($\mu g/m^3$), $PM_{2.5}$ and PM_{10} ($\mu g/m^3$), and CO (ppb). Community resident observations and information about the event from the MDE team assisted in identifying the causes of each significant pollutant spike during the fire event (Figure 6B).

The visuals in Figure 6 were included in a presentation to community residents about the fire event and the community-driven hyperlocal air monitoring network. This is an example of how our network can provide real-time data about elevated air

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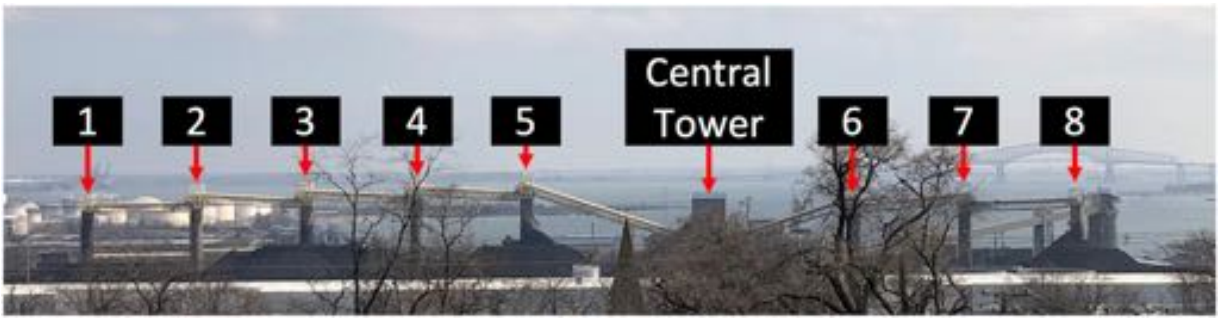

FIGURE 5
View of CSX Coal Terminal used for analysis of activity patterns (trains, ships, bulldozers, cranes, visible smoke or dust), presence of fog, and changes in coal pile dimensions (height and width). Tower numbers are used for orientation in analysis.

TABLE 5 Framework for identifying types of air pollution events.

Probable Type of Air Pollution Event	Pollutants Elevated in Signature
Fugitive coal dust emission	• PM_{10} and/or TSP • BC
Diesel combustion emissions	• PM_1 and/or $PM_{2.5}$ • BC • CO, CO_2, and/or NO_x
Non-combustion particulate matter	• PM_1 and/or $PM_{2.5}$
Road dust or other coarse-mode particulate matter	• PM_{10} and/or TSP

pollution events which can be used for raising community awareness and regulatory or enforcement action.

3.3. Best practices for community-academic partnerships in communities facing similar environmental justice concerns

Equitable and committed community-academic partnerships can be a powerful driver for empowerment and achieving improved health outcomes. Our team has developed a list of best practices and recommendations for other partnerships seeking to address local EJ concerns.

3.3.1. From our community partners to other community-academic partnerships

- Commit time, energy, and resources to listening to residents and workers at every stage of the EJ research and action process.
- Evaluate governance structures of local community-based organizations with a focus on resident/worker participation.
- Honor what residents share and describe and resist the tendency to translate concerns or redirect them out of convenience or a sense of pragmatism.
- Make connections and look for patterns in what you are hearing. Actively work against the divisions and isolating effects that conditions in EJ communities create by facilitating dialogue and connections between residents and groups.
- Trust the direct experience of residents as well as the capacity of residents to take on significant responsibilities and develop new capacities. Residents are the experts! Center a belief in community-led research.
- Seek connections with communities facing similar challenges… realize you are not alone in your struggle.
- Anticipate a seemingly infinite number of challenges and roadblocks by building in staying power for your effort. Recognize and celebrate any breakthroughs at any level.
- Emphasize the multigenerational nature of the challenges being taken on. Affirm the possibility of success but do not pin the wellbeing of the effort on realizing it in a short time frame.

3.3.2. From our academic partners to other academic partners

- Be intentional about prioritizing community needs and input.
- Spend time cultivating relationships; trust is key to doing this work successfully.
- Openly commit to long-term engagement from the start of the partnership. The community partners and residents experience environmental injustice daily and, likely, have for multiple generations. Committing and adhering to long-term collaboration from the outset builds trust, accountability, and informed context to scientific findings.
- Understand and acknowledge your institution's historical relationship with the community and the ways in which it has harmed the community.
- Be transparent about what you can bring to the relationship and your limitations.
- Come to the community with humility and understand that building trust takes time and effort. Academic or scientific and technical knowledge is not the end-all-be-all; the lived experience of the community you are working with is just as, if not more, important in advancing solutions to community-identified needs.

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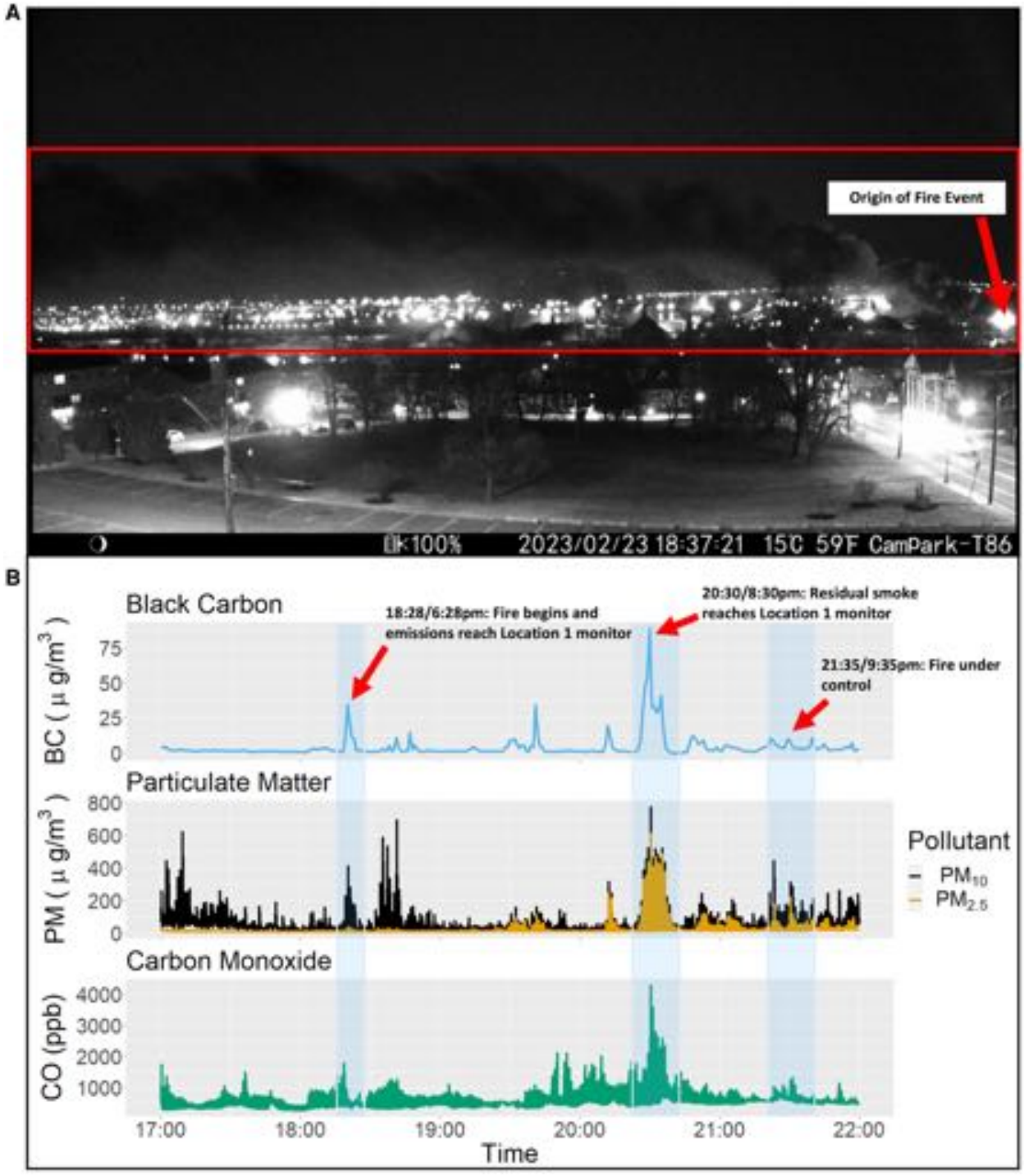

FIGURE 6
(A) Still image from trail camera time lapse video of visible smoke from the industrial fire. Plume of smoke blowing north (right to left) shown in red box. (B) Time series of black carbon (BC), particulate matter ($PM_{2.5}$ and PM_{10}), and carbon monoxide (CO) during the fire event.

- Reject expectations of a transactional relationship with your community partners. In a transactional relationship, each partner prioritizes individual objectives which upholds an "us" vs. "them" power dynamic (71, 72). Transactional relationships cannot coexist with long-term, equitable partnerships and have no place in meaningful community-academic collaboration. Emphasis should be placed upon the co-creation of knowledge, co-learning, and shared objectives of the partnership.
- Intentionally center anti-racist, anti-classist, and inclusive ideologies and practices in your research (73) by:
  - Explicitly acknowledging historical, systematic, and individual racism, classism, and discrimination as drivers of the social, health, and environmental inequities affecting EJ communities;

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- Honoring the perspectives and lived experiences of residents in EJ communities by having marginalized groups empowered in knowledge creation, leadership, and decision-making;
- Assisting community partners in obtaining funding to support their work outside the scope of your research;
- Developing research objectives toward meaningful and equitable action while being flexible to amend your aims and perspectives in line with community priotities.

The air monitoring network described here has brought greater attention to the CB neighborhood and the living EJ movement in the community. Amidst increased interest and scrutiny, adhering to the above tenets has helped our team to remain united in our commitment to improving health and quality of life in CB while empowering community members' lived experience. Although the EJ issues and the community vision may differ in other contexts, adhering to these best practices and developing unique and explicitly shared values keeps both groups accountable to one another and to the broader community.

3.4. Challenges, successes, and next steps

Through this ongoing community-driven air monitoring and capacity building effort, our team has run into several challenges and celebrated our successes, while planning for future steps to expand and improve our work. Our reflection upon these experiences will hopefully aid other communities facing similar EJ concerns and considering similar approaches.

3.4.1. Challenges faced

From experiences with academic groups in the past, our community partners identified researchers' tendencies to view issues in siloes, rather than recognizing the interconnectedness of communities and environmental injustices. For example, the uncovered train cars carrying coal to the CSX Coal Terminal in CB cut through other South Baltimore communities. Residents in these low-income and historically disinvested neighborhoods also have reported dark—presumably coal—dust on exterior and interior surfaces of their homes. In recognizing the aforementioned academic tendency, one of our core objectives was to be posed to expand into interested neighboring communities sharing EJ concerns.

Data quality is a common concern when using low-cost air monitors. Therefore, data quality assurance and control are critical in our community-engaged air monitoring network, as evidenced by our extensive data cleaning and co-location procedures. This presents an important tradeoff, also evident in other forms of CEnR: the time required to employ traditional protocols and improve data quality can be incongruent with and unresponsive to community needs for dissemination and external timelines (e.g., industrial operation permit renewal deadlines). However, having community members as participants in these processes fosters mutual understanding and co-learning about how to balance this tradeoff. Our community-academic team simultaneously worked through data quality control and assurance with MDE while outreaching with other community members and organizations.

Simultaneous activities, on the other hand, also create a lack of attention to some items over time. For an example from our work, MDE required the CSX Coal Terminal to improve their fugitive dust control plan and develop a new fenceline monitoring plan in response to the 2021 explosion and decades-long complaints from South Baltimore residents. Our community-academic team developed public commentary for both plans, merging community experiences with scientific support. With focus and effort turning towards the community-driven hyperlocal air monitoring network over time, follow-up regarding these plans became less frequent and we imposed less accountability upon MDE and CSX to follow through.

3.4.2. Successes celebrated

Nonetheless, the improvement and development of the CSX Coal Terminal fugitive dust control and fenceline monitoring plans stem from the action of our community partners and the support of our community-academic partnership—a major success. This demonstrates our ability to hold polluters and regulators accountable and the power of having community at the table in all aspects of our work. The direct line of communication between CB community representatives and the MDE Air and Radiation Administration has allowed for improved public communication about industrial emergencies. For example, CB residents learned of a chemical spill at a chemical manufacturing and processing plant in May 2023, raising justified alarm in community chats and social media. Through urgent meetings and correspondence between our community-academic team and MDE, CB community representatives received detailed information directly from local regulators about possible environmental hazards and the gravity of the concern. Our partners then updated other CB residents with developing information.

Our capacity building and youth education efforts are expanding into a summer fellowship for high school students and recent graduates, with the first cohort in the summer of 2023. Summer fellows will become more deeply engaged in the local EJ movement through ongoing activism and supporting community science initiatives, such as our hyperlocal air monitoring network and health communication. Fellows will be compensated for their participation and receive valuable skills to become future environmental justice and health leaders. The inaugural cohort will be invited the following summer to support the fellowship as mentors and trainers, ushering in the next generation of EJ trailblazers.

Acknowledging and embracing interconnectedness in our community-driven work is a major success and continuous, intentional endeavor. Embracing interconnectedness began in our objectives with building applicability to other South Baltimore communities. We have begun to partner with other community associations to deploy LCSs and join the community-level air monitoring network. In time, we hope our network can provide powerful, actionable data about air quality and sources of pollution throughout South Baltimore. Community members will continue to guide our objectives and placement of monitoring sites as this network expands.

Interconnectedness has also developed within the CB context, particularly with activism. Action coalitions have mobilized

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around similar efforts addressing the CSX Coal Terminal and broader community concerns with health and safety due to industrial activity. Members of our research team have participated in community demonstrations and rallies in defiance of industrial encroachment in the community. Preliminary data from our community-academic partnership and hyperlocal air monitoring network have helped to support community testimonies and empower activism.

3.4.3. Future steps

A significant next step for our community-driven hyperlocal air monitoring network will be to add new measured pollutant parameters. Air pollutants of concern in CB include volatile organic compounds and air toxics which are not currently addressed in the low-cost sensors in use in our network. In response to community requests and acknowledging uncharacterized air pollution in CB, we will be exploring monitoring and sampling methods for volatile organic compounds in the near future.

As the breadth of our air monitoring network expands, so will our need for personnel to maintain and operate the network long-term. Our community-academic team will be ramping up shadowing and training activities for local youth and other community members. In time, our work will evolve from community-driven to community-owned and -operated, encompassing data collection, data analysis, and data dissemination. Near-term actions include creating standard operating procedures for air monitors and trail cameras with video instruction and available R code for data cleaning and analysis.

Future steps also include improving our dissemination of findings from our air monitoring network. We have begun to develop weekly air quality summaries for our monitor site hosts and community organizations using the openair package in R (62). Weekly summaries allow our monitor hosts to discuss any observations of activities that may have contributed to elevated air pollution. Improvements to our data quality assurance/control and analysis processes will augment the strength and validity of our data. For example, we can use wind speed and wind direction to estimate possible lag time between camera-observed activities and air quality measurements. We will also apply *a posteriori* correction factors to collected LCS data, accounting for bias and unknown factors.

Our team will also conduct a community health panel study around the potential health effects of community exposure to ambient and settled coal dust. Participants will conduct daily symptom and quality of life diaries with concurrent air monitoring and surface dust sampling at their home. This participatory and community-engaged health panel will also be a training opportunity for summer fellows and an element of cross-community engagement. Participant geographic eligibility will be dictated by the shared concern of coal dust and coal-related infrastructure (e.g., coal transport trains and railways) throughout South Baltimore communities.

Our relationship with the MDE Air and Radiation Administration has been critical to the success and evolution of this community-driven hyperlocal air monitoring network. In the short-term, we hope data collected will inform and strengthen industrial operation permits which require community and public input. As decision-makers at MDE become increasingly familiar with residents in the CB community and the EJ issues they experience—alongside robust quantitative air pollution data—regulation and enforcement can better protect EJ communities like CB. In the long-term, these improved environmental regulatory and enforcement decisions can drive structural and systematic change with ramifications in communities across Maryland and the US.

4. Conclusion

In this paper, we outlined our approach to addressing longstanding community-identified EJ issues using scientific/technical strategies and capacity building. Our hyperlocal air monitoring network continues to collect real-time air pollution data, observe industrial activity, and identify possible correlations to characterize the effect of industrial activity upon air quality in CB. The capacity building component of our approach acknowledges and enacts the need for long-term sustainability, co-learning, and community empowerment in EJ efforts. High school students are provided with college credits and community service hours as they learn about quantitative and qualitative data collection strategies. Next steps include growing and fine-tuning our network and data analysis procedures, a community health panel study to characterize community health outcomes and air pollution exposure, and continuing to engage youth leaders in the local EJ movement.

Our community-academic partnership continues to learn from one another and evolve our community-driven approach as we work together towards just community development in CB and South Baltimore.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Ethics statement

This study was reviewed and determined to be not human subjects research (NHSR) by the Johns Hopkins Bloomberg School of Public Health Institutional Review Board (IRB).

Author contributions

Conceptualization & Design: MAA, GS, SC, MT, KS, LD, NF, CDH. Investigation: MAA, GS, KS, LD, CW, CDH. Resources: CDH. Data curation: MAA, KS, LD, CW, CDH. Writing—Original Draft: MAA, GS, LD, NF, CDH. Writing—Review & Editing: MAA, GS, SC, MT, KS, LD, CW, NF, AU, CDH. Visualization: MAA, GS, KS, LD, CDH. Supervision: GS, SC, MT, NF, CDH. Project Administration: GS, SC, MT, NF, CDH. Funding Acquisition: CDH. All authors contributed to the article and approved the submitted version.

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Conflict of interest

The authors declare no conflicts of interest. For the contents of this paper, technical representatives from QuantAQ (https://quant-aq.com/) and Distributed Sensing Technologies (DSTech: https://www.dstech.io/) provided input about data quality control and quality assurance but did not contribute to analysis and interpretation of data, the writing of this article, or the decision to submit it for publication.

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Supplementary material

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fepid.2023.1198321/full#supplementary-material

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EXHIBIT E - 16

EXHIBIT F

Deanes et al. 2025 Scientific Article

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Relation of wind direction and coal terminal activity patterns with air pollution burden in a community bordering a coal export terminal, Curtis Bay, Maryland, USA

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Abstract
Residents of Curtis Bay, South Baltimore, Maryland living near an open-air coal terminal have raised concerns about dark dust in their community. Coal particles have been detected in this dark dust, however, the relationship between coal terminal activity and air pollution in Curtis Bay remains unclear. This study aimed to determine how air quality varied in relation to changes in wind direction and observed coal terminal activity. We measured particulate matter (PM_1, $PM_{2.5}$, PM_{10}, total suspended particles) and black carbon (BC) concurrently with wind direction and visible coal terminal bulldozer activity (camera-based) at equivalent 1-minute time scales. We used conditional fixed-effects regression models to evaluate relationships between local air pollution and (1) wind direction and (2) visible bulldozer activity on coal piles. From July 5, 2022–July 16, 2023, a ten-node air monitoring network collected 2,121,793 PM and 360,325 BC 1-minute records. When downwind of the coal terminal versus not downwind, PM was 0.66 to 5.3 μg/m^3 higher ($p<0.0001$) and BC was 0.11 μg/m^3 higher (95% CI = 0.10, 0.12). When bulldozer activity was visible versus not visible, PM was 0.49 to 2.2 μg/m^3 higher ($p<0.001$) and BC was 0.09 μg/m^3 higher (95% CI = 0.08, 0.10). The associations between bulldozer activity and air pollutant concentrations were ~2.0–2.8 times higher downwind of the coal terminal versus not (all p-interaction < 0.001). PM and BC air pollution was greater in Curtis Bay when downwind of and when bulldozer activity was visible at the coal terminal, and highest when both occurred jointly. Mitigation strategies appear warranted to reduce PM and BC air pollution burden associated with coal terminal activities in Curtis Bay.

Keywords Air pollution · Particulate matter (PM) · Black carbon (BC) · Coal terminal · Coal dust · Environmental justice

Introduction

Amidst the ongoing transition to renewable energy generation, coal remains a key source of energy with global coal consumption reaching a record high in 2023 (International Energy Agency (IEA), 2023). In the United States (U.S.), there exists expansive infrastructure for coal extraction via mining and transport via rail to coal terminals for handling, storage, and export. Coal mining activities are recognized contributors to particulate matter (PM) exposure, associated adverse health outcomes, and impacts to quality of life in both occupational (Shekarian et al. 2023; Petsonk et al. 2013; Liu and Liu 2020; Hendryx 2015; Hendryx et al. 2020b) and fenceline community (Kurth et al. 2014; Hendryx et al. 2020a; Hendryx and Entwhistle 2015; Cortes-Ramirez et al. 2018) contexts.

Lauren N. Deanes and Bonita D. Salmerón contributed equally to this work.

Extended author information available on the last page of the article

EXHIBIT F - 1

Compared to the state of knowledge about occupational exposure and health effects of coal mining, less is known about how coal transport, handling, and storage affect air quality, health and quality of life in neighboring fenceline communities. Recent research in a community at the fenceline of coal by rail infrastructure and an open-air coal terminal in Richmond, California linked coal transport, handling, and storage activities to local air pollution (Ostro et al. 2023a, b). This study demonstrated increases of $PM_{2.5}$ (particles of aerodynamic diameter≤2.5 μm) attributable to the passage of uncovered coal trains (8.32 μg/m^3 [95% CI=6.37, 10.28; $p<0.01$]) (Ostro et al. 2023b). Although these $PM_{2.5}$ increases may be transient, their repeated periodicity was estimated to contribute to increased morbidity and mortality due to asthma and cardiovascular disease (Ostro et al. 2024). This study also found coal and petcoke (petroleum coke) dust in the $PM_{2.5}$ and coarse ($PM_{10-2.5}$) size ranges at concentrations ranging from 0.1 to 0.6 μg/m^3 and 3 to 18 μg/m^3, respectively, via passive aerosol sampling in the community and computer-controlled scanning electron microscopy and energy-dispersive X-ray spectroscopy (SEM-EDX) (Ostro et al. 2023a). There remains a paucity of information about air pollution burdens in communities neighboring coal terminals, which have employed a wide spectrum of mitigation strategies to control the offsite migration of coal dust and other PM air pollution into proximal communities. Questions also remain about the temporal variability of air pollution in relation to weather conditions and activity patterns at coal terminals.

In Curtis Bay, South Baltimore, Maryland (hereafter Curtis Bay), an open-air coal terminal operated by CSX Corporation is a local pollution source of longstanding community concern (Fabricant 2023). In 2023, approximately 30 million metric tons of coal were exported from the Port of Baltimore. The CSX coal terminal in Curtis Bay–one of two operating coal piers in the Port of Baltimore–has an annual throughput capacity of over 12 million metric tons (U.S. Energy Information Administration (EIA), 2024; CSX Corporation). The coal terminal is ~300 m from nearby homes and the Curtis Bay recreation center with local schools and businesses less than a kilometer away. For decades, Curtis Bay residents have observed and reported a daily accumulation of black dust in community spaces, at business and residential properties, and inside people's homes. In December 2021, there was an explosion at the coal terminal which showered the neighborhood with coal dust, shattered windows of nearby homes, and caused widespread panic (South Baltimore Community Land Trust 2023; Kazanjian 2022; Maryland Department of the Environment 2022).

A recent community-driven research study involving a partnership between Curtis Bay residents and several academic institutions observed coal dust (via SEM-EDX) in settled dust collected as far as 1,235 m from the coal terminal near a local high school (Aubourg et al. 2024). Curtis Bay community residents recently documented a fugitive dust emission event (about 30 min in duration) generated by the operation of an autonomous ballast cleaner along the rail lines at the coal terminal (Shen 2024; South Baltimore Community Land Trust (SBCLT), 2024).

In response to continued local concerns and questions about coal dust exposure in the Curtis Bay community, our collaborative team of community and academic scientists aimed to collect high-resolution 1-minute-level data on air pollutants, meteorological conditions, and coal terminal activities. This study aimed to determine how changes in wind direction (downwind of coal terminal vs. not) and camera-based observations of coal terminal activity (visible bulldozer activity on coal piles vs. none) were related to changes in air pollution burden in Curtis Bay.

Materials and methods

Study setting

From 2005 to 2009, South Baltimore postal code 21226, which includes Curtis Bay, was one of the "top ten zip codes in the country for highest quantity of toxic air pollutants" (Environmental Integrity Project 2012). In the Curtis Bay area, there are around 70 stationary sources of air pollution regulated by the Maryland Department of the Environment (MDE) including–but not limited to–oil and gas processing and storage facilities, the nation's largest medical waste incinerator, a municipal wastewater treatment plant, the Baltimore City municipal landfill, and the CSX open-air coal terminal, in addition to heavy diesel truck traffic (Cassie 2024; Community of Curtis Bay Association (CCBA), 2023; Aubourg et al. 2023; Dickerson et al. 2024). The community recreation center is located about 300 m from the fenceline of the open-air coal terminal (Fig. 1). Following the 2021 explosion at the coal terminal on December 30, 2021, the Community of Curtis Bay Association (CCBA) and South Baltimore Community Land Trust (SBCLT) initiated a community-driven research collaboration with academic scientists and MDE to improve understanding of the potential impacts of the coal terminal's routine operating activities on changes in air pollution burden in Curtis Bay (South Baltimore Community Land Trust 2023; Kazanjian 2022; Maryland Department of the Environment 2022). This collaboration has been described in detail elsewhere (Aubourg et al. 2023, 2024; Dickerson et al. 2024).

EXHIBIT F - 2

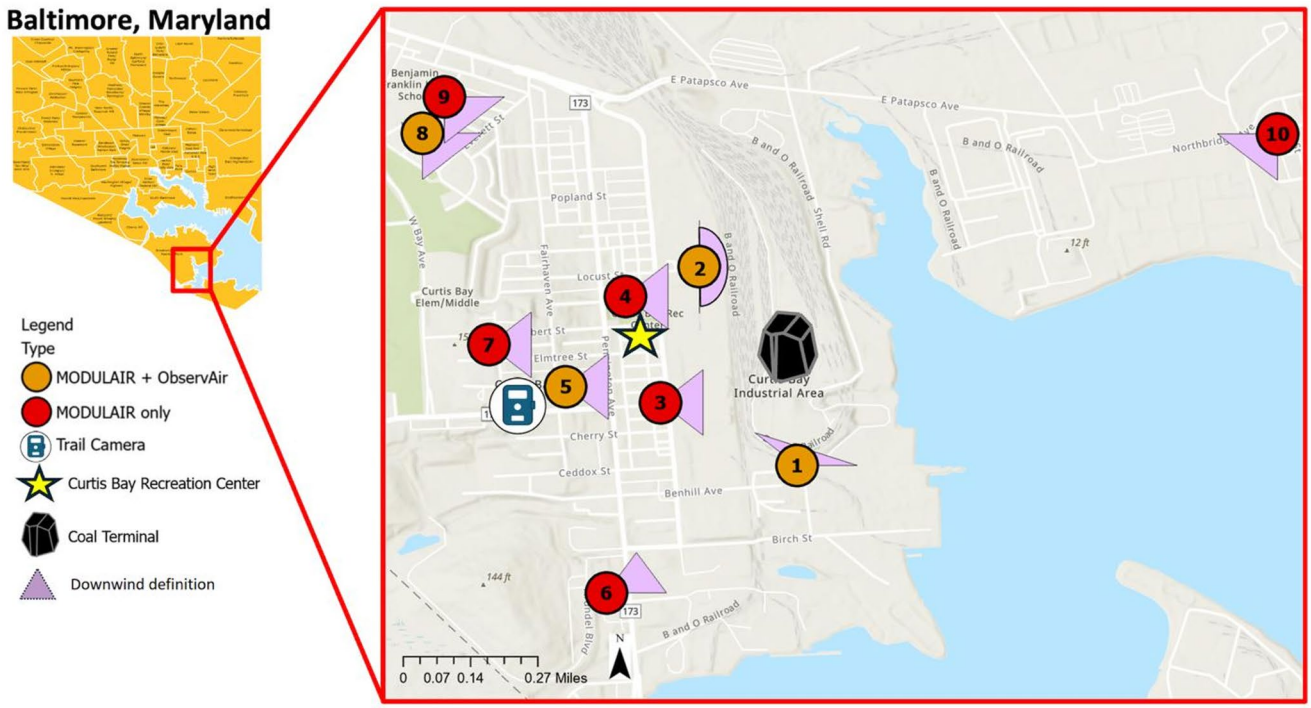

Fig. 1 Multi-pollutant air monitoring and trail camera monitoring locations, Curtis Bay, Baltimore, Maryland, U.S., 2022–2023. *Note*. Red circles indicate locations with MODULAIR units only. Orange circles indicate locations with both MODULAIR and ObservAir units. Camera symbol indicates location of trail camera observation

Environmental and visual activity monitoring instrumentation

QuantAQ MODULAIR air monitors (QuantAQ, Inc., Somerville, MA) were deployed at ten sites to measure PM of various size fractions in units of µg/m^3: PM_1, $PM_{2.5}$, PM_{10}, PM_{40} or total suspended particles (TSP); gases in ppb: carbon monoxide (CO), nitric oxide (NO), nitrogen dioxide (NO_2), and ozone (O_3); and meteorological variables: temperature (ºC) and relative humidity (%) (Fig. 1). Additionally, each MODULAIR is connected to a sonic anemometer (Davis Instruments Corp., Hayward, CA) to record wind speed (miles per hour [mph]) and direction (degrees). At four of the ten sites (Locations 1, 2, 5, and 8), we collocated Distributed Sensing Technologies (DSTech) ObservAir air sensors, which measured black carbon (BC) in µg/m^3 (Fig. 1). Trail cameras (CamPark Electronics Co., Ltd, Hong Kong) were deployed at two locations to record coal terminal activity patterns, including visible bulldozer activity on the coal piles (Fig. 1). Footage from only one location (as shown in Fig. 1) was used in this study.

Data collection, processing & quality assurance/quality control (QA/QC)

The meteorological, trail camera, and air pollutant data were collected at 1-minute time intervals (unless noted otherwise below). As part of our data processing and QA/QC procedure, with the exception of BC, initial data cleaning was performed at the 1-minute time scale. Then, from the 1-minute dataset, 5-, 15-, and 60-minute averages were created.

Meteorological data

Data for temperature (ºC), relative humidity (%), wind speed (mph), and wind direction (degrees) were collected at a 1-minute time interval at each monitoring location. Data were cleaned according to best practices, which included the removal of time periods of fog and instrument error. Wind speed and direction values were removed in cases when both wind speed and direction were equal to zero, and wind direction was removed when degrees were greater than 360º. Hourly data on solar radiation (watts per square meter [W/m^2]) were supplied by MDE from their monitoring site in Essex, Maryland, approximately 15 km (9.5 mi) from the Curtis Bay neighborhood. One minute-level observations were assigned the corresponding solar radiation value for their respective hour. At the longer time scales, wind direction was averaged based on converting the 1-minute resolution wind direction in degrees to u and v vectors, averaging these vectors to the appropriate time scales, and then converting the averaged vectors back into degrees.

The definition of a monitor being downwind of the coal terminal (Figure S2) was developed by first creating

a bearing from each respective monitoring location to the closest fenceline point of the coal terminal. The wind directions interpreted as downwind were within plus or minus 30º of this bearing. We then adjusted this angle based on the location of each air monitoring site and to reflect the unique spatial orientation aspects of the coal terminal and its operations– e.g., trajectory of rail lines within the coal terminal and docking location of coal export barges at the facility. Supplementary Results Text and Figure S2 describe the sensitivity testing to determine the downwind angle definition.

Multi-pollutant air monitoring

Particulate matter and gas data Particulate matter concentrations (PM_1, $PM_{2.5}$, PM_{10}, TSP) were flagged as likely being impacted by fog when two conditions were met: (1) when the rolling maximum (window width = 11 observations, centered on middle observation) of coarse PM ($PM_{10-2.5}$) exceeded 200 µg/m^3 AND (2) when the dew point depression (temperature – dew point temperature) was less than 3.75ºC (Hagan and McClosky 2024). These heuristics are not unique to South Baltimore, therefore, we applied these criteria to PM concentrations from Curtis Bay field data and then, when possible, confirmed the presence of fog using trail cameras deployed in Curtis Bay. A limitation of this approach is the difficulty in confirming fog events during nighttime. MODULAIR units demonstrated strong agreement (as defined by EPA Non-regulatory Supplemental and Informational Monitoring [NSIM] standards) when compared to $PM_{2.5}$ and PM_{10} measurements from regulatory-grade instruments (TSP does not have an NSIM target) in Jurupa Valley, CA (Hagan 2024). Additionally, data for PM_1 and $PM_{2.5}$ may be more reliable than for larger particles because coal dust has a strong absorption component to its index of refraction and aspiration efficiencies are lower for large particles.

Similarly to the PM sensor on the MODULAIR, QuantAQ conducts laboratory-based calibrations of all gases for each unit and gas sensor for CO (linear regression), NO (hybrid regression), NO_2 (hybrid regression), and O_3 (non-linear regression). When QuantAQ collocated units with regulatory instruments in the U.S. and United Kingdom, MODULAIR units demonstrated strong agreement (as defined by EPA NSIM standards) when compared to CO, NO_2, and O_3 measurements from regulatory-grade instruments (NO does not have an NSIM target) (McClosky and Hagan 2024).

All MODULAIR units deployed in this field campaign were collocated with regulatory-grade Teledyne 640X monitors at the MDE monitoring site in Pocomoke City, Maryland from July 18 to August 7, 2023. Results from these collocations are shown in Tables S2a-b. Based on the quality of the agreement statistics meeting EPA Air Sensor Guidelines, we did not apply additional corrections to the PM and gas data.

Black carbon We also developed data QA/QC corrections to the 2-second resolution BC data measured by the DSTech ObservAir. First, we applied a rolling 30 observation median at the 2-second time scale, whereby the rolling median of 30 consecutive 2-second observations was imputed for single 2-second time points that were identified as an outlier (defined as >1 IQR of the rolling 30 observations). Next, we instituted time-based flags, where data analysts observed erratic values during short- and long-term shutoffs. This included flagging (and removal) in two steps: ***(1)*** Flagging the following 60 min after gaps greater than 15 min between observations (including the first 60 min of data after initial startup) and ***(2)*** flagging the 5 previous observations and following 15 min after gaps greater than 2.5 min between observations. We applied this approach to each sensor. We also removed BC data on April 28 and 29, 2023 at Location 1, as the sensor at this location on these days measured concentrations in excess of 500,000 µg/m^3. Independent operators applied the flags to verify the same numbers of records removed. Finally, we removed the lowest and highest 20 BC concentration (µg/m^3) datapoints from the full combined dataset, as these were extreme values that remained after applying previous flags and removing the associated data. The DSTech ObservAir monitors were collocated with a regulatory aethalometer (Model AE33, Magee Scientific) at an MDE monitoring site. Agreement statistics have been previously documented (Aubourg et al. 2023).

Summer 2023 was a major wildfire season in Canada, resulting in region-wide poor air quality on several days. Our primary dataset excluded dates with major fire and smoke impacts in Baltimore. This list of wildfire dates was verified by MDE and includes the following days in 2023: May 12 and 31; June 1, 2, 6, 7, 8, 9, 11, 17, 18, 19, 28, 29, and 30; and July 1, 2, 17, and 18.

Trail camera-based monitoring of visible bulldozer activity at coal terminal

The trail camera was programmed to record still photographic images at 1-minute intervals. We gathered trail camera images from September 16, 2022, to June 28, 2023. Footage was reviewed to identify coal transport trains, coal pile bulldozers, coal export barges, use of the dust wet suppression system, and coal pile height. Examples of camera positioning have been previously documented (Aubourg et al. 2023). For the purposes of this analysis, visible bulldozer

activity on the coal piles was the primary activity of interest, due to its relationship with general terminal operations (e.g., adjusting piles during loading and unloading of trains) and potential to disturb coal piles and generate dust emissions.

Footage was coded "0" for no bulldozer activity observed, "1" for when bulldozer activity was observed, and "." for times affected by complete visual obstructions. These complete visual obstructions occurred for a number of reasons including fog, lens obstruction, and periods when the camera was out of position due to high winds. When there was partial visible obstruction of the coal piles due to the presence of full tree foliage, the coding of any bulldozer activity was only based on the piles that were visible. We coded as "0" the 1-min time periods when there was no activity present on visible piles (despite potential for bulldozer activity to have been occurring on piles obstructed by tree foliage). These time periods were not coded as missing "." because we were still able to visibly observe coal piles that were not obstructed by tree foliage. For this reason, the variable is defined as any "visible bulldozer activity" at the 1-min time scale. Only observations with a non-missing value for this variable were included in the analysis. These 1-minute level visible bulldozer activity observations were merged by date and time with air pollutant measurements from each of the ten monitoring locations. Observation totals are included in the tables of the Results section.

For "visible bulldozer activity" mean time scales longer than 1-minute (i.e., 5-, 15-, 60-min), we first created a new variable that represented the sum of all the single minute activities within each averaged time period that had visible bulldozer activity (e.g., how many minutes within a 5-minute period had visible bulldozer activity?). We then calculated the mean value across all locations of the sum of "visible bulldozer activity" variable. This led to a new variable "visible bulldozer activity above mean", which was coded as "1" if greater than and "0" if less than or equal to the mean of the sum of visible bulldozer activity for each of the longer time scales.

Table 1 Descriptions of strata for binary downwind of the coal terminal and visible bulldozer activity variables

Binary Variable	Description of Stratum
(0, 0)	Time periods when a monitor is ***NOT*** downwind of the coal terminal and there is ***NOT*** visible bulldozer activity
(0, 1)	Time periods when a monitor is ***NOT*** downwind of the coal terminal and there ***IS*** visible bulldozer activity
(1, 0)	Time periods when a monitor is ***IS*** downwind of the coal terminal and there is ***NOT*** visible bulldozer activity
(1, 1)	Time periods when a monitor ***IS*** downwind of the coal terminal and there ***IS*** visible bulldozer activity

Inter-operator reliability was assessed between three independent operators during two points of the period of camera-based observation–October 2022 and December 2022– to assess inter-operator differences potentially related to the presence or absence of tree leaf foliage obscuring lines of sight for coding of visible bulldozer activity (Figure S3).

Data analysis

Using all meteorological, air pollutant, and trail camera observations, we created a combined dataset that merged location specific observations and trail camera observations by date and time. Analyses presented here were performed using a pooled dataset from all ten locations within the monitoring network restricted by the availability of non-missing 1-min records for the camera-based observations of any bulldozer activity at the coal terminal (n [%] missing trail camera data = 368,806 [15.7%]). We focused on the 1-min time scale to capture transient dust events with higher temporal resolution to align with community reports of frequent, short dust events. We excluded dates from the analysis that were affected by wildfires. Four of the ten monitoring locations included BC measurements (Locations 1, 2, 5 and 8 (Figure 1)). Unless otherwise noted, mean concentrations are based on a pooled mean across all locations for which data were available.

We first generated summary descriptive statistics for meteorological, air pollutant, and camera-based visible bulldozer activity variables at a 1-min time scale. Next, we calculated the mean and standard deviation (mean [SD]) air pollutant concentrations at 1-, 5-, 15-, and 60-min time intervals within each combination of strata of the binary downwind of the coal terminal variable and binary visible bulldozer activity variables (Table 1).

Relationships between (a) 1-min average wind direction and air pollutant concentrations; and (b) 1-min average visible bulldozer activity and air pollutant concentrations were evaluated by conditional fixed effects linear regression models (Allison 2009). Since the goal of this analysis was to make inferences about within-location variation of transient explanatory variables while controlling for stable characteristics of locations (both measured and unmeasured), conditional fixed effects models were more appropriate than mixed models or generalized estimating equations (Allison 2009). Conditional fixed effects models evaluate average within-location acute/transient effects by centering the repeated measures within each location (by subtracting the location-specific means) and then pooling the centered data across all locations in the study, rather than making assumptions about the distribution of between-location effects (Allison 2009). The location-specific centering ensures that potential unmeasured confounders that are location-specific

and do not vary over time do not affect the analysis results. In this design, conditional fixed effects models estimate exposure-outcome relationships by treating each location as its own control. This allows us to control for time-invariant characteristics of each location (e.g., physical structures around monitors and distance to coal terminal). We fit an interaction term between visible bulldozer activity and wind direction (downwind of coal terminal vs. not) to assess potential modification of the visible bulldozer activity–air pollution burden relationship by wind direction—during time periods when each monitor was downwind of the coal terminal compared to time periods when each monitor was not downwind of the coal terminal.

In building our conditional fixed-effects regression models we evaluated several time-varying potential confounders of the association between being downwind of the coal terminal and visible bulldozer activity and community air pollutant burden. These included temperature (ºC), relative humidity (%), wind speed (mph), solar radiation (hourly W/m^2), and time of day (AM/PM) because meteorological and diurnal patterns could act as confounders due to their potential to be related to both our independent (wind direction and bulldozer activity) and dependent variables (air pollutants).

For PM and BC, we also evaluated the gases CO, NO, and NO_2 as potential confounders because they indicate sources of combustion and/or vehicular traffic in Curtis Bay. These trace gases arise from combustion with urban sources dominated by vehicles (internal combustion), power plants, and industry. Carbon monoxide and NO are primary (e.g., tailpipe) emissions but NO is oxidized on time scales of minutes to NO_2; thus, NO and NO_2 are often considered together as NOx ($NO+NO_2$). The average tropospheric lifetime of NOx is hours to days. The ratio NO/NO_2 is established by ozone concentrations and in situ photochemistry again in minutes. NO is a good indicator of near-field (~1000 m) combustion. Carbon monoxide has an average atmospheric lifetime of weeks to months and is widely distributed– near sources, only small increments are seen above background levels. Cars (mostly spark ignited and gasoline-fueled) produce more CO than NO, while heavy duty trucks (mostly compression ignited and diesel-fueled) produce nearly equal amounts of CO and NO. Although we measured O_3, we did not consider it as a potential confounder of PM and BC. Ground-level O_3 is a secondary pollutant produced photochemically during atmospheric processing of NOx (e.g., combustion emissions) and volatile organic compounds (many sources both natural and anthropogenic). Further, O_3 (or odd oxygen; $NO_2 + O_3$) is correlated on scales of hundreds of kilometers. Therefore, due to its strong seasonal and regional nature, O_3 was not included as a model covariate.

To evaluate the potential collinearity of covariates, we examined model variance inflation factors (VIFs) and excluded the following: relative humidity, CO, and NO_2. For conditional fixed effects regression models involving the gases as dependent variables (CO, NO, NO_2), we used the same covariate adjustment set as for PM and BC except we did not include any of the gases following an examination of collinearity.

Our final conditional fixed effects linear regression model reflects the following Eq. (1). Simplified versions appearing in the analysis involve the removal of visible bulldozer activity and the interaction term between visible bulldozer activity and downwind.

$$\begin{aligned}&\mathrm{PM\_pollutant_{it}}\\&\quad=\beta1\,(\mathrm{visible\_bulldozer\_activity_{it}})\\&\qquad+\beta2\,(\mathrm{downwind_{it}})\\&\qquad+\beta3\,(\mathrm{temp_{it}})+\beta4\,(\mathrm{wind\_speed_{it}})\\&\qquad+\beta5\,(\mathrm{NO_{it}})+\beta6\,(\mathrm{am\_pm_{t}})+\beta7\,(\mathrm{solar\_radiation_{t}})\\&\qquad+\beta7\,(\mathrm{visible\_bulldozer\_activity}*\mathrm{downwind})+\mu_i+\epsilon_{it}\end{aligned}\tag{1}$$

where: ***i*** indexes the observation unit of location, ***t*** indexes time, **β1**, **β2**,…, **β7** are the coefficients for the independent variables, $\boldsymbol{\mu_i}$ represents the fixed effect for each location, controlling for unobserved heterogeneity, $\boldsymbol{\epsilon_{it}}$ is the error term. Inclusion of the fixed-effects $\boldsymbol{\mu_i}$ implicitly does the location-specific centering, mitigating effects of unmeasured location-specific confounders (see discussion above).

To assess the consistency of our findings, conditional linear fixed effects regression models were repeated at the 1-minute time scale using two alternative definitions of the downwind angle—one wider and one narrower (Supplemental Results; Figure S2). Additionally, to assess potential variability in our results by proximity of our monitoring sites to the coal terminal, conditional linear fixed effects regression models were repeated at the 1-minute time scale, stratifying the data set by monitoring locations < 0.5 km (Locations 1, 2, 3, 4) versus > 0.5 km (Locations 5, 6, 7, 8, 9, 10) from the coal terminal (Supplemental Results; Tables S3-S6). This stratification by distance balanced our interest to investigate a potential role of proximity while maintaining optimal and similar sample sizes for PM and BC variables in each proximity category. To assess the consistency of results over longer time periods, we calculated stratified mean (SD) concentrations and completed conditional linear fixed-effects regression modeling at 5-, 15-, and 60-minute time scales for PM and BC parameters (Supplemental Results; Figures S4-S6; Tables S8, S10-S15). Finally, all analyses were performed for the measured gases (CO, NO, NO_2, & O_3) at the 1-, 5-, 15-, and 60-min average time scales (Supplemental Results; Figures S7-S10; Tables S7, S9, S16-S23). The primary analysis of interest was related to airborne PM and BC air pollution related to fugitive dusts, and thus analyses of

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the gas variables are described in supplementary material. For example, O_3 is hypothesized to be a regional pollutant not associated with being downwind of the coal terminal or when visible bulldozer activity was occurring. All analyses were performed using R (version 4.2.3).

Results

Descriptive statistics of meteorological parameters, air pollutants, and visible bulldozer activity

Table 2 summarizes the independent meteorological and trail camera variables at the 1-minute level. Summaries are reflective of deployment times that were not always overlapping in time or season (Figure S1, Table S1) and reflect the availability of non-missing observations for ≥1 MODULAIR variables. Mean temperatures ranged from 9.6°C (SD = 7.4) to 17.4°C (SD = 8.3), with relative humidity values averaging between 50.0% (SD = 18.5) and 59.3% (SD = 20.1). Wind speeds demonstrated considerable variation, with means spanning 1.0 mph (SD = 1.3) to 4.2 mph (SD = 3.4). Solar radiation showed high variability, with mean values ranging from 122.9 W/m^2 (SD = 201.6) to 213.2 W/m^2 (SD = 291.5). The proportion of observations downwind of the coal terminal ranged from 10.3% to 50.0% (Table 2).

Descriptive statistics for PM (PM_1, $PM_{2.5}$, PM_{10}, and TSP) and BC measured at the 1-minute level are summarized in Table 3. Across all metrics, sample sizes varied by measurement, ranging from 126,630 to 291,318, reflecting differences in data availability by deployment time across locations. Mean concentrations of PM_1 ranged from 7.6 µg/m^3 (SD = 5.4) to 9.6 µg/m^3 (SD = 9.2), and $PM_{2.5}$ exhibited similar variability, with means between 8.3 µg/m^3 (SD = 5.8) and 10.5 µg/m^3 (SD = 9.5). Variability in PM_{10} concentrations increased with mean concentrations ranging from 16.8 µg/m³ (SD = 16.0) to 39.4 µg/m^3 (SD = 155.2). Total suspended particulate concentrations showed high variability based on means and standard deviations, with means spanning 24.3 µg/m³ (SD = 113.8) to 67.7 µg/m^3 (SD = 479.6).

For BC, average concentrations ranged from 0.6 µg/m^3 (SD = 0.5) to 1.1 µg/m^3 (SD = 1.8). Overall, the independent and dependent data highlight significant spatial and temporal variability in pollutant concentrations and meteorological conditions, indicative of dynamic environmental conditions as well as the varied deployment dates by location.

Visible bulldozer activity was noted in 39.9–47.3% of the data, depending on the time period of data at each location (Table 2). Daily averages for bulldozer activity ranged

Table 2 Descriptive statistics of meteorological and camera-based observations of any visible bulldozer activity at 1-minute time scale, Curtis Bay, Maryland, U.S., 2022–2023

Location											
Variable		1	2	3	4	5	6	7	8	9	10
Temperature (°C)	n	279,422	169,163	249,332	273,630	293,032	234,965	192,655	206,228	127,688	227,279
	mean (SD)	12.7 (8.7)	11.5 (7.1)	12.3 (7.3)	13.9 (8.3)	13.0 (8.6)	13.8 (8.6)	12.8 (8.5)	9.6 (7.4)	17.4 (8.3)	13.2 (9.3)
Relative humidity (%)	n	279,422	169,163	249,332	273,630	293,032	234,965	192,655	206,228	127,688	227,279
	mean (SD)	58.1 (19.8)	50.0 (18.5)	53.0 (9.0)	53.3 (20.1)	57.5 (19.9)	51.3 (18.8)	51.8 (18.8)	59.3 (20.1)	50.4 (19.3)	58.7 (21.4)
Wind speed (mph)	n	279,879	170,615	257,435	275,350	293,463	236,251	194,067	265,568	128,132	250,393
	mean (SD)	2.3 (1.7)	4.2 (3.4)	1.9 (2.2)	1.0 (1.3)	1.0 (3.0)	1.9 (1.7)	1.9 (2.8)	2.4 (2.6)	3.2 (2.4)	2.2 (2.3)
Solar radiation (W/m²)	n	276,460	163,539	192,205	270,042	290,286	231,121	146,384	198,879	126,542	217,491
	mean (SD)	158.0 (244.4)	147.0 (228.3)	122.9 (201.6)	150.5 (235.4)	158.2 (245.0)	165.3 (250.7)	137.6 (216.6)	127.1 (208.0)	213.2 (291.5)	162.8 (251.4)
Downwind of coal terminal (downwind = 1)	n (%)	87,872 (31.4)	59,005 (34.6)	81,341 (31.6)	102,603 (37.3)	146,458 (50.0)	24,358 (10.3)	34,768 (18.0)	59,304 (22.3)	14,960 (11.7)	47,842 (19.1)
Any visible Bulldozer Activity (yes = 1)[a]	n (%)	112,088 (40.3)	78,105 (47.3)	82,508 (42.6)	109,349 (40.3)	118,799 (40.7)	105,134 (45.2)	68,373 (46.2)	81,722 (40.7)	54,439 (42.9)	87,592 (39.9)
Average number of minutes of visible bulldozer activity per day[a]	mean (SD)	500 (376)	528 (400)	516 (385)	499 (380)	512 (382)	531 (376)	514 (395)	495 (392)	519 (363)	476 (375)
	% of day	34.8	36.6	35.8	34.7	35.6	36.9	35.7	34.4	36.0	33.1

[a]Descriptive statistics include non-missing observations when ≥1 MODULAIR variables occurred concurrently with a trail camera observation

between 476 min (33.1% of a given 24-hour period) and 531 min (36.9% of a given 24-hour period) (Table 2).

Mean air pollutant concentrations by downwind direction and visible bulldozer activity at coal terminal

As displayed in Fig. 2, mean concentrations of all PM variables were found to be highest during periods when a monitoring site was downwind of the coal terminal and visible bulldozer activity was occurring, and lowest when the site was not downwind of the terminal and there was no visible bulldozer activity occurring. The highest vs. lowest mean (SD) for each pollutant were the following: PM_1: 9.4 (7.1) μg/m³ vs. 7.8 (5.9) μg/m³; $PM_{2.5}$: 10.5 (7.1) μg/m³ vs. 8.5 (5.9) μg/m³; PM_{10}: 27.1 (41.7) μg/m³ vs. 21.9 (56.2) μg/m³; TSP: 40.2 (172.0) μg/m³ vs. 33.4 (193.4) μg/m³; BC: 0.93 (1.60) μg/m³ vs. 0.67 (0.95) μg/m³. Additionally, when bulldozer activity was not present, mean concentrations for all pollutants besides TSP were found to be elevated to their second highest level when monitoring sites were downwind of the coal terminal.

Relation between downwind direction and air pollution burden

Table 4 highlights the sample sizes, mean concentrations, and results from conditional fixed effects linear models to explore the impacts of downwind direction on 1-minute PM_1, $PM_{2.5}$, PM_{10}, TSP, and BC concentrations. There are roughly 2,000,000 records across the ten locations for each of the PM pollutants and over 360,000 records for BC across four locations. The average concentrations (SD) for each pollutant are as follows: PM_1: 8.3 (6.4) μg/m³; $PM_{2.5}$: 9.1 (6.8) μg/m³; PM_{10}: 23.5 (57.8) μg/m³; TSP: 35.6 (215) μg/m³, and BC: 0.76 (1.25) μg/m³. During time periods when a monitor was downwind of the terminal, all PM and BC concentrations were higher, relative to when the monitor was not downwind of the terminal. These increases are highly statistically significant at the $p<0.0001$ level. For an example of beta coefficient interpretation for this model, the downwind beta coefficient for $PM_{2.5}$ is 0.94, meaning the measured $PM_{2.5}$ concentration was 0.94 μg/m^3 higher when a monitor was downwind of the coal terminal versus not downwind (Table 4).

Relation between visible bulldozer activity and air pollution burden

Table 5 depicts the relation between any visible bulldozer activity at the coal terminal and air pollutant levels, stratified by wind direction at a 1-minute timescale. Sample sizes and mean concentrations are the same as those found in Table 4. As suggested by the beta coefficients at the top of each pollutant group, when there is any visible bulldozer activity, there are increases in all pollutant concentrations on average, relative to when there is no visible bulldozer activity. For an example of beta coefficient interpretation for this model, the visible bulldozer activity beta coefficient for $PM_{2.5}$ is 0.49, meaning the measured $PM_{2.5}$ concentration was 0.49 μg/m^3 higher when visible bulldozer activity was occurring versus when not occurring (Table 5).

Joint association of downwind direction and bulldozer activity with air pollution burden

In Table 5, when there is any visible bulldozer activity at the coal terminal versus not, mean concentrations of all PM pollutants and BC are statistically significantly higher (all $p<0.001$). Further, the bulldozer activity–air pollutant (PM_1, $PM_{2.5}$, PM_{10}, TSP, and BC) association was larger for when an air monitor was downwind of the terminal relative to when not downwind of the terminal (all p-interaction <0.0001). In the wind direction-stratified analysis, for all pollutants in Table 5, when the monitor was downwind of the terminal, beta coefficients were roughly two to three times higher during downwind versus not downwind stratified time periods. Figure 3 visually represents the beta coefficients from the pooled, non-downwind, and downwind results described in Sect. 3.4 and 3.5.

Discussion

This study demonstrated increased PM and BC air pollution burden in a community bordering a coal storage, handling, and export terminal which was related to time-varying patterns of wind direction and visible bulldozer activity at the terminal. Further, when both occurred jointly–i.e., during time periods when the monitoring site was downwind of the coal terminal and there was visible bulldozer activity–PM and BC air pollution burden was greatest. We used an effect measure modification analysis approach to understand evidence of statistical interaction, which demonstrated strong consistency in terms of the direction, order of magnitude, and precision of joint effect estimates across a range of transient time scales (1-, 5-, 15-, 60 min; **Supplementary Results**). The incorporation of NO as a control for local combustion and / or diesel exhaust from the bulldozers also enhanced the ability of the analysis to isolate the relationships of interest related to windblown dust.

Dust sources present particle size distributions that may be uni- or bi-modal, with tailing that extends into the finer particle sizes (Junge 1955; Brahney et al. 2024; Chalvatzaki

Table 3 Descriptive statistics for MODULAIR particulate matter (PM) and DSTech ObservAir black carbon (BC) at the 1-minute time-weighted average, Curtis Bay, Maryland, U.S., 2022–2023

		Location									
Air Pollutant		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
PM_1 (µg/m^3)	n	277,580	164,910	193,681	271,539	291,318	219,475	138,813	200,374	126,630	218,549
	min	0.04	0.05	0.07	0.04	0.07	0.07	0.05	0.09	0.05	0.08
	mean (SD)	8.4 (6.5)	8.2 (6.2)	9.6 (9.2)	8.1 (6.1)	8.0 (6.3)	8.5 (6.0)	7.6 (5.4)	7.7 (5.3)	8.3 (6.0)	7.9 (5.6)
	max	417.0	266.0	449.0	265.1	342.0	70.0	94.0	164.6	112.3	132.2
$PM_{2.5}$ (µg/m^3)	n	276,357	164,774	193,328	271,435	290,949	218,957	138,663	200,134	126,630	218,280
	min	0.09	0.16	0.17	0.09	0.07	0.11	0.05	0.09	0.11	0.18
	mean (SD)	9.3 (7.0)	9.0 (6.6)	10.5 (9.5)	8.7 (6.4)	8.6 (6.5)	9.5 (6.8)	8.3 (5.8)	8.4 (5.5)	9.2 (6.2)	8.8 (5.9)
	max	468.0	267.0	540.1	267.9	343.6	240.9	151.7	166.2	114.6	135.1
PM_{10} (µg/m^3)	n	276,357	164,774	193,328	271,435	290,949	218,957	138,663	200,134	126,630	218,280
	min	0.14	0.25	0.17	0.14	0.07	0.12	0.13	0.09	0.17	0.22
	mean (SD)	26.3 (45.5)	21.3 (38.2)	28.8 (36.5)	17.2 (40.6)	16.8 (16.0)	39.4 (155.2)	18.4 (27.9)	19.9 (19.6)	23.6 (25.5)	23.2 (24.4)
	max	5,151.0	6,814.4	2759.9	4663.7	2156.7	10524.2	5236.8	473.8	1233.6	2999.6
TSP (µg/m^3)	n	276,357	164,774	193,328	271,435	290,949	218,956	138,663	200,134	126,630	218,279
	min	0.14	0.25	0.17	0.14	0.07	0.12	0.13	0.09	0.17	0.22
	mean (SD)	39.3 (181.0)	29.4 (112.0)	43.3 (158.0)	25.1 (163.6)	24.3 (113.8)	67.7 (479.6)	28.2 (210.0)	27.9 (139.1)	38.1 (213.0)	33.7 (145.8)
	max	22,452	13,403	12,013	16,408	20,031	138,808	60,121	19,361	23,870	19,155
Black Carbon (µg/m^3)	n	137,432	137,239	--	--	35,072	--	--	185,754	--	--
	min	-10.7	-8.5	--	--	-1.3	--	--	-6.9	--	--
	mean (SD)	1.1 (1.8)	0.6 (0.7)	--	--	0.6 (0.5)	--	--	0.7 (0.9)	--	--
	max	111.8	17.0	--	--	6.2	--	--	17.2	--	--

Note: Sample size determined by available non-missing trail camera data

TSP = total suspended particles

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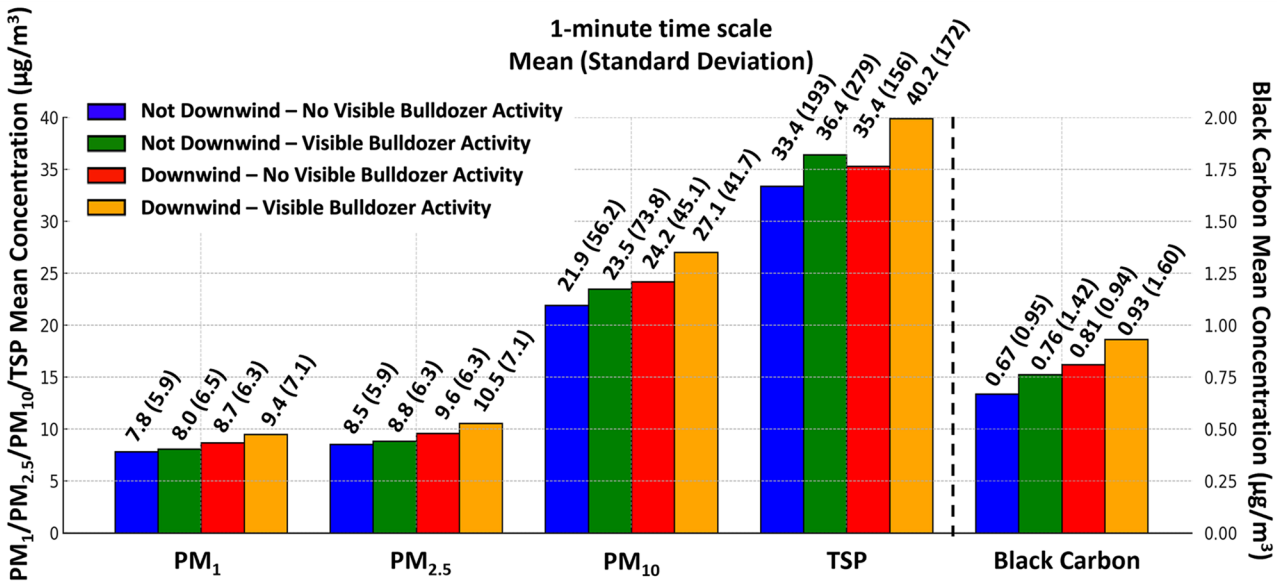

Fig. 2 One-minute average (standard deviation) concentrations of particulate matter (PM) and black carbon (BC) stratified by wind direction and visible bulldozer activity, Curtis Bay, Baltimore, Maryland, U.S., 2022–2023. *Note*: Not downwind: Time periods when monitor was not downwind of coal terminal, Downwind: Time periods when monitor was downwind of coal terminal; TSP = total suspended particles

Table 4 Relation between monitor being downwind of the coal terminal and air pollutant concentration (1-min time scale), Curtis Bay, Maryland, U.S., 2022–2023

	No. of records	Mean of pollutant (SD)	Downwind Beta Coefficient[a]	95% CI	t-value	*p*-value
PM_1(µg/m^3)						
Downwind of coal terminal (yes = 1; no = 0)	2,038,915	8.3 (6.4)	0.66	0.64, 0.68	68.8	<0.0001
$PM_{2.5}$(µg/m^3)						
Downwind of coal terminal (yes = 1; no = 0)	2,035,542	9.1 (6.8)	0.94	0.92, 0.96	93.7	<0.0001
PM_{10}(µg/m^3)						
Downwind of coal terminal (yes = 1; no = 0)	2,035,542	23.5 (57.8)	4.0	3.8, 4.2	43.6	<0.0001
TSP (µg/m^3)						
Downwind of coal terminal (yes = 1; no = 0)	2,035,541	35.6 (215)	5.3	4.6, 6.0	15.1	<0.0001
Black Carbon (µg/m^3)						
Downwind of coal terminal (yes = 1; no = 0)	361,863	0.76 (1.25)	0.11	0.10, 0.12	26.4	<0.0001

Note. PM = particulate matter; TSP = total suspended particles; SD = standard deviation; CI = confidence interval

[a]The beta coefficient is the increase in air pollutant (per µg/m^3) when an air monitor was downwind of the coal terminal versus not downwind. Coefficients are derived from conditional fixed effects linear regression models adjusted for temperature (°C), wind speed (mph), solar radiation (W/m^2), NO (ppb), and time of day (AM/PM)

et al. 2012; Seinfeld and Pandis 2006). Although the mode for the diameter of coal dust is ~10 µm, a substantial fraction of the particles fall in the respirable range under 2.5 µm. Coal dust, like wind-blown dust in general, follows a Gaussian, log-normal distribution (Junge 1955):

$$\frac{dN}{d\,(\log r)} = Cr^{-\beta} \tag{2}$$

where **N** is the number of particles, **r** is their radius, **C** is a constant, and β is a constant ~3 in the classic Junge distribution (Junge 1955). This theory has been experimentally verified for coal and is described in textbooks (Barone et al. 2019; Seinfeld and Pandis 2006; Tessum and Raynor 2017). The large particles will fall out of the atmosphere rapidly, with a settling velocity corresponding to a transport distance of ~1 km, however, smaller particles will persist until rained out in ~1 week (Seinfeld and Pandis 2006). It is thus noteworthy that we observed consistency of associations not only for coarse PM_{10} and TSP, but also for PM_1 and $PM_{2.5}$. Smaller size fraction PM, like PM_1 and $PM_{2.5}$, are pollutants typically associated with regional pollution, traffic, and combustion, while BC is also associated with traffic emissions. Consistency of associations with smaller PM and BC with downwind bulldozer activity may suggest that BC measurements alone or in combination with PM

Table 5 Relation between any visible bulldozer activity at the coal terminal and air pollutant levels, stratified by wind direction (1-min time scale), Curtis Bay, Maryland, U.S., 2022–2023

	No. of records	1-min mean air pollutant (SD)	Visible bulldozer activity beta coefficient[a]	95% CI	t-value	*p*-interaction
Any visible coal terminal bulldozer activity (yes = 1; no = 0)						
PM_1(μg/m^3)[b]	**2,038,915**	**8.3 (6.4)**	**0.40*****	**0.38, 0.42**	**47.3**	
Wind direction (downwind of coal terminal)	579,645	9.0 (6.8)	0.74***	0.71, 0.77	45.3	< 0.0001
Wind direction (not downwind of coal terminal)	1,459,270	8.0 (6.3)	0.26***	0.24, 0.28	31.3	
$PM_{2.5}$(μg/m^3)[b]	**2,035,542**	**9.1 (6.8)**	**0.49*****	**0.47, 0.50**	**54.8**	
Wind direction (downwind of coal terminal)	578,530	10.0 (7.0)	0.88***	0.85, 0.92	51.9	< 0.0001
Wind direction (not downwind of coal terminal)	1,457,012	8.8 (6.6)	0.32***	0.30, 0.34	31.3	
PM_{10}(μg/m^3)[b]	**2,035,542**	**23.5 (57.8)**	**1.3*****	**1.2, 1.5**	**16.2**	
Wind direction (downwind of coal terminal)	578,530	25.5 (43.8)	2.4***	2.2, 2.6	21.1	< 0.0001
Wind direction (not downwind of coal terminal)	1,457,012	22.7 (62.5)	0.9***	0.7, 1.1	8.6	
TSP (μg/m^3)[b]	**2,035,541**	**35.6 (215)**	**2.2*****	**1.6, 2.8**	**7.1**	
Wind direction (downwind of coal terminal)	578,530	37.5 (163)	4.0***	3.1, 4.9	9.2	< 0.001
Wind direction (not downwind of coal terminal)	1,457,011	34.8 (233)	1.5***	0.7, 2.3	3.8	
Black carbon (μg/m^3)[c]	**361,863**	**0.77 (1.25)**	**0.09*****	**0.08, 0.10**	**25.0**	
Wind direction (downwind of coal terminal)	112,098	0.88 (1.32)	0.14***	0.12, 0.15	18.6	< 0.0001
Wind direction (not downwind of coal terminal)	249,765	0.72 (1.22)	0.07***	0.06, 0.08	17.3	

[a]The beta coefficient is the increase in air pollutant (per μg/m^3) when any bulldozer activity was versus was not observed. Coefficients are derived from conditional fixed effects linear regression models adjusted for temperature (ºC), wind speed (mph), solar radiation (W/m^2), NO (ppb), and time of day (AM/PM)

[b]Models include data from air monitoring locations 1 through 10

[c]Models include data from air monitoring locations 1, 2, 5, and 8

*p-value < 0.05, **p-value < 0.01, ***p-value < 0.001

Note. PM = particulate matter; TSP = total suspended particles; SD = standard deviation; CI = confidence interval

may have utility for identifying black PM air pollution, like coal dust, more broadly in communities bordering coal storage, handling, and export facilities. Black carbon monitors' measurement methods select for fine mode aerosol while coal dust is generally coarse mode so future efforts should include speciated PM_{10} or TSP.

We employed a fixed effects regression modeling approach which cannot be confounded by factors that do not vary at the same time scale as the temporal scale of the exposure-response being investigated. The results of this regression modeling approach for PM_1, $PM_{2.5}$, PM_{10}, TSP and BC support the hypothesis that mean concentrations of these air pollutants are higher when the winds blow toward monitoring locations downwind from the coal terminal. The statistical methodology adopted has certain limitations. When only considering downwind wind direction as the exposure, there is a chance of potential confounding from another source of pollution coming from the same direction as the coal terminal. This confounding risk is mitigated to a large extent when using the visible bulldozer activity data as the exposure as it is unlikely that there is another temporal confounder that is highly concurrent with bulldozer activity, particularly as we control for local combustion and / or diesel exhaust from the bulldozer activity. The assumption of linearity in the fixed effect models used can also be violated. The current analysis also only offers an average effect size based on pooled data from all ten air monitoring sites. Separate site-specific analysis can reveal variability in these effect sizes and how they relate to distance from the coal terminal.

Our focus on transient exposure-response time scales reflects the community lived experience involving reports of frequent short term dust events that recur frequently (analogous to our 1-min, 5-min, and 15-min time scales) as well as longer events that have been documented (analogous to our 60-min time scale). Curtis Bay community members recently documented an example of a longer high visibility fugitive dust event at the coal terminal which lasted for approximately 30 min (Shen 2024; South Baltimore Community Land Trust (SBCLT), 2024). The consistency of our exposure-response associations across all times scales considered (1-min, 5-min, 15-min, and 60-min) for both explanatory variables (downwind of the coal terminal and visible bulldozer activity) and all PM and BC air pollutants (Figs. 3, S4-S6; Table S8) is coherent with neighbors' reports about the nature of fugitive dust events.

To our knowledge, this study is the first to investigate the relation between wind direction and coal terminal activity upon the air pollution burden in a proximal fenceline community. This study has some limitations including TSP

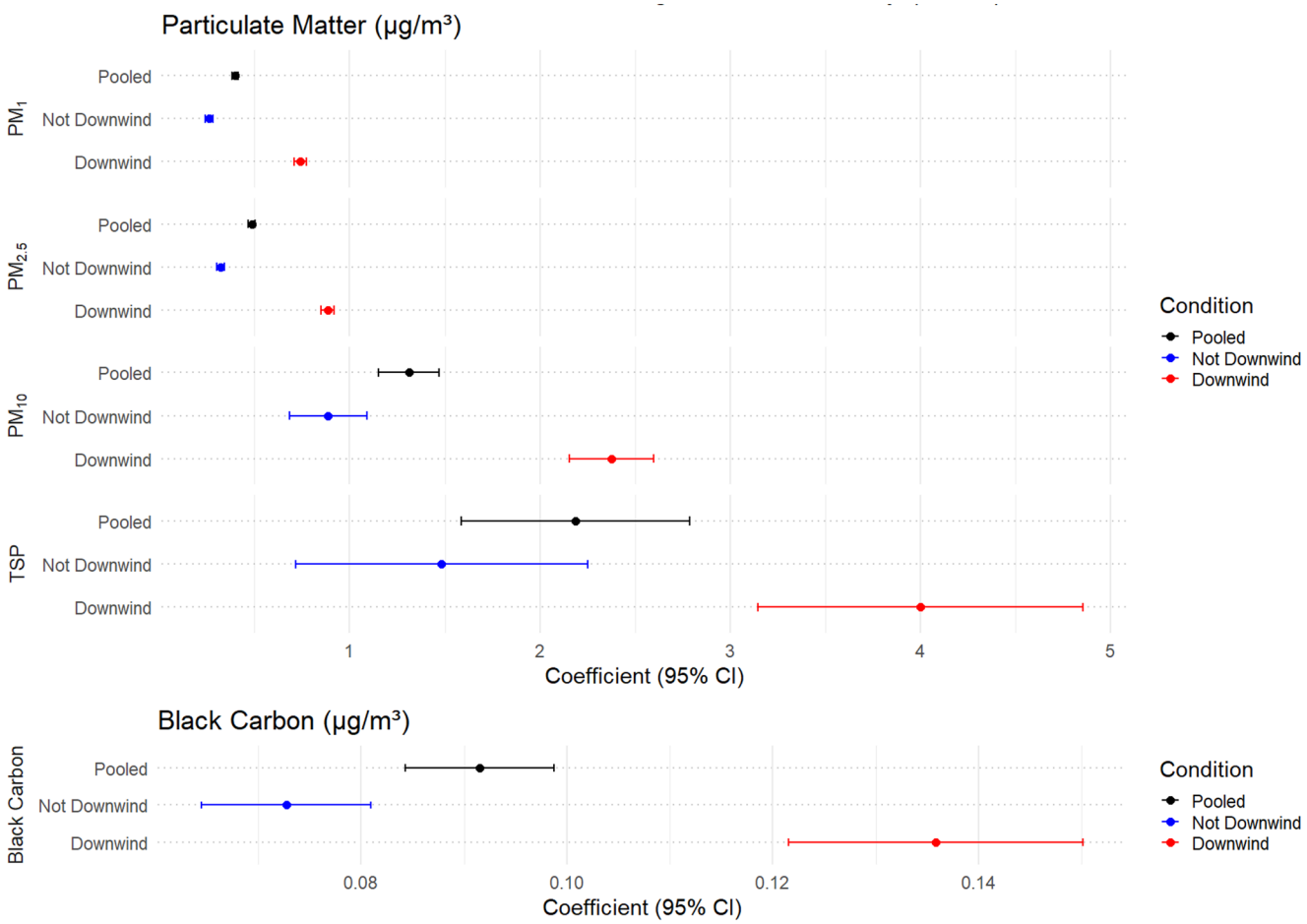

Fig. 3 Forest plot showing magnitude of beta coefficient and 95% confidence interval (CI) estimates of the relation between any visible bulldozer activity at the coal terminal and changes in PM_1, $PM_{2.5}$, PM_{10}, total suspended particles (TSP) and black carbon (BC) stratified by time periods that were downwind of the coal terminal versus not at 1-minute average time intervals, Curtis Bay, Baltimore, Maryland, U.S., 2022–2023. *Note.* Binary any visible bulldozer activity versus none was defined as: If a 1-minute time period had any visible bulldozer activity = 1; if a 1-minute time period did not have any visible bulldozer activity = 0. All p-interaction < 0.001 for PM_1, $PM_{2.5}$, and PM_{10}, TSP, and BC. Coefficient = Beta coefficient of conditional fixed effects linear regression model for the relation between any visible bulldozer activity at the coal terminal and air pollutant levels

measurements by moderate-cost sensors do not have a convenient reference comparator for validation and calibration, unlike $PM_{2.5}$, PM_{10}, and BC. Observed variation in TSP values with large standard deviations may be attributed to instrument error or natural variability due to the higher settling velocity of larger particles resulting in spatial heterogeneity on scales of ~ 100 m. In the coding of trail camera data, tree foliage inhibited the identification of bulldozer activity on certain coal piles during certain times of year. During these times, if there was no bulldozer activity at visible coal piles, the observation was coded as no activity "0" rather than missing ".". We hypothesize that this could have led to an underestimate of the true extent of bulldozer activity that was occurring on the coal piles during these tree foliage-impacted times of year. However, this potential misclassification of bulldozer activity was likely non-differential with respect to the outcome (air pollution).

Our study also has several notable strengths. Our research questions were informed by the concerns, observations, and experiences of Curtis Bay community members who have lived proximal to the coal terminal for decades. This guided our analytic approach involving conditional fixed-effects regression modeling of multi-pollutant data. Thereby, we controlled for time-invariant characteristics of each location, such as proximity to pollution sources or local infrastructure, which could otherwise confound our observed association. By focusing on within-monitor variation in air pollutants over time, fixed-effects models isolated the effects of wind direction and visible bulldozer activity while removing the potential influence of location-specific non-time varying factors. Another strength is the use of the MODULAIR multi-pollutant air sensor which monitors dust in multiple particle size bins. This may be used for quality control to improve confidence in results– i.e., temporal

patterns observed in multiple, independent channels are more realistic in mixed urban/industrial environments than a unique signal in a discrete particle size bin.

Future directions for this line of research could extend the conditional fixed effects regression modeling approach to other time-resolved activity patterns at the coal terminal. While our analysis focused on visible bulldozer activity due to its association with general terminal operations, future analyses can be extended to code time-resolved activity patterns of coal transport by trains, coal ship / barge activity, coal pile height, and use of the dust wet suppression system. Additionally, the conditional fixed-effects regression modeling approach used assumes a linear relationship, and future studies could explore other non-linear approaches, assess and account for potential unmeasured temporal confounding and lags. Our preliminary analysis of how air quality burden varies with proximity of the measurement sites to the coal terminal could be expanded to investigate location-specific and other spatial patterns. Further, there are opportunities for source attribution analyses to identify combinations of air pollutants that are associated with coal terminal emissions.

Short-term exposure to PM has been increasingly linked to adverse health outcomes, with more research still needed (Gutiérrez-Avila et al. 2023; Orellano et al. 2020). Fine PM (PM_1 and $PM_{2.5}$) are of particular concern due to their ability to penetrate deep into the respiratory tract and enter the bloodstream, exacerbating cardiovascular and respiratory conditions. Acute exposure to PM_{10} has been associated with increased hospital admissions for asthma, bronchitis, and chronic obstructive pulmonary disease (COPD), as well as heightened risks of stroke and cardiac events (Alessandrini et al., 2016, Orellano et al. 2020). These impacts are particularly pronounced in vulnerable populations such as children, the elderly, and individuals with pre-existing health conditions. Both long-term and acute exposure to BC have been linked to morbidity and mortality due to cardiovascular and respiratory disease (Song et al. 2022; Luben et al. 2017; Hvidtfeldt et al. 2019; Ostro et al. 2015; Janssen and Joint 2012), in addition to marked impacts upon fetal, pediatric, and maternal health outcomes (Paunescu et al. 2019; Goriainova et al. 2022). Residents in communities of color and low wealth are also disproportionately exposed to PM, BC, and other forms of air pollution, experience elevated impacts of this pollution, and are often overburdened by the cumulative impacts of other chemical and non-chemical stressors. Higher $PM_{2.5}$ exposure was also observed for Hispanic and Black residents in San Francisco, CA living near uncovered coal by rail transport infrastructure(Ostro et al. 2024).

Community observations, actions taken by state/local governments, and the results of this research suggest additional measures are warranted to end or mitigate fugitive dust emissions related to coal terminal operations and neighborhood health and quality of life impacts associated with such emissions. Currently, the facility maintains a wet dust suppression system and has a partial porous wind fence at the southern edge of the coal terminal. When restricting our analysis to the one location within the network on the opposite side of the wind fence, our results were generally consistent with the analysis that pooled data across all locations. This suggests that off-site community air pollution burden is not reduced by wind screen netting mitigation strategies. A range of additional strategies have been submitted by community members. These include, but are not limited to: (1) denial of the application for the renewal of its operating permit based on a record of complaints and violations; (2) full enclosure of the coal piles paired with enforceable limits on PM from the terminal; (3) the imposition of fees on a per-ton basis of coal transferred through the terminal to mitigate negative externalities; and (4) transitioning to the storage and handling of a safer material at the facility.

Conclusions

The findings of this study demonstrated higher PM and BC air pollution burden in Curtis Bay when downwind of the coal terminal and when there was visible bulldozer activity–highest air pollution burdens were observed when both occurred jointly. Results are consistent with the lived experiences of Curtis Bay community members who have documented ongoing, repeated patterns of black dust accumulation at and around their homes alongside recordings of transient fugitive black dust plumes at the coal terminal. Further context for our findings is provided by a recent study demonstrating the detection of coal dust in the black dust that accumulates in residential and community spaces of the Curtis Bay neighborhood (Aubourg et al. 2024). Overall, our findings in context with complementary research and community experiences contribute to a coherence of data across varied analytical and observational platforms that respond to residents' questions and concerns with dark dust accumulation in Curtis Bay. Compared to both Baltimore City and the State of Maryland, the Curtis Bay community is overburdened by cumulative impacts of economic hardship, high vacancy rates, historical pollution burden, and health disparities such as higher mortality due to chronic obstructive pulmonary disease and lung cancer (Baltimore City Health Department 2017). Strategies to mitigate the observed air pollution burdens in the Curtis Bay community appear warranted, including those that could prevent

windblown and mechanical dusts that might be associated with operating practices at the coal terminal.

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Data availability De-identified data will be made available upon request.

Declarations

Ethics approval and consent to participate This study was reviewed and determined to be not human subjects research (NHSR) by the Johns Hopkins Bloomberg School of Public Health Institutional Review Board (IRB).

Consent for publication Not applicable.

Competing interests MAA serves as an unpaid member of the board of directors of the South Baltimore Community Land Trust (SBCLT), starting on June 24, 2024. The other authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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EXHIBIT F - 17

EXHIBIT G

1993 Curtis Bay Permit to Operate

KEEP PERMIT AT SITE

CONTROL NO. 05201

State of Maryland

DEPARTMENT OF THE ENVIRONMENT

AIR AND RADIATION MANAGEMENT ADMINISTRATION

AIR MANAGEMENT ADMINISTRATION

2500 BROENING HIGHWAY

BALTIMORE, MARYLAND 21224

William Donald Schaefer
Governor

David A.C. Carroll
Robert Perciasepe
Secretary

[ ] Construction Permit [X] Operating Permit

PERMIT NO. 24-02263

PERMIT FEE To be paid in accordance with COMAR 26.11.02.20

Date Issued October 1, 1993

Expiration Date September 30, 1998

LEGAL OWNER & ADDRESS

CSX Transportation
Baltimore & Ohio Railroad Company
Patapsco Avenue
Baltimore MD 21226

SITE

Curtis Bay Ore & Coal Pier
Baltimore MD

Baltimore City

SOURCE DESCRIPTION

Ore Facility consisting of two Dravo clamshell unloaders and various weigh hoppers controlled by a wet suppression system.

Coal Facility Consisting of rail car unloading, transfer stations, and ship and barge loading controlled by a wet suppression system.

One bulk pelletized ash handling system with baghouses and a wet suppression system for the control of particulate matter emissions.

This permit is issued subject to the attached terms and conditions, and compliance with all applicable laws and regulations.

Angela Bruce
Program Administrator

Director, Air Management Administration
Director, Air & Radiation Management Adm.

AMA-1 (Rev. 10-1-89)
MDE 130

EXHIBIT G - 1

(NOT TRANSFERABLE)

CSX-CURTIS BAY ORE & COAL PIER
OPERATING PERMIT NO. 24-02263

This permit is subject to the following terms and conditions:

Part A - General

1. Except as otherwise provided in the following provisions, the Company's application is incorporated as part of this Permit to Operate. That application consists of the original application signed by the Company on September 23, 1993 and all amendments to the application. If there are any discrepancies between the permit conditions specified below and the application, the conditions on this permit will take precedence.

2. Right of Entry:

   The Secretary, Department of the Environment, or the Secretary's authorized representative, including inspectors of the Air & Radiation Management Administration, shall be afforded access to the Company's property at reasonable times and upon presentation of credentials:

   a. to determine compliance with the permit and applicable regulations;
   b. to sample any waste, air, or discharge into the atmosphere;
   c. to inspect any monitoring equipment required by this permit or applicable regulations;
   d. to have access to and copy any records required to be kept by this permit or by applicable regulations; and
   e. to obtain any photographic documentation or evidence.

3. The sources and equipment covered by this permit are subject to:

   a. all rules and regulations of Title 26. Subtitle 11, Air Quality, of the Code of Maryland Regulations including specific requirements that appear at COMAR 26.11.06.02C(2), COMAR 26.11.06.03C(1) and COMAR 26.11.06.03D;
   b. all terms and conditions required by construction permits, New Source Review (NSR) approvals, and Prevention of Significant Deterioration (PSD) approvals issued by the Department unless superseded by subsequent permits.

4. Severability: If any provision of this permit shall be held invalid for any reason, the remaining provisions shall remain in full force and effect, and such invalid provision shall be considered severed and deleted from this permit.

5. Nothing in this permit authorizes the violation of any rule or regulation nor the creation of a nuisance or air pollution.

6. The Company shall report periods of excess emissions to the Department as required by COMAR 26.11.01.07.

7. By April 1 of each year during the term of this permit, the Company shall submit to the Department, for the previous calendar year, a certified emissions statement as required under COMAR 26.11.02 and COMAR 26.11.01.05-1.

   The Company shall maintain the following 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:

      i. significant maintenance performed,
      ii. malfunctions and downtime, and
      iii. episodes of reduced efficiency of all the 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.

8. By April 1 of each year during the term of this permit, the Company shall certify in writing to the Department the results of an air toxics analysis for the previous calendar year. The air toxics analysis shall include either:

   a. a statement that the Company's previously submitted toxics compliance demonstrations remain valid; or
   b. if changes in the Company's operations warrant, a new toxics compliance demonstration developed in accordance with the requirements set forth under COMAR 26.11.15.

CSX-CURTIS BAY ORE & COAL PIER
OPERATING PERMIT NO. 24-02263

Part B - Operation

1. The Company shall keep all air pollution control equipment, including the water sprays, properly maintained and in good working order so as to assure full and continuous compliance with all applicable regulations.

2. The Company shall notify the Department at least seven days ahead of time, of any expected ore shipment of Rutile or Richard Bay Slag.

STATE OF MARYLAND-DEPARTMENT OF THE ENVIRONMENT
Air Management Administration
2500 Broening Highway
Baltimore, Maryland 21224

APPLICATION FOR PERMIT TO OPERATE PROCESS EQUIPMENT

I. PREMISE IDENTIFICATION:

CSX Transportation, Inc. — 2263
PREMISE NAME OR IDENTIFICATION — PREMISE NUMBER

Curtis Bay Piers, Patapsco Ave., Baltimore, Md. 21226 - Balto. City
PREMISE ADDRESS — COUNTY

II. EQUIPMENT IDENTIFICATION:

☒ SINGLE INSTALLATION ☐ PROCESS LINE ☐ IDENTICAL UNITS AND NO. _____

III. DESCRIBE EQUIPMENT AND ITS MAJOR FUNCTION. STATE TYPE AND SIZE EQUIPMENT AND TYPE CONTROL DEVICE ASSOCIATED WITH THIS EQUIPMENT ONLY.

Ore facility consisting of two Drave clamshell unloaders and various weigh hoppers controlled by wet suppression system.
Coal facility consisting of rail car unloading, transfer stations and ship and barge loading controlled by wet suppression system.
One bulk pelletized ash handling system with baghouses and a wet suppression system for the control of particulate matter emissions.

IV. STATUS OF CONTROL EQUIPMENT:

(a) ☐ NO CONTROL EQUIPMENT NECESSARY. EMISSIONS _____.

(b) ☒ EXISTING CONTROL EQUIPMENT SATISFACTORY. EMISSIONS _____.

☐ YES ☒ NO EQUIPMENT STACK TESTED ON SITE. DATE _____.

☐ YES ☒ NO EQUIPMENT TO BE TESTED, DATE _____.

(c) ☐ CONTROL EQUIPMENT PRESENTLY BEING CONSTRUCTED OR SCHEDULED FOR CONSTRUCTION.

STARTING DATE _____ ESTIMATED COMPLETION DATE _____.

☐ YES ☐ NO EQUIPMENT TO BE STACK TESTED, DATE _____.

(d) ☐ NON-COMPLIANCE.

G. Kallweit
SIGNATURE AND TITLE

G. S. Kallweit, Manager, Curtis Bay Piers

September 23, 1993
DATE

EXHIBIT G - 5

AMA-26

DENV 73

DO NOT WRITE BELOW THIS LINE

FIELD REPORT

INSPECTOR:	DATE OF INSPECTION:	PERSON CONTACTED:
S. J. Ray	7-22-93 7-26-93	G. Kallaweit S. Wilbur

DISCUSSION, CONDITIONS AND RECOMMENDATION:

This premise consists of three facilities: a coal exporting facility, an ore importing facility, and a bulk pelletized ash handling system.

The coal exporting facility consists of two railcar dumpers, covered conveyor belts, and a telescoping loading spout. The raildump is equipped with water sprays to control fugitive dust. Coal is transferred directly from the raildump to barges or ships. There are no coal stockpiles at this site. During the inspection, this facility was observed in action. No fugitive dust was created.

The ore importing facility consists of two Dravo clamshell unloaders, conveyors, and hoppers. Ore is clamshelled either directly through hopper onto trucks, or is unloaded onto a conveyor belt that carries the material to a loadout building which houses an upper a weigh, and a lower hopper. From here ore is loaded onto railcars or trucks. Canvas shrouds are used to control emissions from transfer points in the ore loadout building. As of early 1991, the company has not been handling two (2) types of especially dusty ores, Rutile and Richard Bay Slay. During the inspection, a ship containing aluminum tri-hydrate was observed being unloaded. The material was moist. It was unloaded directly onto trucks. Fugitive dust from the unloading operation was well under control.

A bulk pelletized ash handling system was constructed in 1990. A combination of several dust collectors at transfer points of the covered conveyors, and water sprays on the unloading hoppers and downspouts is set up to control fugitive dust from this operation. However, pelletized ash can also be handled at the ore importing facility. On 7-22-93, a pelletized ash unloading operation was observed at this facility. Fugitive dust was with controlled by adequate water spraying system.

24-02263

OK RN

DO NOT WRITE BELOW THIS LINE

FIELD REPORT

INSPECTOR:	DATE OF INSPECTION:	PERSON CONTACTED:
S. J. Ray	7-22-93 7-26-93	G. Kallaweit S. Wilbur

DISCUSSION, CONDITIONS AND RECOMMENDATION:

This premise consists of three facilities: a coal exporting facility, an ore importing facility, and a bulk pelletized ash handling system.

The coal exporting facility consists of two railcar dumpers, covered conveyor belts, and a telescoping loading spout. The raildump is equipped with water sprays to control fugitive dust. Coal is transferred directly from the raildump to barges or ships. There are no coal stockpiles at this site. During the inspection, this facility was observed in action. No fugitive dust was created.

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A bulk pelletized ash handling system was constructed in 1990. A combination of several dust collectors at transfer points of the covered conveyors, and water sprays on the unloading hoppers and downspouts is set up to control fugitive dust from this operation. However, pelletized ash can also be handled at the ore importing facility. On 7-22-93, a pelletized ash unloading operation was observed at this facility. Fugitive dust was with controlled by adequate water spraying system.

24-02263

OK RH

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MARYLAND DEPARTMENT OF THE ENVIRONMENT
2500 Broening Highway • Baltimore, Maryland 21224
(410) 631-3000

William Donald Schaefer
Governor

David A.C. Carroll
Secretary

September 15, 1994

Mr. G.S. Kallaweit, Manager
Curtis Bay Pier
CSX Transportation, Inc.
Baltimore and Ohio Railroad Company
Patapsco Avenue
Baltimore MD 21226

Dear Mr. Kallaweit:

Enclosed please find the renewal of your State Permit to Operate. Permits now have a term of up to five years instead of one year. The permit fee, however, must be paid annually and is due before each twelve (12) month anniversary of the date of the permit issuance by the Department. The Department will invoice you for the annual permit fee. Failure to pay the annual fee will invalidate your State Permit to Operate.

As in the past, the permit contains both general conditions, which apply to all permit-to-operate holders in Maryland, and specific conditions, which apply to your Facility's particular operations.

Please note that the general conditions contained in your permit now include a Condition No. 7 that requires you to submit to the Department, by April 1 of each year, your emissions of certain pollutants for the previous calendar year. This submittal is required by COMAR 26.11.02. Also, Condition No. 8 requires an evaluation of your Facility's compliance status for the previous calendar year with regard to Maryland's air toxics control regulations.

Also, please note the changes made on Part B - Operation Condition 2. You are now required to notify the Department of any expected ore shipment of Rutile or Richard Bay Slag.

Please be reminded that you are responsible for compliance with all conditions contained in your permit. Failure to comply with any condition of your permit may result in administrative, civil and/or criminal penalties as provided for in the Environment Article of the Annotated Code of Maryland.

"Together We Can Clean Up"

TDD FOR THE DEAF (410) 631-3009

Recycled Paper

If you have any questions regarding the issuance of this permit or on the annual fee, please contact Ms. Jeanette Wolfe at (410) 631-3225.

Sincerely,

Angelo Bianca Jr

Angelo Bianca, Administrator
Permit and Enforcement Policy Office
Air & Radiation Management Administration

AB/jm

Enclosure

cc: B. Frank Courtright with copy of permit
Baltimore City Health Department

EXHIBIT H

MDE Final Determination Appendix A
(Community Individual Comments)

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Aaron Favin <Aaron.Favin@messages.fwwatch.org> Fri, Dec 13, 2024 at 7:54 AM
Reply-To: Aaron Favin <afavin@verizon.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a concerned resident of Maryland, I strongly urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the well-being of Maryland's residents and to safeguard our clean energy future, it is imperative to halt these operations.

A study conducted last year by the South Baltimore Community Land Trust, Johns Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed the presence of airborne coal dust in South Baltimore, attributed to CSX Transportation's activities. This fine coal dust can penetrate deep into the lungs, contributing to various respiratory and cardiovascular diseases.

Maryland must move away from reliance on the fossil fuel industry. To achieve 100% clean energy by 2035, we cannot support corporations that jeopardize the health of our people and environment. Denying this permit will help transition Maryland towards a cleaner, healthier future.

In September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a South Baltimore playground. The Maryland Department of the Environment cannot permit CSX Transportation to continue endangering our most vulnerable, particularly in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation’s operating permit, as the health of Marylanders and the protection of our environment are too critical to risk. Additionally, CSX Transportation should be required to collaborate with local activists, the community, and the Maryland Department of the Environment to address the harm inflicted and prevent further damage until its eventual closure.
Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Aaron Favin
213 Lower Country Dr
Gaithersburg, MD

EXHIBIT H - 1

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Aaron Favin <Aaron.Favin@messages.fwwatch.org> Sat, Nov 16, 2024 at 6:06 PM
Reply-To: Aaron Favin <afavin@verizon.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I strongly urge you to deny CSX Transportation's permit for its Baltimore coal terminal. To protect the health of our communities and ensure a clean energy future, we must stop these operations.

A recent study by the South Baltimore Community Land Trust, Johns Hopkins University, the University of Maryland, and the Maryland Department of the Environment revealed that airborne coal dust linked to CSX Transportation's activities has been found in South Baltimore. This fine coal dust can penetrate deep into the lungs and is associated with various respiratory and cardiovascular diseases.

Maryland must move away from reliance on the fossil fuel industry. Achieving 100% clean energy by 2035 means we cannot support corporations that endanger public health and the environment. By denying this permit, the Maryland Department of the Environment can help lead our state toward a cleaner, healthier future.

In September, CSX Transportation caused a "coal storm" that released smoke and coal dust near a playground in South Baltimore. It is unacceptable for the Maryland Department of the Environment to allow CSX to continue harming vulnerable communities, particularly those that are underserved and predominantly composed of low-income people of color.

I urge you to deny CSX Transportation's operation permit, as the health and well-being of Marylanders must come first. Furthermore, CSX should be required to collaborate with local activists, the community, and the Maryland Department of the Environment to address the damage caused and to prevent further harm until the eventual closure of their operation Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Aaron Favin
213 Lower Country Dr
Gaithersburg, MD

EXHIBIT H - 2

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Aaron Klaus <Aaron.Klaus@messages.fwwatch.org> Thu, Dec 12, 2024 at 11:54 AM
Reply-To: Aaron Klaus <aarondklaus@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Aaron Klaus
8314 Spruce Hill Dr
Laurel, MD

EXHIBIT H - 3

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

aimee coogan <aimee.coogan@messages.fwwatch.org> Fri, Nov 15, 2024 at 9:52 AM
Reply-To: aimee coogan <aimeecoogan@verizon.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
aimee coogan
16960 Oakmont Ave
Gaithersburg, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Amanda Griffin <Amanda.Griffin@messages.fwwatch.org> Sun, Nov 17, 2024 at 10:26 PM
Reply-To: Amanda Griffin <amastro1002@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Amanda Griffin
6815 Little Barley Dr
Marriottsville, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Amanda Preston <Amanda.Preston@messages.fwwatch.org> Fri, Nov 15, 2024 at 11:10 AM
Reply-To: Amanda Preston <amandpa@yahoo.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Amanda Preston
7939 Stonehearth Rd
Severn, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Amy Shepard <Amy.Shepard@messages.fwwatch.org> Fri, Dec 13, 2024 at 5:30 PM
Reply-To: Amy Shepard <aashepard94@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Amy Shepard
738 Pearson Point Pl
Annapolis, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Andrew Hinz <Andrew.Hinz@messages.fwwatch.org> Fri, Nov 15, 2024 at 1:10 PM
Reply-To: Andrew Hinz <ahinz61@outlook.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Andrew Hinz
1427 Park Avenue
Baltimore, MD

Hello, my name is Andrew Hinz, I have lived in the 1400 block of Park Avenue Baltimore City since 2013, in the Bolton Hill neighborhood. I live 3 blocks from a CSX rail line being retrofitted to handle larger container cars. Our last rail accident was in 2012 I believe, a chemical spill outside the entrance to the Howard Street tunnel. Coal is not generally transported on this line but, like all rail neighbors, we are at the mercy of federal regulations and are one bad president away from bomb trains and nuclear waste transport and living in a blast zone. I thank my U.S. Representative Kweisi Mfume for having my back and working on this issue.

The current draft permit, besides being grossly overdue, is sloppy and unworkable. Rather than a hodgepodge of partially valid CSX documents painted over with vague Maryland Department of the Environment direction, the permit should be as tightly written as COMAR text, specific, with nothing left to doubt or predatory litigation.

I'll write a first draft for you right now:

"Given the health emergency in Curtis Bay, no coal dust is permitted to leave CSX Coal Pier property or easements. If coal dust is found to be leaving CSX Coal Pier property or easements CSX will cease operation of the Coal Piers and transportation or transfer of coal until a Resume Work Order is issued by the Maryland Department of the Environment, who will determine the cause of the dust leaving the CSX Coal Pier property or easements and prescribe a remedy that will be in place before operation resumes."

As to the elephant in this room, climate change (better stated as biosphere failure resulting from fossil fuel emissions), Baltimore exports enough Greenhouse Gases in coal to completely negate our Maryland Climate action plan (we export as much GHG emissions as we cause here). Our Governor is betting our futures on this fundamentally flawed climate action plan.

Governor, you must commit TODAY to a date certain by which Maryland will stop permitting the export of climate chaos and by which state fossil fuel workers will be employed in our green economy.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Andrew Kass <Andrew.Kass@messages.fwwatch.org> Fri, Nov 15, 2024 at 9:46 AM
Reply-To: Andrew Kass <andrewkass@comcast.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Andrew Kass
816 Cabin John Parkway
Rockville, MD

My name is Angela Shaneyfelt. I have lived in Curtis Bay for 16 years. I am here to say to MDE and to Governor Moore that You need to deny the operation permit for CSX. The permit as it reads now is so far short of the simple human right to breathe Fresh Air that it's disgusting.
I have not opened my windows in 15 years, yet the dust still makes its way inside my home. My Husband suffers from respiratory issues regularly. My kids have asthma. I now have been treated for asthma.
As for the restrictions that have been added into the draft, there is no possible way to build a barrier wall that will work (there's already a warehouse and we've proven that the dust still comes into our community - including my daughter's school all the way up the hill). In this draft plan, the dust will rise above the wall and continue to pollute our community. Open air has no ceiling. The enforcement... CSX budgets the amount of fines that they will get in a year. Why? Because they know the damage that the coal dust is causing on a daily basis to our community. The fines do not affect their bottom line. Instead they ramp up the amount of coal that they process thus damaging our health even more. This is not acceptable.
Our community has suffered enough for way too many years. Now is the time to change! Now is the time for MDE and the state to hold CSX accountable for these damages and deny this permit completely. There needs to be No More Coal in Curtis Bay. We deserve to breathe Fresh Air. We have other options for our port and our economy other than coal - we have to - but getting there has to start with a change from our leaders. You've ignored the problem for literally decades but that has to stop and we are asking for this to be the beginning of a new chapter that doesn't sacrifice or displace or dump on entire communities to increase profits. We're all in this together - so let's start acting that way.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Ann Foxen <Ann.Foxen@messages.fwwatch.org> Thu, Dec 12, 2024 at 1:06 PM
Reply-To: Ann Foxen <whitefoxen@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Ann Foxen
1907 AUGUST DR
SILVER SPRING, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Anne Pearson <Anne.Pearson@messages.fwwatch.org> Thu, Dec 12, 2024 at 1:28 PM
Reply-To: Anne Pearson <aplace04@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Anne Pearson
2041 Shore Dr.
Edgewater, MD

By: Ariel Smith daughter of Angela Shaneyfelt.

Once upon a time, people thought coal was a gift from the Earth. It was a black, shiny rock that could be burned to create heat and light. It fueled the Industrial Revolution, powering factories, trains, and ships. But as time passed, people began to realize that coal had a dark side.

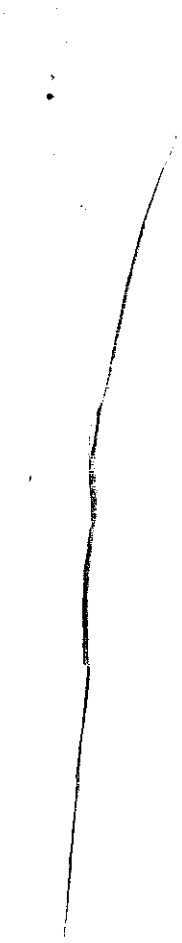
When coal is moved, it releases harmful dust into the air. This dust can cause respiratory problems, heart disease, and even cancer. They can also make the rain turn acidic, which can damage forests, lakes, and rivers. The dust pollutes the land and water.

The people who work in coal mines face many dangers. They can be crushed by falling rocks, injured in explosions, or develop black lung disease. The work is often dirty and physically demanding. , as it can lead to environmental damage and social problems.

Even though coal has helped to improve people's lives in some ways, it has also caused a great deal of harm. We need to find new ways to produce energy that are cleaner and safer. We should transition to clean energy sources such as solar, wind, and geothermal power.

The transition to clean energy will not be easy. It will require significant investments and changes in our way of life. But the benefits will be great. A clean energy future will improve our health, protect our environment, and create new jobs.

In Maryland, the Maryland Department of the Environment (MDE) has a crucial role to play in this transition. MDE is responsible for regulating the state's environmental laws. One of the most important decisions MDE will need to make is whether to renew the permit for the CSX terminal in Curtis Bay.



The CSX terminal is one of the oldest and dirtiest in the United States. It emits significant amounts of pollution into the air and homes. The coal is also located in a densely populated area, which puts the health of thousands of people at risk.

MDE should not renew the permit for the CSX. Instead, the agency should support the closure of the plant and the development of renewable energy projects in Maryland. Closing the CSX terminal would improve air and water quality, reduce greenhouse gas emissions, and create jobs in the clean energy.

Let us work together to build a better world. A world where we use clean energy and take care of our planet. A world where everyone can live a healthy and happy life.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Arlene Kerber <Arlene.Kerber@messages.fwwatch.org> Sun, Nov 17, 2024 at 10:34 AM
Reply-To: Arlene Kerber <agkerber@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

The Maryland Department of the Environment can make a difference. The agency needs to do the right thing. As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Arlene Kerber
5376 Mad River Ln
Columbia, MD

Suna Yi Sariscak
Manager, Air Quality Permits Program
Air and Radiation Administration
Maryland Department of the Environment
1800 Washington Blvd.
Baltimore, MD 21230
July 19, 2024

Re: CSX Permit Approval

Dear Ms. Sariscak:

We are students in the University System of Maryland and are concerned about the prospect of a renewed permit for CSX to operate in the Curtis Bay community. We are writing to express concern that CSX has not been adhering to the provisions of its permit, and we fear that if their permit is renewed, these violations will continue. This is particularly distressing because of the ongoing impact CSX's operations have on the people living close to the facility. We respectfully request that you revoke CSX's permit for Curtis Bay because it has not complied with, and will likely continue to disregard, the requirements of its previous permit. Please consider this letter and others submitted by the public, when making this critical decision.

CSX is in clear violation of Part B (3)(e) of its permit, COMAR 26.11.06.08, which states, "An installation or premises may not be operated or maintained in such a manner that a nuisance or air pollution is created."[1] For years, the residents of the Curtis Bay community have reported the presence of coal dust in their community. The Maryland Department of Environment (MDE) and other reputable institutions investigated these claims, culminating in the Collaborative Investigation of Coal Dust, Air Pollution, and Health Concerns in Curtis Bay, South Baltimore, Maryland (Collaborative Investigation Report).[2]

In this study conducted in Curtis Bay, researchers aimed to enhance understanding of coal dust accumulation using advanced imaging techniques and spectroscopy. They utilized two primary methods: tape lifts and passive ambient particle accumulation (PAPA). Tape lifts involved directly collecting settled dust from surfaces using double-sided conductive carbon tape, adapted from established protocols.[3] Concurrently, PAPA samples left tapes exposed to ambient air over three days, capturing airborne particles. Both methods were meticulously conducted with rigorous cleaning and handling protocols to prevent contamination.

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[1] COMAR 26.11.06.08

[2] Maryland Department of the Environment, Community of Curtis Bay Association, South Baltimore Community Land Trust, Mt. Winans Community Association, SB7 Coalition, Maryland Department of the Environment Air and Radiation Administration, Johns Hopkins Bloomberg School of Public Health Department of Environmental Health & Engineering, & University of Maryland Department of Atmospheric and Oceanic Science. (2023, December 5). *Collaborative investigation of coal dust, air pollution, and health concerns in Curtis Bay, South Baltimore, Maryland, USA, 2022-2023*. Maryland Department of the Environment. https://mde.maryland.gov/programs/permits/AirManagementPermits/Documents/FINAL_Full_CB%20Collab_%20Report.pdf

[3] ASTM International. ASTM E1216-21: Standard Practice for Sampling for Particulate Contamination by Tape Lifts. 2021.

The samples were collected from control sites and field locations and were imaged using Scanning Electron Microscopy (SEM). Particles were characterized via Energy X-ray Dispersive Spectroscopy (EDX) at the University of Maryland Advanced Imaging and Microscopy Laboratory and Johns Hopkins University, operated by trained analysts from the Bloomberg School of Public Health.

Small segments of each sample were imaged, and a systematic analysis was conducted by selecting random particles from grid cells on images of varying magnifications. Coal dust particles were compared to a National Institute of Standards and Technology (NIST) standard and bulk coal samples from Curtis Bay, distinguishing them from soot and fly ash based on size, shape, and elemental composition. Criteria for identifying coal particles were established, including morphology and elemental composition thresholds for different types of coal.

The findings revealed high levels of coal particles near the coal terminal and residential areas. Lab blanks showed no significant particles, while field blanks confirmed coal dust presence. Systematic analysis of PAPA samples confirmed coal particles at all residential locations, with higher concentrations closer to the coal terminal. These findings corroborated community claims that coal dust is present outside the CSX facility, supporting the assertion that CSX has violated its permit by creating air pollution.

Another clear example of CSX creating air pollution occurred in 2021. On December 30, 2021, the Curtis Bay community was rocked by a massive explosion at the CSX facility. The blast, caused by "a methane and airborne coal dust buildup in the North Reclaim Tunnel" according to a report in the *Baltimore Brew*, resulted in a fireball that expelled coal dust in an approximately 12 blocks area, blanketing the neighborhood in toxic residue.[4] Residents reported "dark dust coating their homes, cars, and sidewalks shown through cell phone images" and expressed concerns about air pollution and potential health hazards.

Following the December 2021 explosion, MDE issued a Notice of Violation (NOV) of the Maryland Air Quality Act[5] and fines after the explosion, citing violations of COMAR 26.11.06.02C(2), 26.11.06.08, and 26.11.06.09, all of which are explicitly listed in the CSX permit as regulations that should not be violated.[6,7] CSX faced additional penalties, including a $15,000 fine from the Maryland Department of the Environment, a $100,000 contribution to the South Baltimore Community Land Trust, and $121,000 in fines from the Occupational Safety and Health Administration (OSHA) (Marsh, 2022).[8] The residents of Curtis Bay received a class action settlement of $1.75 million, with eligibility criteria established for claimants and a regulatory settlement with the MDE.[9]

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[4] Gutierrez, L. (2023, January 15). Maryland state government gives wrist-slap fine to CSX railroad for massive Baltimore coal explosion. World Socialist Web Site. Retrieved from https://www.wsws.org/en/articles/2023/01/15/mary-j15.html

[5] Maryland Code, Environment Article §2-101 et seq.

[6] Notice of Violation - December 30, 2021, Curtis Bay Terminal Coal Explosion.

[7] CSX Transportation, Inc. Curtis Bay Piers Permit-to-Operate Conditions Permit No. 510-2263.

[8] Marsh, Joanna. "OSHA proposes fines for CSX over Baltimore coal terminal explosion." Freight Waves, 12 July 2022, https://www.freightwaves.com. Accessed 15 Jan. 2024.

[9] Boteler, Cody, and Adam Willis. "CSX reaches $1.75 million settlement with Curtis Bay residents over coal explosion." The Baltimore Banner, 7 June 2024, https://www.thebaltimorebanner.com. Accessed 15 Jan. 2024.

Part C, Sections 3 and 4 of the CSX permit outlines how CSX must control fugitive dust from plant roads, stockpiles, and other surfaces using water, asphalt, oil, or suitable chemical dust suppressants.[10] The clear presence of coal dust indicates that CSX's dust control measures, such as water sprays and covered conveyors, have not been effectively implemented. If they had been, there would not be coal dust present outside the facility. CSX must ensure the effective implementation of its dust control measures, and its inability to do so constitutes another violation of its permit.

In Maryland, a person can bring a successful private nuisance claim if "another party's conduct is a legal cause of an invasion of another's interest in the private use and enjoyment of land, and the invasion is either (a) intentional and unreasonable, or (b) unintentional and otherwise actionable under the rules controlling liability for negligent or reckless conduct, or for abnormally dangerous conditions or activities."[11] CSX has been negligent and reckless in its conduct by not properly ensuring that coal dust does not escape its property. They have been a nuisance to the Curtis Bay community for years, as evidenced by the NOV listing nuisance regulations among the violations. This community has not been able to enjoy going outside for years for fear of breathing in coal dust, which has been linked to respiratory problems, cardiovascular diseases, and other health issues.[12]

Despite the available evidence in the Collaborative Investigation Report and the December 2021 explosion in the Curtis Bay, the February 2024 CSX response to the Collaborative Report asserts that the coal dust found in Curtis Bay is not a result of their terminal operations. This claim, however, is inconsistent with the actions CSX took following the 2021 explosion. Significant repairs were made by the company to reduce coal dust emissions, which unequivocally demonstrates their awareness of the problem.[13] If CSX truly believed the coal dust was not from their operations, why were such extensive repairs mandated by OSHA, MDE, and demanded Curtis Bay residents, resulting in nearly $2 million in settlements and fines?

Additionally, the CSX response to the Collaborative Report focuses on challenging the methodology and conclusions regarding coal dust detection but fails to explain why such extensive repairs were necessary if the dust was not from their operations. This omission raises questions about the credibility of their denial and suggests an attempt to downplay the environmental and health impacts of their terminal.

In their response, CSX challenges the notion that the black material accumulating on resident homes is coal dust, writing that "putative coal dust [as written in the Collaborative Report] is not coal dust". They argue that the PM10, TSP, and black carbon composition of the "putative coal dust" is not unique to coal dust. While PM10, TSP, and black carbon are not the only components of coal dust, the scientific literature demonstrates that these substances *are* indeed found in coal dust. Samples obtained from British coal mines were composed of 80% carbon,

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[10] CSX Permit.

[11] Restatement (Second) of Torts § 822 (1979).

[12] Lockwood, A. H., Welker-Hood, K., Rauch, M., & Gottlieb, B. (2009, November). *Coal's assault on human health: A report from physicians for social responsibility*. Oregon Live. https://media.oregonlive.com/environment_impact/other/physicians%20for%20social%20responsibility_Coal_report.pdf.

[13] Kazanjian, Glynis. "CSX coal explosion impacted a large swath of residential Curtis Bay, report finds." Baltimore Brew, 27 Aug. 2022, https://www.baltimorebrew.com. Accessed 15 Jan. 2024.

which will be reflected in any shed dust particles.[14] Similar to the area around the CSX coal storage facility, PM10 levels have also been detected in various open coal mines around the world and are particularly high (exceeding EPA levels) outside open coal mines in Appalachian communities.[15] Furthermore, it is worthwhile to note that most of the alternative sources CSX provided for the "putative coal dust" (namely wild-fires, fuel-burning, diesel exhaust, and construction sites) are harmful to human health and can be traced back to facility operations. CSX is focused on disproving scientific results while disregarding the greater purpose of this discussion – protecting the health of Curtis Bay community members.

In another part of their response, CSX claims that coal storage and handling do not emit coal dust. This claim has been disproven by existing scientific literature. In a 2017 study, a Carnegie Mellon University research group observed that increases in uncovered coal pile size were correlated with the generation and displacement of more particulate matter into nearby communities. Using mathematical models, the researchers calculated increased adult and infant mortality rates associated with coal dust exposure. Their research estimated that a 10% increase in coal deliveries results in a 0.16% increase in the average concentration of PM2.5 for locations up to 25 miles away from, and downwind from, coal storage.[16] Additionally, they provide recommendations similar to those requested by concerned Curtis Bay members, namely the covering of coal stockpiles and freight cars used in transport. This demonstrates that the knowledge of coal dust's harmful impacts and associations with open-air coal piles is not new, preceding the infamous CSX explosion by four years. CSX's disregard for this scientific information runs contrary to its "unyielding focus on treating our people, the environment and our communities right".[17]

Yet another claim in their rebuttal is that the white tape experiments have no value from a coal impact perspective. CSX asserts that the dark particles collected on the tape strips cannot be determined as coal dust, yet this argument does not logically hold up to the fact that the strips contained more particles the closer they were to the coal pile. As noted in MDE's Collaborative Report, the increase in dust particles on the tape strips with increasing proximity to the coal pile is also statistically significant.[18] Additionally, CSX claims that the inconsistencies in the brightness of the tape images as analyzed in ImageJ lower the validity of the report's results. While this inconsistency in brightness is not ideal, it does not negate the findings in the report's

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[14] IARC Working Group on the Evaluation of Carcinogenic Risks to Humans. Silica, Some Silicates, Coal Dust and para-Aramid Fibrils. Lyon (FR): International Agency for Research on Cancer; 1997. (IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, No. 68.) Coal Dust. Available from: https://www.ncbi.nlm.nih.gov/books/NBK410075/

[15] Viney P. Aneja, Aaron Isherwood, Peter Morgan, Characterization of particulate matter (PM10) related to surface coal mining operations in Appalachia, Atmospheric Environment, Volume 54, 2012, Pages 496-501, ISSN 1352-2310, https://doi.org/10.1016/j.atmosenv.2012.02.063.

[16] Jha, A., & Muller, N. (2017). Handle with Care: The Local Air Pollution Costs of Coal Storage. https://doi.org/10.3386/w23417

[17] Working at CSX. CSX.com. (n.d.). https://www.csx.com/index.cfm/working-at-csx/

[18] Maryland Department of the Environment, Community of Curtis Bay Association, South Baltimore Community Land Trust, Mt. Winans Community Association, SB7 Coalition, Maryland Department of the Environment Air and Radiation Administration, Johns Hopkins Bloomberg School of Public Health Department of Environmental Health & Engineering, & University of Maryland Department of Atmospheric and Oceanic Science. (2023, December 5). *Collaborative investigation of coal dust, air pollution, and health concerns in Curtis Bay, South Baltimore, Maryland, USA, 2022-2023*. Maryland Department of the Environment. https://mde.maryland.gov/programs/permits/AirManagementPermits/Documents/FINAL_Full_CB%20Collab_%20Report.pdf

multiple regression analysis- namely, that the darkness of the tape strips at every tested location increased over the total 28-day observation period. Each regression model, in turn, was statistically significant. The white tape data is therefore very relevant because it demonstrates spatial and temporal relationships with accumulated levels of coal dust.

Given that coal storage itself contributes to air pollution, it is imperative that the permit is not renewed. Maryland has one of the most aggressive climate pollution reduction plans in the country. Maryland's Climate Solutions Now Act (CSNA) of 2022 calls for a reduction of statewide greenhouse gas emissions by 60% by 2031 and net-zero by 2045.[19] In a significant push to get various agencies to do their part, Gov. Wes Moore signed Executive Order 01.01.2024.19 on June 4th, 2024.[20] This move demonstrates the current administration's commitment to implementing the policies outlined in the Climate Pollution Reduction Plan. Allowing the second-largest coal storage facility in the United States to continue operating runs counter to Maryland's climate goals.

By ignoring the explosion and the repairs in their rebuttal, CSX avoids addressing the root causes of community complaints. This selective reporting further justifies the community's demand to not renew CSX's operating permit, emphasizing the need for transparent and accountable operations that prioritize public health and environmental safety. How many explosions do you need in your neighborhood to be sufficient to stop the operations?

In conclusion, the evidence clearly shows that CSX has violated its permit by creating air pollution and has been a persistent nuisance to the Curtis Bay community. The continued operation of this facility contradicts Maryland's climate goals and threatens the health and well-being of its residents. We urge you to consider all these factors and decline CSX's application to renew their permit for Curtis Bay.

Thank you for your time and attention to this critical matter.

Sincerely,
Ayana Burrowes
Concerned Maryland Students

CC:
Serena C. McIlwain, Secretary of the Environment
Suzanne E. Dorsey, Ph.D., Deputy Secretary
Mark W. Stewart, Manager of Climate Change Program
Christopher M. Beck, Deputy Manager of Climate Change Program

[19] Climate Solutions Now Act (CSNA) of 2022.
[20] Executive Order 01.01.2024.19.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Barbara Carr <Barbara.Carr@messages.fwwatch.org> Fri, Nov 15, 2024 at 10:08 AM
Reply-To: Barbara Carr <barbca@aol.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Barbara Carr
2235 W Joppa Rd
Lutherville Timonium, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Barbara Swanson <Barbara.Swanson@messages.fwwatch.org> Thu, Dec 12, 2024 at 9:16 PM
Reply-To: Barbara Swanson <batswans@verizon.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Sincerely,
Barbara Swanson
1828 Loch Shiel Rd
Towson, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Bernie Fleitman <Bernie.Fleitman@messages.fwwatch.org> Fri, Nov 15, 2024 at 8:34 PM
Reply-To: Bernie Fleitman <blf1@pacbell.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Bernie Fleitman
10003 Lawrence Pond Ct
Laurel, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Beth Williams <Beth.Williams@messages.fwwatch.org> Fri, Nov 15, 2024 at 5:06 PM
Reply-To: Beth Williams <wethbilliams@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

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I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Beth Williams
14 Judas St
Easton, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Betty Stipe <Betty.Stipe@messages.fwwatch.org> Fri, Nov 15, 2024 at 11:00 AM
Reply-To: Betty Stipe <janestipe@verizon.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Betty Stipe
8239 Riviera Dr
Severn, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Beverly Antonio <Beverly.Antonio@messages.fwwatch.org> Fri, Nov 15, 2024 at 8:20 PM
Reply-To: Beverly Antonio <niloflightrn@msn.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Beverly Antonio
317 Spaniards Neck Rd
Centreville, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Beverly Antonio <Beverly.Antonio@messages.fwwatch.org> Thu, Dec 12, 2024 at 2:00 PM
Reply-To: Beverly Antonio <niloflightrn@msn.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Beverly Antonio
317 Spaniards Neck rd
Centreville, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Beverly Davis <Beverly.Davis@messages.fwwatch.org> Thu, Dec 12, 2024 at 3:26 PM
Reply-To: Beverly Davis <beverlybancroft@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Beverly Davis
704 Saint Georges Rd
Baltimore, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Brian Ditzler <Brian.Ditzler@messages.fwwatch.org> Fri, Nov 15, 2024 at 9:56 AM
Reply-To: Brian Ditzler <bditzler@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Brian Ditzler
1225 Noyes Dr
Silver Spring, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Brian Shultz <Brian.Shultz@messages.fwwatch.org> Thu, Dec 12, 2024 at 1:00 PM
Reply-To: Brian Shultz <bshultz360@yahoo.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Brian Shultz
704 Wheatley Rd
North East, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Carla Tevelow <Carla.Tevelow@messages.fwwatch.org> Fri, Nov 15, 2024 at 8:04 PM
Reply-To: Carla Tevelow <perlpubl@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Carla Tevelow
11170 Chambers Ct, Unit Q
Woodstock, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Mon, Dec 16, 2024 at 1:54 PM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 12/16/2024 13:32:45 Eastern Standard Time

Response End Time: 12/16/2024 13:54:26 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Camille

2. Last Name:
Burke

3. Email:
Camille.Burke@baltimorecity.gov

4. Mailing Address:(optional)
[No Answer Entered]

5. Affiliation:(optional)
CEJSC Chair

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
Chris Hoagland,
Director, Air and Radiation Administration
Re: Request to consider community concerns related to the issuance of a CSX operating permit.
Dear Director Hoagland,
My name is Camille Burke, I am the Chair of the Commission on Environmental Justice and Sustainable Communities (CEJSC or Commission) CEJSC is charged with examining EJ issues and sustainable community opportunities that may be associated with public health, safety, economy, government, or any other matter associated with EJ and sustainable communities.
We write this letter at the request of the South Baltimore Community Land Trust concerning the permitting of the CSX coal terminal in Curtis Bay. As CEJSC, we advise Maryland Department of Environment (MDE) that a central tenet of environmental justice is meaningful involvement and the idea that community voice is integral to the decision-making process, so the agency should seriously consider the request from the affected and nearby community. If the agency is going to issue the permit, we strongly recommend there be enhanced measures to not only mitigate harm caused by

coal dust entering Curtis Bay but minimize or eliminate the passage of coal dust into the surrounding community.
This permit should consider existing harms and other sources of pollution in the general vicinity(defined by the census tract or a mileage radius) because the facility is located in an overburdened and underserved community . In overburdened and underserved communities it is particularly important to assess how multiple pollution factors interact and impact environmental and public health.
In conclusion, MDE must take robust action to protect the health and safety of environmental justice communities. We strongly recommend that any permit issued includes provisions to eliminate harm caused by coal dust and imposes penalties severe enough to ensure strict daily compliance. Additionally, CEJSC recommends a thorough evaluation of cumulative impacts, recognizing the coal terminal's location in an already overburdened and underserved community.
Scientific Evidence
The recommendations herein are based on science. Recent studies have confirmed the presence of coal dust in Curtis Bay:
● Coal particles were found in 100% of samples from eight different locations, up to three-quarters of a mile from the terminal (University of Maryland, Baltimore).

● Coal dust levels near residential areas closest to the terminal were nearly four times higher than at sites farther away. (Johns Hopkins University).
● The presence of coal dust has been confirmed using electron microscopy and other scientific methods. (Johns Hopkins University)

Community Impact
The CSX coal terminal has significantly impacted the health and safety of the Curtis Bay community:
● Residents report constant presence of coal dust, leading to respiratory issues and reduced quality of life.
● A 2021 coal dust explosion at the facility caused property damage and released harmful pollutants.
● The terminal's operations contribute to both local air pollution and global climate change in addition to unacceptable human health risks.

Sincerely,

Camille Burke, Chair,
Maryland Commission on Environmental Justice
and Sustainable Communities

Testimony to the Maryland Department of Environment
Topic: CSX Permit Renewal - Curtis Bay Coal Terminal

Good Evening, my name is Carlos Sanchez, as you all may already know. I've been fighting for our communities since the age of 13. I've been working on the coal dust pollution issue in our community for a few years now, since I was attending high school at Benjamin Franklin, here in Curtis bay. My mentors often talk about how they've seen me grow. Unfortunately the efforts to protect the health of our youth, community and the workers haven't grown as fast as me. That's why I'm here today , to urge the Maryland Department of Environment (MDE) to deny CSX's application to renew their permit for the Curtis Bay Coal Terminal and to develop a just transition plan away from coal.

I've dedicated my life to advocating for basic human rights, for voices that aren't being heard. I've been raising awareness about this issue. I was part of the first cohort of scholars who worked to collect the scientific evidence that our community needed. Now we have peer-reviewed research proving that coal dust is reaching as far as Benjamin Franklin High School, where students are exposed to harmful pollution every day as they are trying to learn. The same goes for the workers who are around this harmful particulate matter everyday. They are trading their health for a job that can be given to someone else.

Beyond the science, I've spent time attending community meetings to share what is happening in our neighborhoods. I've also taken part in panels, symposiums, presentations, and conferences to shine a light on these issues and bring the voices of my community to broader audiences. We've been fighting for clean air for years, and it's time for that fight to result in real action.

I've done my own research into the long history of this problem among others issues and the cumulative impacts that the communities suffer. During my research, I found a petition from 2013
where residents were asking for the same protections we're asking for now. Yet, 10 YEARS later, coal dust pollution has continued, and accountability has fallen shorter—even after the coal terminal explosion.

To bring further attention to this issue, I've even used creative methods—like cutting out messages on tape strips—to make sure our message is heard. But despite all these efforts, the pollution continues, and the health of our community remains at risk.

The draft permit is concerning for several reasons:

1. It does not require the strongest possible pollution controls, leaving our community vulnerable to continued exposure to dangerous coal dust.
2. It lacks clear and enforceable pollution limits. Without strict standards and accountability, there is no guarantee that emissions will be reduced.

3. The monitoring requirements are inadequate. We need ongoing, real-time monitoring that the community has full access tied with strong enforcable limits.

The only clear solution is to get coal out of the community. We can have good jobs that don't involve coal. Look what happened early last month, we were trying to enjoy God's nice beautiful day when all of a sudden we saw plumes of coal going into the air. That's unacceptable. MDE, we are asking you to stand with our community and deny this permit renewal. Protecting health of the community and the workers, should be the priority. You have the testimonies, you have the youth taking a stand, you have the evidence. This environmental injustice must end, and the people of Curtis Bay deserve action now.

Thank you.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Catherine Turner <Catherine.Turner@messages.fwwatch.org> Fri, Nov 15, 2024 at 10:08 AM
Reply-To: Catherine Turner <cjreturner@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Catherine Turner

Silver Spring, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Chad Cover <Chad.Cover@messages.fwwatch.org> Fri, Nov 15, 2024 at 11:38 AM
Reply-To: Chad Cover <chaddcover@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Chad Cover
6014 Terrace Road
Baltimore, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

CSX Coal Terminal Permit Testimony

1 message

Christianne Marguerite <christiannemarguerite@gmail.com> Fri, Oct 11, 2024 at 9:03 AM
To: shannon.heafey@maryland.gov

CSX Curtis Bay Coal Terminal Permit Hearing Testimony - Christianne Marguerite

Good evening, my name is Christianne Marguerite and I'm with Young, Gifted and Green. I have been a resident of Baltimore City for a total of 8 years, and my move to Southeast Baltimore 3 years ago marked the beginning of a relentless battle with worsened allergies and newfound respiratory issues. Living right across the harbor from Curtis Bay and now in a neighborhood where the train runs right through has exposed me to the harsh reality of coal dust pollution emanating from the CSX Coal Terminal. I write this today overwhelmed by the urgency of this crisis and the grave impact it has on our health and quality of life across Baltimore.

Coal dust can travel hundreds of miles, with wind carrying it long distances. As someone who has felt the direct effects of this dust, I can attest to the seriousness of this issue, and the emotional and physical toll is unjustifiable. Each breath I take is a reminder of the particles infiltrating my lungs, and each day brings new struggles as my respiratory condition deteriorates, which after countless medical tests coming up negative for all known illnesses besides my severe allergies, I can only attribute to the pervasive dust compounding from both of the coal terminals in the city contaminating our air.

As an avid runner and a member of one of our cities great running groups, I run outside along the waterfront often, I was actually just out there this morning running all the way to inner Harbor and back, so being able to breathe clean air is not only especially important to me as a runner, but I also know that it leads to a healthier, higher quality of life when your body is functioning in the ways you need it to - and it's a human right.

Given what I'm already experiencing, I can only imagine what it's like to live right in Southeast in direct proximity to the source of pollution, and my heart goes out to the residents there whom I know have been suffering from and complaining about the impacts of this coal terminal plant for years. I'm writing to stand in solidarity with other residents and to confirm that this is an issue that impacts all of us in our city.

I implore the Maryland Department of the Environment to deny this permit renewal today. The wellbeing of our community cannot be sacrificed at the altar of industrial convenience and economic greed.

--
Christianne Marguerite, *she/her*
1-516-643-2136

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Christine Crandell <Christine.Crandell@messages.fwwatch.org> Sun, Nov 17, 2024 at 8:08 AM
Reply-To: Christine Crandell <gencrandell@yahoo.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

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I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Christine Crandell
9052 Queen Maria Ct
Columbia, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Christopher Ebey <Christopher.Ebey@messages.fwwatch.org> Fri, Nov 15, 2024 at 9:14 PM
Reply-To: Christopher Ebey <erycravyn68@icloud.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Christopher Ebey
4714 Greenspring Ave Apt T1
Baltimore, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Claire Gartner <Claire.Gartner@messages.fwwatch.org> Thu, Dec 12, 2024 at 12:16 PM
Reply-To: Claire Gartner <cguille1@jhu.edu>
To: shannon.heafey@maryland.gov

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I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Claire Gartner
8209 Thornton Rd
Towson, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Clarisse Holman <Clarisse.Holman@messages.fwwatch.org> Thu, Dec 12, 2024 at 11:48 AM
Reply-To: Clarisse Holman <cholma8@wgu.edu>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Clarisse Holman
9809 Dilston Rd
Silver Spring, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Claude Guillemard <Claude.Guillemard@messages.fwwatch.org> Thu, Dec 12, 2024 at 12:20 PM

Reply-To: Claude Guillemard <claude@jhu.edu>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I find it abhorrent that our energy needs are met by poisoning our neighbors. How can we find it acceptable that coal dust surrounds the Curtis Bay community and is making them sick?

I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

By denying the CSX permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

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In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Claude Guillemard
9 Edgemoor Road
Lutherville Timonium, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Claudia Harrington <Claudia.Harrington@messages.fwwatch.org> Thu, Dec 12, 2024 at 7:20 PM

Reply-To: Claudia Harrington <claudia280@comcast.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Claudia Harrington
280 Dill Ave
Frederick, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Claudia Harrington <Claudia.Harrington@messages.fwwatch.org> Fri, Nov 15, 2024 at 3:30 PM
Reply-To: Claudia Harrington <claudia280@comcast.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Sincerely,
Claudia Harrington
280 Dill Ave
Frederick, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Colleen Roots <Colleen.Roots@messages.fwwatch.org> Sun, Dec 15, 2024 at 2:24 PM
Reply-To: Colleen Roots <colleenroots@yahoo.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Colleen Roots
935 Paulsboro Dr
Rockville, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Colleen Roots <Colleen.Roots@messages.fwwatch.org> Thu, Dec 12, 2024 at 6:48 PM
Reply-To: Colleen Roots <colleenroots@yahoo.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Sincerely,
Colleen Roots
935 Paulsboro Dr
Rockville, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Courtney Fiore <Courtney.Fiore@messages.fwwatch.org> Thu, Dec 12, 2024 at 1:16 PM
Reply-To: Courtney Fiore <bondfiore@yahoo.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Courtney Fiore
13803 Princess Anne Way
Phoenix, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Cynthia Williams <Cynthia.Williams@messages.fwwatch.org> Thu, Dec 12, 2024 at 1:28 PM
Reply-To: Cynthia Williams <cawilliams66@hotmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Cynthia Williams
15754 union chapel rd
Woodbine, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

CYNTHIA ARNOLD <CYNTHIA.ARNOLD@messages.fwwatch.org> Thu, Dec 12, 2024 at 12:38 PM

Reply-To: CYNTHIA ARNOLD <cadogdazed@aol.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
CYNTHIA ARNOLD
3634 Franklinville Rd
New Windsor, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

D Topper <D.Topper@messages.fwwatch.org> Thu, Dec 12, 2024 at 8:16 PM
Reply-To: D Topper <dtopper2@verizon.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
D Topper
505 Wilton Rd
Towson, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

D Topper <D.Topper@messages.fwwatch.org> Fri, Nov 15, 2024 at 3:44 PM
Reply-To: D Topper <dtopper2@verizon.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Sincerely,
D Topper
505 Wilton Rd
Towson, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Daphne Heppding <Daphne.Heppding@messages.fwwatch.org> Fri, Dec 13, 2024 at 9:58 AM
Reply-To: Daphne Heppding <daph2q4u2@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Daphne Heppding
1504 Olmstead st
Curtis Bay, MD

Dave Arndt

Coal dust contains at least 17 toxic heavy metals and pollutants including lead, mercury, cadmium, chromium, arsenic and selenium, all of which can endanger human health, and at least six neurotoxins and five known or suspected carcinogens. Research shows that prolonged exposure to coal dust via air or water can affect every major organ system in the human body, causing birth defects, heart and lung disease, and a variety of cancers. Coal dust pollution has also caused fish kills and deformities in aquatic life.

It is no wonder that the life expectancy in Curtis Bay is 15-20 years less than other communities in Baltimore.

I applaud the new regulations

This means that there should be zero coast dust particles that are emitted beyond the CSX property line. MDE needs to not only monitor this, ~~they~~ you need to enforce this. Violations need to be swift and be large enough to prevent repeat offensives. The burden of monitoring should not be placed on the shoulders of already overburdened residents. If MDE cannot ~~strengthen~~ the permit's requirements to protect the health of all Curtis Bay residents from coal dust, MDE needs to ~~revoke~~ the permit. Otherwise, the Governor's words of "leave no one behind" are just empty promises.

CSX. Curtis Bay

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

David Bergstein <David.Bergstein@messages.fwwatch.org> Thu, Dec 12, 2024 at 12:50 PM
Reply-To: David Bergstein <david.r.bergstein@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
David Bergstein
13113 Vandalia Dr
Rockville, MD

Subject: Deny CSX Transportation's permit

David Duba <David.Duba@messages.fwwatch.org> Mon, Dec 16
to shannon.heafey

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
David Duba
10 Fairhope Ct
Annapolis, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

David Elwell <David.Elwell@messages.fwwatch.org> Thu, Dec 12, 2024 at 2:30 PM
Reply-To: David Elwell <davidelwell@gmx.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
David Elwell
1203 La Grande Rd
Silver Spring, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

David Elwell <David.Elwell@messages.fwwatch.org> Fri, Nov 15, 2024 at 11:58 AM
Reply-To: David Elwell <davidelwell@gmx.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

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Sincerely,
David Elwell
1203 La Grande Rd
Silver Spring, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

David Spaans <David.Spaans@messages.fwwatch.org> Fri, Nov 15, 2024 at 10:52 AM
Reply-To: David Spaans <dnspaans@comcast.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
David Spaans
9013 Bush Creek Cir
Frederick, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

David Spaans <David.Spaans@messages.fwwatch.org> Thu, Dec 12, 2024 at 11:52 AM
Reply-To: David Spaans <dnspaans@comcast.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
David Spaans
9013 Bush Creek Cir
Frederick, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

CSX Curtis Bay piers permit

1 message

Dawn Biehler <dawn.biehler@gmail.com> Tue, Dec 17, 2024 at 12:01 AM
To: Shannon.Heafey@maryland.gov

Dear Ms. Heafey,

I am writing to provide my comments on the permitting for CSX Transportation at Curtis Bay Piers in Baltimore. I am a tenured professor of Geography and Environmental Studies. My PhD is in Geography, and I have studied issues of environmental justice and urban geography for nearly 25 years. I am writing to you not to speak for my university but to represent only my informed professional assessment of the situation in Curtis Bay.

Sometimes what our professional expertise tells us is that other people have expertise that is equally worth listening to, or even more so. Since I began my job in Maryland in 2008, I have been hearing from the residents of Curtis Bay and neighboring communities that the places where they work, live, play, and learn are polluted. These are *not* just cries of NIMBY – "not in my backyard." These residents know with their eyes, noses, throats, and lungs that their neighborhood is polluted and that supposed mitigation practices have not been sufficient to reduce coal dust to a safe level. When decisions have disregarded residents' own observations, community members have engaged with technical experts from area universities, health agencies, and lawyers to document what they already know to be true. Matthew Auborg is a professor at Johns Hopkins and lead author of an article recently released in the journal *Science of the Total Environment* that confirmed the presence of coal dust throughout the community.

The text of the permit itself details the pollution this community has endured. Curtis Bay and surrounding communities have for years borne the burdens of waste disposal, freight transportation, and energy production that benefits people in Maryland and even as far away as Canada. We could even say that this burden benefits people from further abroad, as coal is exported. This is a textbook case of environmental injustice and cumulative impact by multiple industries when we also consider the two incinerators and the traffic that runs through the neighborhood in addition to the coal dust. Amid this pollution, community members have built rich networks of connections among neighbors and grassroots organizations. They have proposed alternate ideas for clean, sustainable economic development in the area. They cannot be expected to leave what they have built so that companies can continue to use the air as a dumping ground. So it is the duty of government to make it safe, as regulators have made other places safe since the passage of the Clean Air Act in 1970.

Given CSX's past violations and ongoing pollution issues in the neighborhood, I do not feel confident that the mitigation measures will be adequate to protect the community. Community members said as much at the hearing in October. Fines have been inadequate as deterrence against previous incidents, and residents continue to document visible violations. I urge you to take these concerns into consideration as you deliberate on the permit.

Yours sincerely,

Dawn Biehler
Associate Professor

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Demetrius Stafford <Demetrius.Stafford@messages.fwwatch.org> Thu, Nov 14, 2024 at 2:44 PM

Reply-To: Demetrius Stafford <Demetrius1672@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

PLEASE, Think about the children.
Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Demetrius Stafford
4890 Battery Lane
Bethesda, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Deborah Warden <Deborah.Warden@messages.fwwatch.org> Fri, Nov 15, 2024 at 10:50 AM
Reply-To: Deborah Warden <wateryogini@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Deborah Warden
8005 Ashboro Ct
Chevy Chase, MD

My name is Diane Wittner. My message is for Governor Moore. CSX has been polluting our treasured water-dependent state, with the double fossil fuel whammy of long diesel trains carrying coal, for far too long. In this moment of Hurricanes Helene and Milton, this dinosaur-era practice is beyond irresponsible. It's deadly. Maryland's railroads can benefit our residents, building, not environmental injustice but instead, community health. Several U.S. states have freight rail operations that carry safe goods. Solar and wind powered train systems are being built, or are operating, in the European Union, and in countries elsewhere. To paraphrase a port official I recently heard in a meeting, a pivot to clean electric -energy and -transportation systems is daunting and, yes, monumental, but we haven't a choice. It will be far more costly to postpone. We will have failed in our duty to provide safety and well being for future generations.

Gov Moore I urge you to watch videos

Listen closely to Curtis Bay's youth in the room. The ongoing, youth-led community science efforts at highlighting the injustices of the Curtis Bay CSX coal pier facility communicate this message very clearly. Governor Moore, we adults in the room must do better and create resilient and healthy Maryland communities, starting here. ~~Let's get started.~~ and now, Thank you.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Donna Osler <Donna.Osler@messages.fwwatch.org> Fri, Nov 15, 2024 at 12:18 PM
Reply-To: Donna Osler <doflowerhealing@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Donna Osler
130 Hearne Rd
Annapolis, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Edward Bielaus <Edward.Bielaus@messages.fwwatch.org> Thu, Dec 12, 2024 at 11:52 AM
Reply-To: Edward Bielaus <ljbar@msn.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

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I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Edward Bielaus
6912 Breezewood Ter
Rockville, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Edward Bielaus <Edward.Bielaus@messages.fwwatch.org> Fri, Nov 15, 2024 at 9:24 AM
Reply-To: Edward Bielaus <ljbar@msn.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Edward Bielaus
6912 Breezewood Ter
Rockville, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Eileen Schramm <Eileen.Schramm@messages.fwwatch.org> Fri, Nov 15, 2024 at 9:42 AM
Reply-To: Eileen Schramm <eschrammdesign@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

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I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Eileen Schramm
725 Boundary Ave
Silver Spring, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Eileen Schramm <Eileen.Schramm@messages.fwwatch.org> Thu, Dec 12, 2024 at 1:42 PM
Reply-To: Eileen Schramm <eschrammdesign@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Eileen Schramm
725 Boundary Ave
Silver Spring, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Elizabeth Lutz <Elizabeth.Lutz@messages.fwwatch.org> Thu, Dec 12, 2024 at 11:52 AM
Reply-To: Elizabeth Lutz <elutz7@verizon.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

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I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Elizabeth Lutz
3700 Rexmere Rd
Baltimore, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Elizabeth Moore <Elizabeth.Moore@messages.fwwatch.org> Thu, Dec 12, 2024 at 4:12 PM
Reply-To: Elizabeth Moore <moore.betsy@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Elizabeth Moore
311 Cedar Ave
Gaithersburg, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Elizabeth Moore <Elizabeth.Moore@messages.fwwatch.org> Sun, Nov 17, 2024 at 4:34 PM
Reply-To: Elizabeth Moore <moore.betsy@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Elizabeth Moore
311 Cedar Ave
Gaithersburg, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Ellen E Barfield <EllenE.Barfield@messages.fwwatch.org> Fri, Nov 15, 2024 at 9:50 AM
Reply-To: Ellen E Barfield <ellene4pj@yahoo.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I STRONGLY urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents,
especially the residents of Curtis Bay in Baltimore, the location of the terminal, and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was ubiquitous in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland MUST not continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we MUST not extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland OFF fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment MUST STOP allowing CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I STRONGLY urge you to deny CSX Transportation's operating permit. Marylanders' health and environment are entirely too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure soon.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Ellen E Barfield
814 Powers St
Baltimore, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Emily Knisely-Durham <Emily.KniselyDurham@messages.fwwatch.org> Thu, Nov 14, 2024 at 7:10 PM

Reply-To: Emily Knisely-Durham <ekniselydurham@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Emily Knisely-Durham
4890 Battery Lane #414
Bethesda, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Emily Wurth <Emily.Wurth@messages.fwwatch.org> Fri, Dec 13, 2024 at 1:24 PM
Reply-To: Emily Wurth <emilywurth@hotmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Emily Wurth
3511 Upshur St
Brentwood, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Emily Wurth <Emily.Wurth@messages.fwwatch.org> Fri, Nov 15, 2024 at 9:12 PM
Reply-To: Emily Wurth <emilywurth@hotmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Sincerely,
Emily Wurth
3511 Upshur St
Brentwood, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Eugene Tehansky <Eugene.Tehansky@messages.fwwatch.org> Thu, Dec 12, 2024 at 11:56 AM
Reply-To: Eugene Tehansky <bysail@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Eugene Tehansky
39655 Ellen Ct
Mechanicsville, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

CSX Permit – Legal and scientific evidence to review – Comment in Opposition

1 message

Evelyn H <evelynlhoon@gmail.com> Fri, Dec 13, 2024 at 2:34 PM
To: shannon.heafey@maryland.gov

Permit No. 510-2263

To the Maryland Department of the Environment,

I am writing to MDE to urge against the passing of the draft permit for the CSX Curtis Bay Coal Piers, on the grounds that it does not effectively prevent harm to residents living nearby, nor does it acknowledge the harms of the terminal upon waterways near the terminal. **There is inadequate evidence to support the idea that the permit can prevent harm to the local community and environment**. **Allowing CSX to operate under this draft permit would be a violation of laws regarding the protection of air and water quality.**

My name is Evelyn Louise Hoon, and I am a **lifelong resident of Maryland**, currently resident in Anne Arundel County, only a few miles from the CSX Curtis Bay Coal Terminal. I am also a member and activist with Coal Free Curtis Bay; an affiliate with Coal Kills Baltimore; an ally of the Community of Curtis Bay Association and the South Baltimore Community Land Trust; and a PhD student at the University of Cambridge, where my research examines health and environmental justice in South Baltimore.

I will not be the first to note that rates of chronic respiratory diseases like asthma, chronic obstructive pulmonary disease, and emphysema are many times higher in Curtis Bay and other neighborhoods near the terminal. The same is true for rates of chronic heart diseases and cancers known to be caused by chronic pollution exposure. There is ample research on this fact, from the EIP, from Baltimore City, and others (1, 2). Research by CCBA, JHU, UMD, and MDE itself has proven that massive quantities of coal dust blow into the community – the size of these particles (PM2.5 and PM10) is KNOWN to cause the sorts of diseases listed above (3). **Any claim that we need further data to prove a connection between coal dust and harm to health in the community is disingenuous and scientifically inaccurate** – I say this as an academic who specializes in chronic health disorders and pollution exposure. There are currently no provisions in the draft permit that acknowledge these harms. There is also insufficient evidence to prove that water spraying and barriers will prevent ambient air pollution resulting in health disparities. As noted by Biliaiev et al. 2020, **the type of barrier used to control coal dust has a massive variance in how effective dust control is** (4). **Some types of barriers have little to no preventative effect on coal dust emissions.** As the draft permit currently does not specify what type of barrier must be constructed by CSX, there is no certainty as to whether barriers constructed by CSX under this permit will indeed protect the community and prevent air pollution.

It is also highly concerning that there is NO acknowledgement in the draft permit of the **impacts of coal-contaminated wastewater entering waterways near the terminal**. There is legal, EPA precedent for the acknowledgement of wastewater emissions from coal power plants, and from coal mining, preparation, and storage facilities (5, 6) – please review these laws as you reconsider the permit. Also consider that MDE is bound by the Clean Water Act: the act, as you well know, makes the discharge of any pollutant from a point source into navigable waters unlawful, unless a permit is obtained (7). There is currently NO language within the permit that mentions the emissions of this wastewater into the navigable waters of Curtis Creek, Curtis Bay, Masonville Cove, and the Patapsco River and Chesapeake Bay writ large. **The permit calls for coal piles to be sprayed regularly with water to prevent**

airborne emissions; this will create coal-contaminated wastewater that is likely to reach local waterways, causing serious harm to local marine environments. There is currently no evidence to prove whether CSX wastewater emissions do discharge pollutants into navigable waterways. However, based on prior studies conducted on similar facilities (see Johnson et al. 2006), **we can infer that such emissions are likely taking place, unmonitored – in violation of the Clean Water Act** (8).

Without adequate information regarding the discharge of pollutants from the CSX terminal into waterways, the passing of t**he draft permit in its current form would, to my reading, not meet the demands of the Clean Water Act**. As noted above, **the permit also cannot claim to remediate the risks of air pollutants entering the community, leading to severe harms to community health**, and potentially breaking the demands of the Clean Air Act (9).

The rates of childhood asthma that prevent kids from being kids ought to be enough to make you deny the permit outright. No child deserves to live a life burdened by pollution because laws protect companies instead of people. As a Marylander, an activist, and an academic, I am furious that this matter is still up for discussion. However, I know that you, MDE, are limited in your capacity to work off reason alone, and are tied in legal knots at the moment. So, I hope you will listen to what I have written here and **deny the renewal of the permit in its current form on the basis of both justice, and solid legal and scientific evidence**.

If you don't deny the permit in its current form, best believe we will see you on the streets, and in the courts (10, 11).

In hopeful solidarity,
Evelyn Louise Hoon

evelynlhoon@gmail.com / 240-565-5928
Lifelong Marylander / Member, Coal Free Curtis Bay / Affiliate, Coal Kills Baltimore / PhD Candidate, University of Cambridge

Sources for you to review (please actually review them!!):

1. Environmental Integrity Project (EIP). Asthma and Air Pollution in Baltimore City. 2017 https://www.environmentalintegrity.org/wp-content/uploads/2017/12/Baltimore-Asthma.pdf.
2. Baltimore City Health Department (BCHD). 20-Year Gap In Life Expectancy Between Richer, Poorer Areas Of Baltimore. 2017. https://health.baltimorecity.gov/news/news-coverage/2017-07-07-20-year-gap-life-expectancy-between-richer-poorer-areas-baltimore-cbs#:~:text=New%20data%20says%20a%20baby,life%20expectancy%20is%20around%2079.
3. Community of Curtis Bay Association (CCBA), South Baltimore Community Land Trust, Mt. Winans Community Association, SB7 Coalition, Air and Radiation Administration, Maryland Department of the Environment, Department of Environmental Health & Engineering, Johns Hopkins Bloomberg School of Public Health, Department of Atmospheric and Oceanic Science, & University of Maryland. Collaborative Investigation of Coal Dust, Air Pollution, and Health Concerns in Curtis Bay, South Baltimore, Maryland, USA, 2022-2023. 2023. https://mde.maryland.gov/programs/permits/AirManagementPermits/Documents/FINAL_Full_CB%20Collab_%20Report.pdf.
4. **Biliaiev, M.; Biliaieva, V.; Berlov, O.; Kozachyna, V.; Kirichenko, P.; Olatoye, O.M.; Poltoratska, V. Modeling coal dust dispersion from pile with protection barriers. E3S Web Conf. 168 00021, 2020. https://doi.org/10.1051/e3sconf/202016800021.**
5. **EPA coal mining wastewater guidance: https://www.epa.gov/eg/coal-mining-effluent-guidelines**
6. EPA coal burning/coal ash wastewater guidance: https://www.epa.gov/coalash/coal-ash-rule
7. **Summary of the Clean Water Act: https://www.epa.gov/laws-regulations/summary-clean-water-act**
8. **Johnson, R.; Bustin, R.M. Coal dust dispersal around a marine coal terminal (1977–1999), British Columbia: The fate of coal dust in the marine environment. International Journal of**

Coal Geology, 68(1–2): 57-69, 2006. https://doi.org/10.1016/j.coal.2005.10.003.

9. Summary of the Clean Air Act: https://www.epa.gov/laws-regulations/summary-clean-air-act
10. The Curtis Bay community is ready to take to the streets in action. https://foxbaltimore.com/news/local/activists-urge-state-action-as-coal-dust-threatens-health-in-curtis-bay
11. There is legal precedent for lawsuits against state agencies that fail to protect oppressed communities: https://www.hud.gov/press/press_releases_media_advisories/hud_no_23_095; we are ready to take action if MDE is unwilling to take brave action towards environmental justice.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Evelyn Hoon <Evelyn.Hoon@messages.fwwatch.org> Mon, Nov 18, 2024 at 6:00 PM
Reply-To: Evelyn Hoon <elh91@cam.ac.uk>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Evelyn Hoon
-
-, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

First Last <First.Last@messages.fwwatch.org> Thu, Dec 12, 2024 at 11:14 PM
Reply-To: First Last <steam.head@verizon.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
First Last
310 Centre Ave
Towson, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Frances Donaldson <Frances.Donaldson@messages.fwwatch.org> Sat, Nov 16, 2024 at 11:40 AM

Reply-To: Frances Donaldson <frandonsldson@hotmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Frances Donaldson
2911 Pauls Provision
Ellicott City, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

G. Countryman-Mills <G.CountrymanMills@messages.fwwatch.org> Fri, Nov 15, 2024 at 12:18 PM

Reply-To: "G. Countryman-Mills" <gaylelcm@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
G. Countryman-Mills
11906 Oden Ct
Rockville, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Gale Luce <Gale.Luce@messages.fwwatch.org> Thu, Dec 12, 2024 at 11:36 PM
Reply-To: Gale Luce <ggluce@yahoo.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Gale Luce
1019 Welsh Dr
Rockville, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Gale Luce <Gale.Luce@messages.fwwatch.org> Fri, Nov 15, 2024 at 8:18 PM
Reply-To: Gale Luce <ggluce@yahoo.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

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Sincerely,
Gale Luce
1019 Welsh Dr
Rockville, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Supplementary Comments in Support of Hearing Testimony, 10/16/24

1 message

Posey, Garrett <gposey@umaryland.edu> Mon, Dec 16, 2024 at 10:32 AM
To: Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Good morning,

My name is Garrett Posey, and on October 10, 2024, I gave remote testimony at MDE's hearing regarding the renewal of CSX's permit to operate its coal transportation and storage facility. I am attaching a PDF copy of my comments to this message.

Additionally, my fellow students Leonardo Soto and Joyce Wang wrote a letter with me that described those points I made and others in greater detail. We submitted it to MDE back in the summer, but I am attaching it again to this message for MDE's awareness.

Thank you,
Garrett

2 attachments

CSX Permit Hearing Comments_Posey.pdf
57K

CSX Permit to Operate Comment_Posey, Soto & Wang.pdf
138K

Garrett Posey
Curtis Bay CSX Permit Hearing Comments

Note: I presented these comments with minimal alterations remotely at the CSX coal terminal permit hearing on October 10, 2024.

Good evening. I am here on behalf of a group of students in the University of Maryland system, including myself, who submitted a comment to MDE back in July. We argued that MDE should deny CSX's permit in light of the facility's health impacts on the local community. MDE's collaborative investigation, corroborated by significant scientific data and validated through community testimonials, highlights the pervasive presence of coal dust and its detrimental health implications for south Baltimore residents. Despite CSX's arguments that "exposure to coal dust does not equate to toxicity or development of adverse health effects," coal dust exposure is linked with emphysema, asthma, and COPD. For example, Curtis Bay has one of the worst rates of death by respiratory illness in the state.

These impacts are striking in light of CSX's legal obligations under its permit and applicable law. MDE may decline to renew the permit when it believes that CSX will violate the permit. CSX has violated and will continue to violate the reasonable precautions to prevent the spread of pollution requirements under Part 2(f) of the permit. The coal is uncovered at the CSX site. Coal dust appears in nearby property. The only conclusion is that CSX is unable to control the harmful dust. The company's failure to cover the dust demonstrates a continuing failure to take reasonable precautions against the spread of harmful airborne material. The new permit does not remedy these problems. CSX already has a wall and already uses water to attempt to control coal dust. Both are ineffective. Furthermore, CSX's permit should not be renewed because CSX creates a nuisance through the operation of its facility. MDE agreed when it issued a notice last month to CSX that it created a nuisance in violation of its permit. That is the precise situation where MDE can deny the permit. Our state's air quality goals are, quote, "to maintain the degree of purity of the air necessary to protect the health, the general welfare, and property of the people of this State." To reach that minimum standard, MDE must use its authority to decline to renew this permit and save lives. Thank you.

Suna Yi Sariscak
Manager, Air Quality Permits Program
Air and Radiation Administration
Maryland Department of the Environment
1800 Washington Blvd.
Baltimore, MD 21230
July 9, 2024

Re: CSX Permit Approval

Dear Ms. Sariscak:

We are a group of three students from the University of Maryland, Baltimore concerned with the environmental and health impacts of CSX's coal storage and export in the overburdened Curtis Bay community. We are committed to advancing sustainable environmental activities that align with Maryland's climate goals. With the help of initiatives like the Climate Solutions Now Act, the state has made significant progress toward lowering its carbon impact. However, the operation of the CSX plant contradicts these initiatives by exporting coal. When burned, the coal substantially increases CO2 emissions. The total amount of export accounts for roughly 70% of Maryland's yearly emissions.

These activities compromise our state's commitments to climate change and harm the health of those living near the CSX facilities. As reported by the Natural Resources Defense Council, fossil fuel-induced air pollution and climate change is a major cause of illness and death in the US with these impacts expected to intensify in the coming decades (De Alwis and Limaye, 2021).

To protect the health and safety of our communities, we urge that CSX immediately align its operations with Maryland's environmental standards. Furthermore, we highlight extensive existing scientific data on the CSX site, its health impacts, and relevant laws, which demonstrate that CSX is continuing to negatively impact the community of Curtis Bay. Please consider this letter and others which community advocates submit when making this critical decision. Curtis Bay must no longer be another victim, like Wagner's Point or Fairfield, of unfettered climate-harming disease-causing industrial practices in South Baltimore. Given that the permit process is delayed awaiting reopening of the Port of Baltimore, we look forward to presenting our important point in the form of a comment at a hearing when that is scheduled.

In Curtis Bay, residents face significant environmental health challenges due to coal dust from the CSX transportation coal export terminal. This terminal causes air pollution that significantly impacts health and reduces the quality of life. Recent research and media have highlighted the severe impacts of coal dust in Curtis Bay. Studies, notably the Collaborative Investigation of Coal Dust, Air Pollution, and Health Concerns report (MDE et al., 2023) provide strong scientific data on the health and environmental risks posed by coal dust. This evidence, supported by coverage from major news outlets like WMAR- ABCNews, the *Baltimore Banner*, the *Baltimore Sun* and WJC-CBSNews Baltimore, underscores the community's air quality struggles and the necessity for regulatory action. The reporting has amplified local voices and

provided a platform for community demands for stronger regulatory measures to mitigate environmental damage.

Coal dust, a fine powdered form of coal, is produced from the mechanical handling and grinding of coal, particularly during preparation and transportation. The finest particles, especially PM2.5, are of greatest concern due to their ability to penetrate deep into the respiratory tract and potentially enter the bloodstream. In Curtis Bay, the primary coal dust source is the CSX terminal, where coal handling for export generates significant dust emissions. These emissions are a major health concern due to the terminal's proximity to residential areas.

In CSX's rebuttal to MDE's Collaborative Report, toxicologist Dr. House-Knight comments that "exposure to coal dust does not equate to toxicity or development of adverse health effects". However, this claim is unsubstantiated and copious research publications emphasize the negative environmental and health implications of coal dust exposure. Ecologically, it can degrade soil and water quality, harming both plant and aquatic life. Health-wise, exposure is linked with respiratory and cardiovascular diseases, particularly critical in Curtis Bay due to the community's proximity to the coal terminal. Key health risks, such as emphysema, asthma, and COPD, are all substantially linked to air pollution, such as coal dust (Stine, 2023). Sustained pollution decreases lifespans but increases the likelihoods of cancer or cardiovascular or respiratory diseases (Bayram &Hersher, 2023). The problem is especially pronounced for facilities like CSX, which has been in Curtis Bay for many years (Condon & Price, 2022).

For years, residents have expressed concerns over the consequences of encountering coal dust on their cars and in their schools, homes, and community centers. An analysis of existing literature reveals a multitude of health impacts that can severely decrease residents' quality of life. Overall, coal dust exposure is implicated in higher adult and infant mortality rates (Jha & Muller, 2017). Coal dust activation of pro-inflammatory and clotting mechanisms contributes to higher rates of atherosclerosis and heart attacks (Brook et al., 2004). Ocular conditions like dry eye, impaired tear formation, and glaucoma have also been linked to irritation and oxidative damage attributed to coal dust (Blanc et al., 2005) (Qiu & Fang, 2023). Furthermore, the heightened prevalence of gastric cancers (Alif et al., 2021) and pneumoconioses in coal workers (Attfield et al., 2011) should not be ignored, as efforts should also be taken to ensure the safety of CSX workers.

The impact of coal dust on the community cannot be overstated. Collaborative Investigation of Coal Dust, Air Pollution, and Health Concerns report (MDE et al., 2023), corroborated by significant scientific data and validated through community testimonials, highlights the pervasive presence of coal dust and its detrimental health implications for Curtis Bay residents. It methodically combines advanced analytical techniques and extensive community engagement, presenting a compelling case for stringent regulatory oversight. The evidence is robust, countering CSXT's claims of non-toxicity and demonstrating a clear link between coal dust exposure and serious health risks. This report should serve as a critical reference in your evaluation of CSX's permit renewal, emphasizing the need for urgent and decisive action to mitigate these environmental and health risks.

In the latter part of 2021, there was an explosion at the CSX coal storage facility site in Baltimore (Stine, 2023). While initial claims stated that there were no reported injuries in the

surrounding area (Condon & Price, 2022), the force of the explosion shattered the windows of Curtis Bay residents' homes and spewed coal dust across the area (Stine, 2023). In addition to posing health risks to the surrounding area, the facility harmed its own workers. It faced over $120,000 in OSHA violation penalties for permitting workers to breathe dust and other toxins without respirators in its tunnels (Condon & Price, 2022). This was just another in a long line of violations, dating back to four OSHA-required paybacks of wages to workers between 2010 and 2021 (Condon & Price, 2022).

CSX is not only a blight to its workers, but also regularly harms the surrounding community. One resident who lives across the road rarely opens his windows and often sees black in his spit from his time living there (Bayram & Hersher, 2023). Another grew up in the community and knew she breathed in coal dust during her high school years (Condon & Mullan, 2023). While teaching twenty years ago, a former teacher recalled that her students had to come indoors to avoid pollution (Condon & Mullan, 2023). In 2012, another teacher's six-year-old students could not get outside recess time due to pollution (Ahman, 2024). The Maryland Department of the Environment's own report revealed a grandmother whose pool was covered in black coal dust after filling it the previous day, a mother forced to hose her house off to eliminate dust, and the fears of a patient with already-existing respiratory problems regarding living in Curtis Bay (Condon & Mullan, 2023). The fears are not imagined. Curtis Bay has one of the worst rates of death by respiratory illness in the entire state (Ahmann, 2024).

Curtis Bay residents have no method to secure a healthier future for themselves other than to seek denial of this permit and we strongly support their position. Facing a housing shortage and unfair rent prices, the lack of affordable options for residents makes it tougher to find a new place to live, if they even want to (Reed et al., 2024). Residents have a right to their healthy community, but they have limited options to find cleaner places to live while Maryland drags its feet on cleaning up Curtis Bay. Low-income communities nationwide face disproportionate levels of damaging air pollution (Bayram & Hersher, 2023). Even if they can find another place to live, then, it is disproportionately likely to face the exact same problems. During a 2017 fire, the community was revealed to have three dry fire hydrants in the space of two blocks (Azhar, 2023). The resources and protections in the community are simply weaker, and it is the Department's duty as an arm of the government to step in.

These impacts are particularly striking in light of CSX's legal obligations under its permit and applicable law. MDE should only have administratively extended MDE's permit under COMAR 26.11.06.08B if, in relevant part, CSX complied with the permit during its time in force. CSX failed to comply with Part 2(f) of the permit, or COMAR 26.11.06.03D, because CSX neglected to take reasonable precautions to guard against airborne dust. For example, recent evidence demonstrates that it fails to cover vehicles which create pollution. CSX failed to comply with Part 3(e) of the permit, or COMAR 26.11.06.08, because its operations of the coal storage facility in Curtis Bay created a nuisance in the form of air pollution. Because of these past violations, CSX should never have received an administrative extension pursuant to COMAR 26.11.06.08B. Furthermore, because the conditions which caused these violations have not changed, MDE should recognize that CSX will continue to fail to comply with the permit. MDE should thus reject the permit under COMAR 26.11.02.06C(2) due to CSX's failure to take reasonable precautions and creation of a nuisance through air pollution. Additionally, as the

regulatory body charged with the duty "to maintain the degree of purity of the air necessary to protect the health, the general welfare, and property of the people of this state" through the permit process, MDE should deny CSX's permit in light of the facility's detrimental health impacts on the local community (Md. Code Ann., Env't § 2-102 (1982); Md. Code Ann, Env't § 2-401 (1993)).

MDE should decline to renew the permit under COMAR 26.11.02.06C(2) because CSX has failed and will continue to fail to take reasonable precautions to prevent the spread of pollution under Part 2(f) of the permit. The coal has been uncovered in Curtis Bay. Coal dust appears in nearby property. The only conclusion is that CSX fails to adequately control the harmful dust, which takes the form of micro particles which are never safe to the human body. The company's failure to cover the dust demonstrates a past and continuing failure to take reasonable precautions against the spread of air pollution and harmful airborne material. Furthermore, as documented online by the Community of Curtis Bay Association, CSX's train cars contain uncovered coal on the pathway to the storage site. The permit itself envisions covering as a reasonable precaution, which has not been taken. CSX's routine failure to abide by the permit demonstrates a pattern of violations of applicable law and grounds to deny the permit.

Furthermore, CSX's permit should not be renewed under COMAR 26.11.02.06C(2) because CSX created a nuisance through air pollution and the operation of its facility. Under *Schuman v. Greenbelt Homes*, in Maryland, "[a] nuisance is an interference with the enjoyment of one's property when that interference is substantial and unreasonable such that it would be offensive or inconvenient to the normal person." (212 Md. App. 451, 464-65 (Md. Ct. Spec. App. 2013)). Local property owners in Curtis Bay see extremely harmful coal dust spread across their vehicles and homes. The reasonable person would find this encroachment of toxic dust so substantial and unreasonable that CSX infringes upon their very right to enjoy their property. As explained above, the failure to cover dust and prevent this pollution demonstrates that this nuisance is likely to continue unless the permit is revoked.

The inconsistency between Maryland's ambitious climate change policies and CSX's continued storage and export of coal provides an additional argument in favor of permit denial. The Climate Solutions Now Act calls for reducing emissions by 60% by 2031 and reaching net zero by 2045. On June 4th 2024, Gov. Wes Moore signed Executive Order 01.01.2024.19 emphasizing the urgent need for infrastructure, transportation, and other implementation plans to combat climate change. Gov. Moore's most recent executive orders reemphasized these goals and called for all state agencies to implement the economic, transportation, architecture, industrial, agricultural, and waste-related policies highlighted in the Maryland Climate Pollution Reduction Plan. The plan stresses the economic and public health impacts of such policies – namely, the creation of more jobs, increased state GDP, and reduced mortality or exacerbations of acute and chronic diseases. While the state recently met all the National Ambient Air Quality Standards for the first time since the passing of the Clean Air Act in 1963, Curtis Bay residents are still paying a heavy price with their health.

Beyond Curtis Bay, the coal is most often shipped to countries abroad for production of energy. . Its subsequent burning produces harmful greenhouse gases and pollutants, which endanger the welfare of not only citizens in those regions, but in Maryland as well. These endeavors

demonstrate the state's ongoing complicity in climate change and pollution. This inconsistency in Maryland's approach to climate change should be addressed and transformed into a different strategy; instead of exporting tons of carbon that would ultimately affect the world as a whole, Maryland and other states should support efforts to develop sustainable energy in other countries.

We understand that permit denial is permissive under COMAR 26.11.02.06C(2), and that the CSX facility is both profitable and a source of jobs. But it is MDE's duty to balance these considerations in the permit process with "the health, the general welfare, and property of the people of this state" under Md. Code, Env't §§ 2-102, 2-401. It is time to shift the balance in favor of climate justice, and to stop the dangerous path that CSX has carved toward turning this community into another Wagner's Point or Fairfield (Ahmann, 2024). CSX and its permit have long placed profit over the people's health in Curtis Bay and beyond and this has come to an end.

In the fourth quarter of 2022, CSX earned roughly $1,000,000,000 (Condon & Mullan, 2023). The median household income for Curtis Bay is less than that of Baltimore in general (*Baltimore City*, 2017). CSX is but another corporation profiting from polluting lower income communities. CSX must go somewhere else. As "Mount Winans resident Angela Smothers said[,] 'It's been killing us for years. What else is it going to take? Y'all are playing with too many people's lives because they're getting money'" (Condon & Mullan, 2023). We cannot make Curtis Bay another Wagner's Point or Fairfield—it cannot be a positive solution to force relocations upon residents (Ahmann, 2024). A sustained solution is necessary. MDE must weigh these considerations and understand that the net gain for Curtis Bay—preventing further destruction of residents' homes and lungs—is a net gain for Maryland.

We thank you for your time with this incredibly critical matter for Baltimore and Maryland as a whole, and we look forward to your response and thoughts as the permit process continues.

Sincerely,
Garrett Posey, Leonardo Soto, and Joyce Wang
Concerned Maryland Students

CC:
Serena C. McIlwain, Secretary of the Environment
Suzanne E. Dorsey, Ph.D., Deputy Secretary
Mark W. Stewart, Manager of Climate Change Program
Christopher M. Beck, Deputy Manager of Climate Change Program

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Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

G. Countryman-Mills <G.CountrymanMills@messages.fwwatch.org> Thu, Dec 12, 2024 at 3:48 PM

Reply-To: "G. Countryman-Mills" <gaylelcm@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
G. Countryman-Mills
11906 Oden Ct
Rockville, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Gerald Borleis <Gerald.Borleis@messages.fwwatch.org> Fri, Nov 15, 2024 at 11:34 AM
Reply-To: Gerald Borleis <gborleis@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Gerald Borleis
1923 Winder Rd
Windsor Mill, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Germano Brandes <Germano.Brandes@messages.fwwatch.org> Thu, Dec 12, 2024 at 12:26 PM
Reply-To: Germano Brandes <germanobrandes@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Germano Brandes
808 Saint Paul St
Baltimore, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Greg DeCowsky <Greg.DeCowsky@messages.fwwatch.org> Thu, Dec 12, 2024 at 3:46 PM
Reply-To: Greg DeCowsky <greg.decowsky@me.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Greg DeCowsky
PO BOX 478
Rock Hall, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Greg DeCowsky <Greg.DeCowsky@messages.fwwatch.org> Fri, Nov 15, 2024 at 10:28 AM
Reply-To: Greg DeCowsky <greg.decowsky@me.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Greg DeCowsky
PO BOX 478
Rock Hall, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Harry Schaefer <Harry.Schaefer@messages.fwwatch.org> Fri, Dec 13, 2024 at 1:10 AM
Reply-To: Harry Schaefer <harry_schaefer@yahoo.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Harry Schaefer
310 Marvin Rd
Silver Spring, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Helene Guillemard <Helene.Guillemard@messages.fwwatch.org> Thu, Dec 12, 2024 at 10:52 PM

Reply-To: Helene Guillemard <fasting4impeachment2019@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Helene Guillemard
3400 N Charles St
Baltimore, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Howard Gampel <Howard.Gampel@messages.fwwatch.org> Thu, Dec 12, 2024 at 12:30 PM
Reply-To: Howard Gampel <rxgamp@verizon.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Howard Gampel
14730 York Rd
Sparks Glenco, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Howard Gampel <Howard.Gampel@messages.fwwatch.org> Fri, Nov 15, 2024 at 11:06 AM
Reply-To: Howard Gampel <rxgamp@verizon.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Howard Gampel
14730 York Rd
Sparks Glenco, MD

Buenas tardes, mi nombre es Humberto Sánchez, y soy residente en la comunidad vecina de Lakeland. Estoy aquí hoy no solo como un miembro preocupado de la comunidad, sino como un padre. Y abuelo He visto a mi hijo profundamente involucrado en esta lucha contra la contaminación; contaminación causada por polvo de carbón, así como otras injusticias ambientales, y ver su dedicación a este tema me ha abierto los ojos a los peligros reales que enfrenta nuestro vecindario. Por ejemplo, vivimos cerca de un vagón de ferrocarril descubierto que transporta el carbón a esta instalación.

Durante años, he visto a mi hijo hablar en eventos y conferencias para hablar sobre el increíble trabajo que él y otros estudiantes están haciendo. Incluso han recopilado evidencia científica que demuestra que el polvo de carbón está llegando a la comunidad. Como padre y abuelo, eso me preocupa de lo que nuestra juventud está respirando. Los jóvenes no deberían ser los que tengan que trabajar tan duro para obtener el derecho básico al aire limpio. Pero me alegro de que lo sean.

Puede que no conozca todos los detalles técnicos, pero lo que si sé es esto: la contaminación por polvo de carbón está dañando a nuestra comunidad, nuestra salud y a nuestros jóvenes. Es por eso que les pido a ustedes, miembros del Departamento del Medio Ambiente de Maryland, que se le niegue el permiso de CSX.

Necesitamos que tomen medidas reales. Para Protejer a nuestra comunidad y evitar que este polvo de carbón; siga envenenando nuestro aire. Es hora de apoyar a la gente, por el bien de nuestra salud y el futuro de nuestros hijos.

Gracias.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Jack Reilly <Jack.Reilly@messages.fwwatch.org> Fri, Nov 15, 2024 at 12:10 PM
Reply-To: Jack Reilly <jackreillysr@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Jack Reilly
1409 Berwick Road
Baltimore, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

James Beeler II <James.BeelerII@messages.fwwatch.org> Thu, Dec 12, 2024 at 12:48 PM
Reply-To: James Beeler II <fanfareman@hotmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
James Beeler II
20653 Benevola Church Rd
Boonsboro, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

James Beeler II <James.BeelerII@messages.fwwatch.org> Fri, Nov 15, 2024 at 12:12 PM
Reply-To: James Beeler II <fanfareman@hotmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

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Sincerely,
James Beeler II
20653 Benevola Church Rd
Boonsboro, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

James Bolton <James.Bolton@messages.fwwatch.org> Fri, Nov 15, 2024 at 9:26 AM
Reply-To: James Bolton <boltonj777@verizon.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
James Bolton
110 Mellor Ave
Baltimore, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

James Kline <James.Kline@messages.fwwatch.org> Thu, Dec 12, 2024 at 11:50 AM
Reply-To: James Kline <jamesdkline@outlook.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
James Kline
3012 Aquarius Avenue
Silver Spring, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Jane Randall <Jane.Randall@messages.fwwatch.org> Thu, Dec 12, 2024 at 7:58 PM
Reply-To: Jane Randall <womansailor46@yahoo.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Jane Randall
PO Box 1085
Chestertown, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Jasmine Ghartey <Jasmine.Ghartey@messages.fwwatch.org> Mon, Dec 16, 2024 at 6:16 PM
Reply-To: Jasmine Ghartey <jasmineghartey@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Jasmine Ghartey
1630 whetstone Way
Baltimore, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Don't poison people in Curtis Bay!

1 message

Jean Cushman <jeanpcushman@gmail.com> Thu, Oct 17, 2024 at 8:28 PM
To: shannon.heafey@maryland.gov

Dear Ms. Heafey:

I have been to Curtis Bay - I know what it's like. Poor people are living there - not a great reason to continue poisoning them -- but it's a way to keep them from having any power over the air they breathe, the water they drink!

They don't have the power to stop this. I hope that my one small voice can make a difference.

Stop poisoning people with coal dust. It sickens children and adults. Too many people get asthma, too many people get lung disease that causes them to be handicapped. So stop the poisoning.

Jean P Cushman
4000 N. Charles Street, Apt 1002
Baltimore, MD 21218

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Jeanne Bolton <Jeanne.Bolton@messages.fwwatch.org> Fri, Nov 15, 2024 at 12:08 PM
Reply-To: Jeanne Bolton <jbolton05@verizon.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Jeanne Bolton
7546 Red Cravat Ct
Columbia, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Jeanne Faust <Jeanne.Faust@messages.fwwatch.org> Thu, Dec 12, 2024 at 10:50 PM
Reply-To: Jeanne Faust <faustjd@aol.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Sincerely,
Jeanne Faust
2951 Kingsmark Ct
Abingdon, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Jennifer Kiner <Jennifer.Kiner@messages.fwwatch.org> Fri, Nov 15, 2024 at 9:32 AM
Reply-To: Jennifer Kiner <jandhsrvs@sbcglobal.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Sincerely,
Jennifer Kiner
26323 Cherry Ln
Hollywood, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Jessica coe <Jessica.coe@messages.fwwatch.org> Thu, Dec 12, 2024 at 12:02 PM
Reply-To: Jessica coe <daredevil71120@aol.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Jessica coe
569 Shipley Rd
Linthicum Heights, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Jessica Coe <Jessica.Coe@messages.fwwatch.org> Fri, Nov 15, 2024 at 11:32 AM
Reply-To: Jessica Coe <daredevil71120@aol.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Sincerely,
Jessica Coe
569 Shipley Rd
Linthicum Heights, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Jill Bailey <Jill.Bailey@messages.fwwatch.org> Thu, Dec 12, 2024 at 9:02 PM
Reply-To: Jill Bailey <mrs.jillbailey@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Jill Bailey
7109 Clarendon Rd, Apt 2
Bethesda, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Public Comment regarding Permit No. 510-2263

1 message

Jill Cairns <jill.cairns@yahoo.com> Mon, Dec 16, 2024 at 1:21 PM
Reply-To: Jill Cairns <jill.cairns@yahoo.com>
To: "Shannon.heafey@maryland.gov" <Shannon.heafey@maryland.gov>

RE: Permit No. 510-2263

Dear Ms. Heafey

As a person of faith, a resident of Columbia, Maryland, and a former longtime resident of Baltimore City, I am writing to express my strong opposition to the proposed Air Pollution Permit to Operate for the CSX coal terminal in Curtis Bay. This terminal has long been a source of harmful coal dust emissions, and its operations continue to degrade air quality, jeopardizing the health and well-being of surrounding communities. MDE must act to prevent the ongoing coal dust pollution in Curtis Bay caused by the operations of the CSX terminal by denying the request to renew its Permit to Operate.

The CSX terminal handled over 7 million tons of coal in 2022, releasing coal dust that contains dangerous particulate matter (PM2.5 and PM10) and toxic elements such as arsenic, mercury, and lead. New peer-reviewed research from the collaborative efforts of the Maryland Department of the Environment (MDE) Air and Radiation Administration (ARA), the Community of Curtis Bay Association (CCBA), the South Baltimore Community Land Trust (SBLT), the CHARMED Center in the Department of Environmental Health and Engineering (EHE) at the Johns Hopkins Bloomberg School of Public Health (BSPH), and the Department of Atmosphere and Oceanic Sciences at the University of Maryland(UMD) proves what residents have long said: coal dust contaminates the community. According to the measured investigation of this report, coal particles were found in all of the community sampling locations during each round of sampling, including a wide variety of locations. According to longstanding community reports, residents are not able to open their windows out of concerns of further exposure to the coal their homes are consistently subject to ever present layers of coal dust.

Exposure to particulate matter has been linked to respiratory diseases, cardiovascular issues, and premature mortality. No amount of this pollution is safe for human health, and Curtis Bay resident have endured it for too far too long.

Maryland should prioritize the health of its citizens and the air quality of its state, not the interests of polluters. MDE must deny this permit renewal to protect the community and the state from further harm.

If a permit is granted, it must include stringent and more timely conditions that effectively eliminate coal dust emissions in the community. It must require fully covered coal piles and rail cars, as has occurred in other areas of the country. It must also include required monitoring and reporting from outside organizations rather than self-monitoring by CSX. Furthermore, it must hold CSX more significantly accountable for non-compliance and limited compliance. When pollution from the CSX coal terminal is found to cause harm to the community and to the environment, they must be held responsible for full remediation of that harm in order to maintain their permit in both the short term and the long term.

Finally, if the permit is granted, MDE must explain how their approval of this permit fits with Maryland’s commitment to countering the realities of climate change with its continued support of a company that has increased its coal exports through Baltimore.

Sincerely,

Jill Cairns

Yahoo Mail: Search, Organize, Conquer

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Joan Lewin <Joan.Lewin@messages.fwwatch.org> Thu, Dec 12, 2024 at 2:58 PM
Reply-To: Joan Lewin <joanlewin@yahoo.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Joan Lewin
504 Club Lane
Towson, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

John Lowe <John.Lowe@messages.fwwatch.org> Sat, Nov 16, 2024 at 12:08 AM
Reply-To: John Lowe <lowe@xecu.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
John Lowe
PO Box 254
Braddock Heights, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Jordan Gregory <Jordan.Gregory@messages.fwwatch.org> Thu, Nov 14, 2024 at 5:44 PM
Reply-To: Jordan Gregory <jordangregory34@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Jordan Gregory
1647 Langford Rd
Baltimore, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Joseph DiMaggio <Joseph.DiMaggio@messages.fwwatch.org> Thu, Dec 12, 2024 at 2:46 PM
Reply-To: Joseph DiMaggio <jjdimaggio@yahoo.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Joseph DiMaggio
PO Box 3632
Baltimore, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Public Comment - Permit No. 510-2263

1 message

Joe Galarraga <j.r.galarraga@gmail.com> Fri, Dec 13, 2024 at 3:49 PM
To: "shannon.heafey@maryland.gov" <shannon.heafey@maryland.gov>

Hello,

Good afternoon. Please see my public comments on the CSX terminal permit in Curtis Bay attached. Thank you for taking the time to review and consider these comments.

Best regards,

Joseph R. Galarraga
(he/him/his)

Galarraga_public comment.pdf
111K

Permit No. 510-2263

Dear Maryland Department of the Environment,

As a concern resident of Baltimore, MD, I am writing to express my strong opposition to the proposed draft Air Pollution Permit to Operate for the CSX coal terminal in Curtis Bay. This terminal has long been a source of harmful coal dust emissions, and its operations continue to degrade air quality, jeopardizing the health and well-being of surrounding communities. MDE must act to prevent the ongoing coal dust pollution in Curtis Bay caused by the operations of the CSX terminal by denying the request to renew its Permit to Operate.

A November 2024 article in *Baltimore Magazine* entitled "Ashes to Ashes, Dust to Dust" has detailed the reasons why this permit ought to be denied: fugitive coal dust enters the community of Curtis Bay on a daily basis at a rate of every 90 minutes. Particulate matter (PM2.5 and PM10) and other toxic pollutants found in coal dust have been linked to respiratory diseases, cardiovascular issues, and premature mortality. In Curtis Bay, asthma-related hospitalizations are three times the national average. Life expectancy is 17 years shorter than in Baltimore's most prosperous neighborhoods. Given that this is a working class community where 75% of students qualify as economically disadvantaged, there is no other way to describe the conditions in Curtis Bay as anything other than environmental injustice – and according to MDE's website, the agency, "is committed to addressing injustices that have occurred throughout history in communities located next to industry that have been exposed to higher levels of pollution." Therefore, MDE must deny this permit renewal to protect our community from further harm. If a permit is granted, it must include stringent conditions that effectively eliminate coal dust emissions, enforce stricter air quality monitoring, and hold CSX accountable for non-compliance.

Sincerely,



Joseph Galarraga

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Joy Kroeger-Mappes <Joy.KroegerMappes@messages.fwwatch.org> Thu, Dec 12, 2024 at 12:36 PM

Reply-To: Joy Kroeger-Mappes <jkroeger@frostburg.edu>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Joy Kroeger-Mappes
82 Frost Ave
Frostburg, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Joy Kroeger-Mappes <Joy.KroegerMappes@messages.fwwatch.org> Sat, Nov 16, 2024 at 6:12 PM

Reply-To: Joy Kroeger-Mappes <jkroeger@frostburg.edu>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Joy Kroeger-Mappes
82 Frost Ave
Frostburg, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Judith Goldberg <Judith.Goldberg@messages.fwwatch.org> Fri, Nov 15, 2024 at 10:12 AM
Reply-To: Judith Goldberg <judithcgoldberg@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Judith Goldberg
621 Stoney Spring Dr
Baltimore, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Justin Daley <Justin.Daley@messages.fwwatch.org> Mon, Dec 16, 2024 at 4:08 PM
Reply-To: Justin Daley <Markisalilbitch@yahoo.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Justin Daley
5248 Wasena Ave
Baltimore, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Fri, Dec 13, 2024 at 9:40 AM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 12/13/2024 09:37:20 Eastern Standard Time

Response End Time: 12/13/2024 09:40:09 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Justine

2. Last Name:
Muyu

3. Email:
dancinbeanjustine@gmail.com

4. Mailing Address:(optional)
[No Answer Entered]

5. Affiliation:(optional)
SURJ3A, AACO resident

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
Deny the permit. The residents of Curtis Bay deserve a healthy environment with clean air and water!

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Karen Carothers <Karen.Carothers@messages.fwwatch.org> Fri, Nov 15, 2024 at 1:46 PM
Reply-To: Karen Carothers <trekkieturtle@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Karen Carothers
2762 Yarnall Road
Halethorpe, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Karen Kujala <Karen.Kujala@messages.fwwatch.org> Sun, Nov 24, 2024 at 6:22 PM
Reply-To: Karen Kujala <kloukujala@aol.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Karen Kujala
207 Fairwood Rd APT J
Bel Air, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Karl Held <Karl.Held@messages.fwwatch.org> Fri, Nov 15, 2024 at 2:18 PM
Reply-To: Karl Held <karlheld213@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Karl Held
9008 Cherbourg Dr
Potomac, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Strong Opposition to proposed draft of the Air Pollution Permit In Curtis Bay

1 message

Kate Sugarman <katesugarman@hotmail.com> Fri, Dec 6, 2024 at 9:32 PM
To: "shannon.heafey@maryland.gov" <shannon.heafey@maryland.gov>

Dear Maryland Department of the Environment,

As a physician who lives in Maryland I am writing to express my strong opposition to the proposed draft Air Pollution Permit to Operate for the CSX coal terminal in Curtis Bay. This terminal has long been a source of harmful coal dust emissions, and its operations continue to degrade air quality, jeopardizing the health and well-being of surrounding communities. MDE must act to prevent the ongoing coal dust pollution in Curtis Bay caused by the operations of the CSX terminal by denying the request to renew its Permit to Operate.

The CSX terminal handled over 7 million tons of coal in 2022, releasing coal dust that contains dangerous particulate matter (PM2.5 and PM10) and toxic elements such as arsenic, mercury, and lead. New peer-reviewed research proves what residents have long said: coal dust contaminates the community. Exposure to particulate matter has been linked to respiratory diseases, cardiovascular issues, and premature mortality. No amount of this pollution is safe for human health, and Curtis Bay residents have endured it for far too long.

A

Maryland should prioritize the health of its citizens, not the interests of polluters. MDE must deny this permit renewal to protect our community from further harm. If a permit is granted, it must include stringent conditions that effectively eliminate coal dust emissions, enforce stricter air quality monitoring, and hold CSX accountable for noncompliance.
I I am a Maryland physician very worried about the health of my patients
Kate Sugarman, MD
11909 Enid Drive
PPotomac, MD 20854

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Katherine Barrett-Zywan <Katherine.BarrettZywan@messages.fwwatch.org> Thu, Dec 12, 2024 at 8:16 PM

Reply-To: Katherine Barrett-Zywan <kbar720@aol.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Katherine Barrett-Zywan
3914 Beech Ave
Baltimore, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Katherine Barrett-Zywan <Katherine.BarrettZywan@messages.fwwatch.org> Fri, Nov 15, 2024 at 9:48 AM

Reply-To: Katherine Barrett-Zywan <kbar720@aol.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Katherine Barrett-Zywan
3914 Beech Ave
Baltimore, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Katherine White <Katherine.White@messages.fwwatch.org> Fri, Nov 15, 2024 at 11:24 AM
Reply-To: Katherine White <kcwd50@hotmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Sincerely,
Katherine White
17705 Hollingsworth Dr.
Rockville, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Kathie Mudrone <Kathie.Mudrone@messages.fwwatch.org> Thu, Dec 12, 2024 at 6:08 PM
Reply-To: Kathie Mudrone <kathie_m1@yahoo.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Kathie Mudrone

Laurel, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Kathleen Zeminsky <Kathleen.Zeminsky@messages.fwwatch.org> Sat, Nov 16, 2024 at 2:50 AM

Reply-To: Kathleen Zeminsky <a2z810@verizon.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Kathleen Zeminsky
9776 Riverside Cir
Ellicott City, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Kathleen Zeminsky <Kathleen.Zeminsky@messages.fwwatch.org> Fri, Dec 13, 2024 at 2:52 AM
Reply-To: Kathleen Zeminsky <a2z810@verizon.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Sincerely,
Kathleen Zeminsky
9776 Riverside Cir
Ellicott City, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Sat, Nov 9, 2024 at 6:04 PM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 11/09/2024 18:03:00 Eastern Standard Time

Response End Time: 11/09/2024 18:04:05 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Kathryn

2. Last Name:
Little

3. Email:
ktll99@gmail.com

4. Mailing Address:(optional)
881 W Lombard St, Baltimore, MD 21201

5. Affiliation:(optional)
[No Answer Entered]

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
Maryland Department of the Environment
1800 Washington Blvd
Baltimore, MD 21230

Dear MDE:

My name is Kathryn Little, and I live a few miles from Curtis Bay in the Hollins Roundhouse neighborhood. I gave a spoken comment at the public meeting on October 10, and I've since realized I have another perspective to offer that I'd like to share here.

I am an environmental engineer, and I wear an engineer's ring. It is worn on the little finger of the dominant hand so that anytime the engineer signs and seals a plan set or permit, the ring touches the paper and reminds them of the ethical responsibility inherent in that signature.

On of my graduate school courses, "Engineering Ethics and the Public," focused on the Washington, D.C. lead in water crisis of 2001-2004 and the then-ongoing Flint, MI crisis of 2014-2019 as case studies. In both cases, the governmental agency deceived and/or outright lied to the public about the safety of their drinking water. We all know how those turned

out: with lead-poisoned children and incredible public outcry.

At their core, there is no substantial difference between these case studies and the actions taken for decades by CSX and the history of broken promises to Curtis Bay by MDE. Unfortunately, the current draft Permit to Operate sets MDE up for a continuation of the problem.

Part D of the draft permit calls for dust control via water application, and we heard from the CSX representative at the meeting on October 10 that this measure is already in place. Based on the testimony and evidence provided by numerous Curtis Bay residents, this is not sufficiently controlling the coal dust. It still coats their community, causing environmental and health impacts. Part D also proposes the construction of a physical barrier. As seen in the video footage captured of the acute pollution event on September 5, 2024, the plume of dust rises well above the tree line and existing wall. A physical barrier constructed to a height appropriate to surrounding structures would not be sufficient to control the coal dust.

From one professional to another, I ask you to remember the responsibility that you have to “first and foremost, protect the health, safety, and welfare of the public” (ASCE Code of Ethics). Residents’ testimony shows that the continued operation of the CSX coal terminal in Curtis Bay would violate this responsibility, even if the proposed measures were implemented. The full Code of Ethics also includes other principles and responsibilities relevant to this permit.

I urge you to consider what your signature on the Permit to Operate would mean for the residents of Curtis Bay and choose to deny the permit.

Regards,
Kathryn Little, P.E.
881 W. Lombard St
Baltimore, MD 21201

Hi, my name is Katie Little. Thank you for your time tonight. I live just a few miles away in the Hollins Roundhouse neighborhood. I am an environmental engineer, and it's important to me that any permit or project includes adequate measures for the protection of the environment and the people who live in it.

I recognize that this draft Permit to Operate includes the construction of a physical barrier and dust control via water application to the coal cars. But I am here to say that this is not enough. It's putting a band-aid on the bullet hole that is the continued operation of this coal terminal and rail line through residential communities. This community has been lied to and ignored for decades, and putting token preventative measures will not undo the damage that has been done. At this stage the only viable option to make amends is to deny this permit. Thank you.

→ We've heard from the CSX rep that this dust control is already happening & clearly is not working. The history of broken promises means that we cannot believe these measures will be implemented or if implemented effective.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Katie Starbird-tierney <Katie.Starbirdtierney@messages.fwwatch.org> Fri, Nov 15, 2024 at 9:52 AM

Reply-To: Katie Starbird-tierney <starney3@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

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I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Katie Starbird-tierney
714 Erie Ave
Takoma Park, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Kelly Allison <Kelly.Allison@messages.fwwatch.org> Fri, Nov 15, 2024 at 8:04 PM
Reply-To: Kelly Allison <kma36@hotmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Kelly Allison
PO Box 1673
Berlin, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Kay Katz <Kay.Katz@messages.fwwatch.org> Wed, Nov 20, 2024 at 5:10 PM
Reply-To: Kay Katz <kaymarcie@aol.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Kay Katz
2639 Twin Birch Rd
Hanover, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Re: CSX Curtis Bay Coal Terminal Draft Permit to Operate No. 510-2263

1 message

Shannon Heafey -MDE- <shannon.heafey@maryland.gov> Mon, Dec 9, 2024 at 10:36 AM
To: Ken Crandell <kencrandell@yahoo.com>
Bcc: Suna Sariscak -MDE- <suna.sariscak@maryland.gov>

Good Morning Mr. Crandell,

This is to acknowledge receipt of your emails on behalf of:
Carla Sackey Beyers
Amy Williams Clark
Lisa Dickerson
Amy Forno
Precious Ibe
Arianne Monroe
Linda Nedzbala
Kevin Omand
Rebecca Reese
Judith Schardt

As these letters contain the same comments and concerns, and were submitted by you on their behalf, you will be receiving the Final Determination along with a copy of a Response to Comments (RTC) document on their behalf. If any of these people wish to receive this information directly, I will need their email contact or mailing address.

Please acknowledge this email with agreement to distribute the RTC to the commenters, or provide contact information for any who wish direct notification.

Thank you,
Shannon Heafey

Shannon Heafey Public Participation Coordinator
Air Quality Permits Program, Air and Radiation Administration
Maryland Department of the Environment
1800 Washington Boulevard, Baltimore, Maryland 21230
shannon.heafey@maryland.gov
410-537-4433

Comments in Opposition to the CSX Curtis Bay Coal Terminal Air Pollution Permit

November 24, 2024

To: Maryland Department of the Environment

Re: Permit No. 510-2263

Dear Shannon Heafey,

As a concerned Maryland citizen from nearby Columbia, my religious beliefs call me to support justice. I am writing to express my strong opposition to the proposed draft Air Pollution Permit to Operate for the CSX coal terminal in Curtis Bay.

This terminal has long been a source of harmful coal dust emissions, and its operations continue to degrade air quality, jeopardizing the health and well-being of surrounding communities. MDE must act to prevent the ongoing coal dust pollution in Curtis Bay caused by the operations of the CSX terminal. We request that MDE either deny the request to renew its Permit to Operate, or at least include stringent conditions to effectively eliminate coal dust emissions in Curtis Bay.

The CSX terminal handled over 7 million tons of coal in 2022, releasing coal dust that contains dangerous particulate matter (PM2.5 and PM10) and toxic elements such as arsenic, mercury, and lead. New peer-reviewed research proves what residents have long said: coal dust contaminates the community. Exposure to particulate matter has been linked to respiratory diseases, cardiovascular issues, and premature mortality. No amount of this pollution is safe for human health, and Curtis Bay residents have endured it for far too long.

Maryland should prioritize the health of its citizens, not the interests of polluters. MDE must deny this permit renewal to protect our community from further harm. If a permit is granted, it must include stringent conditions that effectively eliminate coal dust emissions, enforce stricter air quality monitoring, and hold CSX accountable for non-compliance.

Sincerely,

Judith Scharett

Judith Scharett

Comments in Opposition to the CSX Curtis Bay Coal Terminal Air Pollution Permit

November 24, 2024

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Sincerely,

Amy S Foard AMY S. FOARD

Comments in Opposition to the CSX Curtis Bay Coal Terminal Air Pollution Permit

November 24, 2024

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Sincerely,

Carla Sackey Beyers

Carla Sackey Beyers

Comments in Opposition to the CSX Curtis Bay Coal Terminal Air Pollution Permit

November 24, 2024

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Sincerely,

Lisa Dickson. This is important for peoples health! Please Make the important changes.

Lisa Dickson

Comments in Opposition to the CSX Curtis Bay Coal Terminal Air Pollution Permit

November 24, 2024

To: Maryland Department of the Environment

Re: Permit No. 510-2263

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Sincerely,

Precious Ibe

Comments in Opposition to the CSX Curtis Bay Coal Terminal Air Pollution Permit

November 24, 2024

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Re: Permit No. 510-2263

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Sincerely,

Arianne Monroe

Arianne Monroe

Comments in Opposition to the CSX Curtis Bay Coal Terminal Air Pollution Permit

November 24, 2024

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Sincerely,

L. S. Nedzbala

L. S. NEDZBALA

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This terminal has long been a source of harmful coal dust emissions, and its operations continue to degrade air quality, jeopardizing the health and well-being of surrounding communities. MDE must act to prevent the ongoing coal dust pollution in Curtis Bay caused by the operations of the CSX terminal. We request that MDE either deny the request to renew its Permit to Operate, or at least include stringent conditions to effectively eliminate coal dust emissions in Curtis Bay.

The CSX terminal handled over 7 million tons of coal in 2022, releasing coal dust that contains dangerous particulate matter (PM2.5 and PM10) and toxic elements such as arsenic, mercury, and lead. New peer-reviewed research proves what residents have long said: coal dust contaminates the community. Exposure to particulate matter has been linked to respiratory diseases, cardiovascular issues, and premature mortality. No amount of this pollution is safe for human health, and Curtis Bay residents have endured it for far too long.

Maryland should prioritize the health of its citizens, not the interests of polluters. MDE must deny this permit renewal to protect our community from further harm. If a permit is granted, it must include stringent conditions that effectively eliminate coal dust emissions, enforce stricter air quality monitoring, and hold CSX accountable for non-compliance.

Sincerely,

KEVIN OMLADD

RE: Permit No. 510-2263

Dear Maryland Department of the Environment,

As a resident of Howard County, Maryland, I am writing to express my strong opposition to the proposed Air Pollution Permit to Operate for the CSX coal terminal in Curtis Bay. This terminal has long been a source of harmful coal dust emissions, and its operations continue to degrade air quality, jeopardizing the health and well-being of surrounding communities. MDE must act to prevent the ongoing coal dust pollution in Curtis Bay caused by the operations of the CSX terminal by denying the request to renew its Permit to Operate.

The CSX terminal handled over 7 million tons of coal in 2022, releasing coal dust that contains dangerous particulate matter (PM2.5 and PM10) and toxic elements such as arsenic, mercury, and lead. New peer-reviewed research from the collaborative efforts of the Maryland Department of the Environment (MDE) Air and Radiation Administration (ARA), the Community of Curtis Bay Association (CCBA), the South Baltimore Community Land Trust (SBLT), the CHARMED Center in the Department of Environmental Health and Engineering (EHE) at the Johns Hopkins Bloomberg School of Public Health (BSPH), and the Department of Atmosphere and Oceanic Sciences at the University of Maryland(UMD) proves what residents have long said: coal dust contaminates the community. According to the measured investigation of this report, coal particles were found in all of the community sampling locations during each round of sampling, including a wide variety of locations. According to longstanding community reports, residents are not able to open their windows out of concerns of further exposure to the coal their homes are consistently subject to ever present layers of coal dust. Exposure to particulate matter has been linked to respiratory diseases, cardiovascular issues, and premature mortality. No amount of this pollution is safe for human health, and Curtis Bay resident have endured it for too far too long.

Maryland should prioritize the health of its citizens and the air quality of its state, not the interests of polluters. MDE must deny this permit renewal to protect the community and the state from further harm.

If a permit is granted, it must include stringent and more timely conditions that effectively eliminate coal dust emissions in the community. It must require fully covered coal piles and rail cars, as has occurred in other areas of the country. It must also include required monitoring and reporting from outside organizations rather than self-monitoring by CSX. Furthermore, it must hold CSX more significantly accountable for non-compliance and limited compliance. When pollution from the CSX coal terminal is found to cause harm to the community and to the environment, they must be held responsible for full remediation of that harm in order to maintain their permit in both the short term and the long term.

Finally, if the permit is granted, MDE must explain how their approval of this permit fits with Maryland's commitment to countering the realities of climate change with its continued support of a company that has increased its coal exports through Baltimore

Sincerely,

Amy Williams Clark

Amy Williams Clark

Comments in Opposition to the CSX Curtis Bay Coal Terminal Air Pollution Permit

November 24, 2024

To: Maryland Department of the Environment

Re: Permit No. 510-2263

Dear Shannon Heafey,

As a concerned Maryland citizen from nearby Columbia, I am writing to express my strong opposition to the proposed draft Air Pollution Permit to Operate for the CSX coal terminal in Curtis Bay.

This terminal has long been a source of harmful coal dust emissions, and its operations continue to degrade air quality, jeopardizing the health and well-being of surrounding communities. MDE must act to prevent the ongoing coal dust pollution in Curtis Bay caused by the operations of the CSX terminal. We request that MDE either deny the request to renew its Permit to Operate, or at least include stringent conditions to effectively eliminate coal dust emissions in Curtis Bay.

The CSX terminal handled over 7 million tons of coal in 2022, releasing coal dust that contains dangerous particulate matter (PM2.5 and PM10) and toxic elements such as arsenic, mercury, and lead. New peer-reviewed research proves what residents have long said: coal dust contaminates the community. Exposure to particulate matter has been linked to respiratory diseases, cardiovascular issues, and premature mortality. No amount of this pollution is safe for human health, and Curtis Bay residents have endured it for far too long.

Maryland should prioritize the health of its citizens, not the interests of polluters. MDE must deny this permit renewal to protect our community from further harm. If a permit is granted, it must include stringent conditions that effectively eliminate coal dust emissions, enforce stricter air quality monitoring, and hold CSX accountable for non-compliance.

Sincerely,

Rebecca Reese

Comments in Opposition to the CSX Curtis Bay Coal Terminal Air Pollution Permit

November 24, 2024

To: Maryland Department of the Environment

Re: Permit No. 510-2263

Dear Shannon Heafey,

As a concerned Maryland citizen from nearby Columbia, my religious beliefs call me to support justice. I am writing to express my strong opposition to the proposed draft Air Pollution Permit to Operate for the CSX coal terminal in Curtis Bay.

This terminal has long been a source of harmful coal dust emissions, and its operations continue to degrade air quality, jeopardizing the health and well-being of surrounding communities. MDE must act to prevent the ongoing coal dust pollution in Curtis Bay caused by the operations of the CSX terminal. We request that MDE either deny the request to renew its Permit to Operate, or at least include stringent conditions to effectively eliminate coal dust emissions in Curtis Bay.

The CSX terminal handled over 7 million tons of coal in 2022, releasing coal dust that contains dangerous particulate matter (PM2.5 and PM10) and toxic elements such as arsenic, mercury, and lead. New peer-reviewed research proves what residents have long said: coal dust contaminates the community. Exposure to particulate matter has been linked to respiratory diseases, cardiovascular issues, and premature mortality. No amount of this pollution is safe for human health, and Curtis Bay residents have endured it for far too long.

Maryland should prioritize the health of its citizens, not the interests of polluters. MDE must deny this permit renewal to protect our community from further harm. If a permit is granted, it must include stringent conditions that effectively eliminate coal dust emissions, enforce stricter air quality monitoring, and hold CSX accountable for non-compliance.

Sincerely,

Barbara J. Wright

Barbara J. Wright

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Re: CSX Curtis Bay Coal Terminal Draft Permit to Operate No. 510-2263

1 message

Ken Crandell <kencrandell@yahoo.com> Mon, Dec 9, 2024 at 10:54 AM
To: Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Thank you.
This acknowledges receipt of your email and I agree to have you just send the RTC document to me.

Thanks!
Ken

On Monday, December 9, 2024 at 10:37:16 AM EST, Shannon Heafey -MDE- <shannon.heafey@maryland.gov> wrote:

Good Morning Mr. Crandell,

This is to acknowledge receipt of your emails on behalf of:
Carla Sackey Beyers
Amy Williams Clark
Lisa Dickerson
Amy Forno
Precious Ibe
Arianne Monroe
Linda Nedzbala
Kevin Omand
Rebecca Reese
Judith Schardt

As these letters contain the same comments and concerns, and were submitted by you on their behalf, you will be receiving the Final Determination along with a copy of a Response to Comments (RTC) document on their behalf. If any of these people wish to receive this information directly, I will need their email contact or mailing address.

Please acknowledge this email with agreement to distribute the RTC to the commenters, or provide contact information for any who wish direct notification.

Thank you,
Shannon Heafey

Shannon Heafey Public Participation Coordinator
Air Quality Permits Program, Air and Radiation Administration
Maryland Department of the Environment
1800 Washington Boulevard, Baltimore, Maryland 21230
shannon.heafey@maryland.gov
410-537-4433

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Laurence Bulka <Laurence.Bulka@messages.fwwatch.org> Sat, Nov 16, 2024 at 3:24 PM
Reply-To: Laurence Bulka <laurie.bulka@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Laurence Bulka
10924 Battersea Lane
Columbia, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Leo Shapiro <Leo.Shapiro@messages.fwwatch.org> Thu, Dec 12, 2024 at 12:00 PM
Reply-To: Leo Shapiro <leoshapiro99@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Leo Shapiro
6907 Rhode Island Ave
College Park, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Leo Shapiro <Leo.Shapiro@messages.fwwatch.org> Fri, Nov 15, 2024 at 1:16 PM
Reply-To: Leo Shapiro <leoshapiro99@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Leo Shapiro
6907 Rhode Island Ave
College Park, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Linda Indyke <Linda.Indyke@messages.fwwatch.org> Sat, Nov 16, 2024 at 3:46 PM
Reply-To: Linda Indyke <lmi3620221@msn.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Linda Indyke
13801 York Rd, Apt E7
Cockeysville, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Linda King <Linda.King@messages.fwwatch.org> Fri, Dec 13, 2024 at 6:06 PM
Reply-To: Linda King <kringly@earthlink.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Linda King
5516 Southwick St
Bethesda, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Linda Murphy <Linda.Murphy@messages.fwwatch.org> Fri, Dec 13, 2024 at 10:24 PM
Reply-To: Linda Murphy <linda56k@verizon.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Linda Murphy
4106 Quintana St
Hyattsville, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Linda Murphy <Linda.Murphy@messages.fwwatch.org> Fri, Nov 15, 2024 at 9:30 PM
Reply-To: Linda Murphy <linda56k@verizon.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Linda Murphy
4106 Quintana St
Hyattsville, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Lisa Boynton <Lisa.Boynton@messages.fwwatch.org> Fri, Dec 13, 2024 at 9:40 PM
Reply-To: Lisa Boynton <lisaboynton13@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Lisa Boynton
1024 Forest Hills Ave
Annapolis, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Lisa Boynton <Lisa.Boynton@messages.fwwatch.org> Sun, Nov 17, 2024 at 4:06 PM
Reply-To: Lisa Boynton <lisaboynton13@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Lisa Boynton
1024 Forest Hills Ave
Annapolis, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Lisa Krausz <Lisa.Krausz@messages.fwwatch.org> Thu, Dec 12, 2024 at 2:28 PM
Reply-To: Lisa Krausz <lisalkrausz@comcast.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Lisa Krausz
6109 Trackless Sea Ct
Clarksville, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Lisa Krausz <Lisa.Krausz@messages.fwwatch.org> Mon, Nov 18, 2024 at 12:12 PM
Reply-To: Lisa Krausz <lisalkrausz@comcast.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Lisa Krausz
6109 Trackless Sea Court
Clarksville, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Lisa Vaughan <Lisa.Vaughan@messages.fwwatch.org> Fri, Nov 15, 2024 at 12:12 PM
Reply-To: Lisa Vaughan <lvntoto2@yahoo.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Lisa Vaughan
1302 N Rolling Rd
Catonsville, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Lois Hybl <Lois.Hybl@messages.fwwatch.org> Fri, Nov 15, 2024 at 11:58 AM
Reply-To: Lois Hybl <lhybl@verizon.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Lois Hybl
707 Maiden Choice Ln, Apt. 8216
Catonsville, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Lyn Cox <Lyn.Cox@messages.fwwatch.org> Thu, Dec 12, 2024 at 7:42 PM
Reply-To: Lyn Cox <revlyncox@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a citizen living in Maryland, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I grew up in Maryland. I'm raising kids in Baltimore. Young lungs need healthy air and healthy water.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Lyn Cox
6209 Sareva Dr
Baltimore, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

M Carlisle <M.Carlisle@messages.fwwatch.org> Fri, Nov 15, 2024 at 3:08 PM
Reply-To: M Carlisle <carlmari23@yahoo.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
M Carlisle
1238 Ramblewood Rd
Baltimore, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

m kirby <m.kirby@messages.fwwatch.org> Sat, Dec 14, 2024 at 11:20 AM
Reply-To: m kirby <mk56@drexel.edu>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
m kirby
6451 N Charles St
Baltimore, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

M Langelan <M.Langelan@messages.fwwatch.org> Sat, Dec 14, 2024 at 11:28 PM
Reply-To: M Langelan <mjlangelan@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
M Langelan
7215 Chestnut St
Chevy Chase, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

M Langelan <M.Langelan@messages.fwwatch.org> Fri, Nov 15, 2024 at 9:28 AM
Reply-To: M Langelan <mjlangelan@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Sincerely,
M Langelan
7215 Chestnut St
Chevy Chase, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Madeline Amalphy <Madeline.Amalphy@messages.fwwatch.org> Mon, Nov 25, 2024 at 6:50 PM

Reply-To: Madeline Amalphy <radchic05@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Gaithersburg resident who is extremely concerned about the climate crisis and regularly visits Baltimore, I strongly urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations. If you don't, millions of innocent Americans will die in hurricanes, floods, famines, droughts, wildfires, and heat waves caused by the climate crisis.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Madeline Amalphy
651 Saybrooke Oaks Boulevard
Gaithersburg, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Marc And Alice Imlay <MarcAndAlice.Imlay@messages.fwwatch.org> Fri, Nov 15, 2024 at 9:44 AM

Reply-To: Marc And Alice Imlay <wildmarcimlay@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Marc And Alice Imlay
2321 Woodberry Drive, Bryans Road, Md, Usa 20616
Bryans Road, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Margaret Karen Rist <MargaretKaren.Rist@messages.fwwatch.org> Thu, Dec 12, 2024 at 3:52 PM

Reply-To: Margaret Karen Rist <karenrist14@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Margaret Karen Rist
601 Windwood Rd
Baltimore, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Margaret Karen Rist <MargaretKaren.Rist@messages.fwwatch.org> Fri, Nov 15, 2024 at 9:32 AM

Reply-To: Margaret Karen Rist <karenrist14@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Margaret Karen Rist
601 Windwood Rd
Baltimore, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Comment on CSX Curtis Bay Coal Terminal Air Pollution Permit No. 510-2263

1 message

marilyn carlisle. <carlmari23@yahoo.com> Sat, Dec 7, 2024 at 10:06 AM
To: "shannon.heafey@maryland.gov" <shannon.heafey@maryland.gov>

Dear Maryland Department of the Environment,

As a concerned Baltimore resident, I am writing to express my strong opposition to the proposed draft Air Pollution Permit to Operate for the CSX coal terminal in Curtis Bay. This terminal has long been a source of harmful coal dust emissions, and its operations continue to degrade air quality, jeopardizing the health and well-being of surrounding communities. MDE must act to prevent the ongoing coal dust pollution in Curtis Bay caused by the operations of the CSX terminal by denying the request to renew its Permit to Operate.

The CSX terminal handled over 7 million tons of coal in 2022, releasing coal dust that contains dangerous particulate matter (PM2.5 and PM10) and toxic elements such as arsenic, mercury, and lead. New peer-reviewed research proves what residents have long said: coal dust contaminates the community. Exposure to particulate matter has been linked to respiratory diseases, cardiovascular issues, and premature mortality. No amount of this pollution is safe for human health, and Curtis Bay residents have endured it for far too long.

Maryland should prioritize the health of its citizens, not the interests of polluters. MDE must deny this permit renewal to protect our community from further harm. If a permit is granted, it must include stringent conditions that effectively eliminate coal dust emissions, enforce stricter air quality monitoring, and hold CSX accountable for noncompliance.

Sincerely,

Marilyn Carlisle
1238 Ramblewood Rd
Baltimore, MD 21239

I'm worried about the long-term impacts of air pollution on the health of Curtis Bay residents, particularly vulnerable populations like children and the elderly.

Coal dust pollution in Curtis Bay is a serious and persistent issue, with significant health and environmental consequences for residents. The dust, which comes from the CSX coal terminal and other operations, contains particulate matter (PM), including fine particles like PM2.5 and larger particles like PM10. These pollutants have been found in homes, schools, businesses, parks, and churches across the community, traveling up to ¾ of a mile from the terminal.

As you know, in a collaborative effort to address community concerns about coal dust, researchers from the Maryland Department of the Environment, Johns Hopkins University, and other institutions conducted extensive studies to measure coal dust pollution in Curtis Bay. Their findings confirmed the presence of coal dust throughout the community. Community of Curtis Bay Association et al., Collaborative Investigation of Coal Dust, Air Pollution, and Health Concerns in Curtis Bay, South Baltimore, Maryland, USA, 2022-2023, at 1 (Dec. 14, 2023). Report. These findings have now been scientifically validated through peer review. Matthew A. Aubourg, et al., Use of electron microscopy to determine presence of coal dust in a neighborhood bordering an open-air coal terminal in Curtis Bay, Baltimore, Maryland, USA, Science of The Total Environment, October 8, 2024.

"Service to others is the rent you pay for your room here on earth" -Muhammed Ali

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Marc And Alice Imlay <MarcAndAlice.Imlay@messages.fwwatch.org> Thu, Dec 12, 2024 at 2:26 PM

Reply-To: Marc And Alice Imlay <wildmarcimlay@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Marc And Alice Imlay
2321 Woodberry Drive, Bryans Road, MD, USA 20616
Bryans Road, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Marc Imlay <Marc.Imlay@messages.fwwatch.org> Thu, Dec 12, 2024 at 2:10 PM
Reply-To: Marc Imlay <marc.imlay@mdsierra.org>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Sincerely,
Marc Imlay
2321 Woodberry Dr
Bryans Road, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Mark Sugarman <Mark.Sugarman@messages.fwwatch.org> Fri, Nov 15, 2024 at 9:50 AM
Reply-To: Mark Sugarman <mjsugarmanrph2@netscape.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Sincerely,
Mark Sugarman
215 Brightside Ave
Pikesville, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Mary Beth Thompson <MaryBeth.Thompson@messages.fwwatch.org> Thu, Dec 12, 2024 at 1:26 PM

Reply-To: Mary Beth Thompson <mbtdeplume@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Mary Beth Thompson
1917 Ruxton Rd
Towson, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Mary Beth Thompson <MaryBeth.Thompson@messages.fwwatch.org> Fri, Nov 15, 2024 at 10:44 AM

Reply-To: Mary Beth Thompson <mbtdeplume@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

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Sincerely,
Mary Beth Thompson
1917 Ruxton Rd
Towson, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Mary Ella Jourdak <MaryElla.Jourdak@messages.fwwatch.org> Mon, Dec 16, 2024 at 9:40 PM
Reply-To: Mary Ella Jourdak <info@maryellajourdak.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Mary Ella Jourdak
10 SILVERWOOD CIR
Annapolis, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Mary Holst <Mary.Holst@messages.fwwatch.org> Fri, Nov 15, 2024 at 10:54 AM
Reply-To: Mary Holst <m3.holst@icloud.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Sincerely,
Mary Holst
5020 Norwood Ave
Baltimore, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Maryann Natale <Maryann.Natale@messages.fwwatch.org> Fri, Dec 13, 2024 at 9:48 AM
Reply-To: Maryann Natale <origami_momi@yahoo.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Sincerely,
Maryann Natale
350 Prospect Blvd APT A
Frederick, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Megahn Dudzinsky <Megahn.Dudzinsky@messages.fwwatch.org> Fri, Nov 15, 2024 at 11:46 AM
Reply-To: Megahn Dudzinsky <sweetplus298@yahoo.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Sincerely,
Megahn Dudzinsky
10311 Pinehurst Ct
Ellicott City, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

CSX Coal Terminal Hearing Testimony

1 message

Meleine Yao <meleineyao@gmail.com> Thu, Oct 10, 2024 at 3:54 PM
To: shannon.heafey@maryland.gov

Hello,

My name is Meleine Yao, and I represent Young, Gifted and Green. Having spent the majority of my life in Maryland, I am deeply passionate about environmental advocacy, and I stand before you today to highlight the critical issue of coal dust and air pollution emanating from the CSX terminal in Curtis Bay. This is not just an environmental concern—it is a public health crisis that affects the well-being of our community in Baltimore City.

In 2022 alone, the CSX terminal managed an astounding 7.1 million tons of coal, and in 2021, that figure rose to 8.6 million tons. The fallout from these operations is not inconsequential; it has led to severe coal dust pollution permeating our air and environment. This coal dust contains harmful particulate matter, specifically PM2.5 and PM10, along with hazardous elements such as arsenic, mercury, and lead. These toxic substances present serious health risks, particularly for our community's most vulnerable members, including children and the elderly.

The implications of this pollution extend far beyond the immediate vicinity of the terminal. We have scientifically validated evidence showing that coal dust has been detected as far from the terminal as Benjamin Franklin High School. This is a grave concern for parents, educators, and health advocates who care about the future and vitality of our children and community.

It is critical that if the Maryland Department of the Environment considers issuing a permit for continued operations at the CSX terminal, it must substantially strengthen the permit’s requirements. It is paramount to enforce stricter regulations on coal dust emissions to protect the residents of Curtis Bay and the surrounding Baltimore area from further adverse health effects and environmental degradation.

In conclusion, I implore the Maryland Department of the Environment to either deny this permit or impose stringent regulations to mitigate coal dust emissions from the CSX terminal. The health and safety of the Curtis Bay community must take precedence over industrial interests. We deserve clean air and a healthy environment for ourselves and for generations to come.

Thank you for your time and consideration.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Meredith Mohr <Meredith.Mohr@messages.fwwatch.org> Thu, Dec 12, 2024 at 12:08 PM
Reply-To: Meredith Mohr <meredithmohr2@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Meredith Mohr
7 Maple Ct
Elkton, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Meredith Mohr <Meredith.Mohr@messages.fwwatch.org> Fri, Nov 15, 2024 at 12:26 PM
Reply-To: Meredith Mohr <meredithmohr2@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Meredith Mohr
7 Maple Ct
Elkton, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Comment on CSX Curtis Bay Coal Terminal Air Pollution Permit No. 510-2263

1 message

Meryl Thomas <meryl.g.thomas@gmail.com> Mon, Dec 16, 2024 at 7:29 PM
To: shannon.heafey@maryland.gov

Dear staff at the Maryland Department of the Environment,

I live in Montgomery County, Maryland. I am writing to you today, as a concerned Maryland resident, to state my strong opposition to the proposed draft Air Pollution Permit to Operate for the CSX coal terminal in Curtis Bay.

This morning, I read a Baltimore Magazine article by Ron Cassie, which was published last month (November 2024). The article details the dangerous situation for Curtis Bay residents: "Asthma-related hospitalization rates are three times the national average. The share of deaths caused by chronic lower respiratory disease is nearly 75 percent higher than the rest of Baltimore." The article makes clear the extent of the damage to the people in Curtis Bay. The article also details the violations of CSX.

Here's a link to the article:
https://www.baltimoremagazine.com/section/health/curtis-bay-south-baltimore-air-pollution-coal-incineration-public-health-impacts/

This terminal has been a source of harmful coal dust emissions. Its operations continue to degrade air quality, jeopardizing the health and well-being of people in the surrounding communities.

MDE must prioritize the health of its citizens over the interests of polluters like CSX. The Department can and should prevent the ongoing coal dust pollution in Curtis Bay caused by the operations of the CSX terminal by denying the request to renew its Permit to Operate. I urge you to deny this permit renewal.

If MDE grants a permit, it must include stringent conditions that effectively eliminate coal dust emissions, enforce stricter air quality monitoring, and hold CSX accountable for noncompliance.

Sincerely,
Meryl Goodman Thomas

KWEISI MFUME

7TH DISTRICT, MARYLAND

HOUSE COMMITTEE ON FOREIGN AFFAIRS

SUBCOMMITTEE ON MIDDLE EAST, NORTH AFRICA, AND CENTRAL ASIA

Congress of the United States
House of Representatives
Washington, DC 20515

HOUSE COMMITTEE ON OVERSIGHT AND ACCOUNTABILITY

RANKING MEMBER, SUBCOMMITTEE ON GOVERNMENT OPERATIONS AND THE FEDERAL WORKFORCE

SUBCOMMITTEE ON CYBERSECURITY, INFORMATION TECHNOLOGY, AND GOVERNMENT INNOVATION

SELECT SUBCOMMITTEE ON THE CORONAVIRUS PANDEMIC

October 10, 2024

Serena McIlwain
Secretary
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, MD 21230

Dear Secretary McIlwain,

I am writing in support of my constituents in the community of Curtis Bay as they raise concerns about the proposed Maryland Department of Environment (MDE) permit for the CSX Coal Terminal. For years, this community has faced numerous environmental challenges tied to the production, handling, and transportation of coal. These concerns include air quality degradation, potential health risks, and environmental impacts that continue to disproportionately affect this historic community. It is vital that we take these issues seriously and commit ourselves to a course of action that prioritizes the health, well-being, and quality of life for Curtis Bay residents.

The residents of Curtis Bay deserve greater involvement and input into the decisions that directly impact their lives and their environment. They live with the day-to-day realities of coal dust and emissions from industrial activities. Their voices must be heard, and their experiences must shape the solutions that are put forward to address these longstanding environmental hazards. No community should be left out of discussions about its own future, particularly when public health and safety are at risk.

I urge the Maryland Department of the Environment, and all stakeholders involved in this process to prioritize community input as they consider the new permit. A comprehensive and collaborative approach is needed, one that ensures Curtis Bay residents are empowered to shape a future where their health and environment are safeguarded. This must be a partnership that looks beyond industrial growth and addresses the environmental challenges that have burdened this community for far too long.

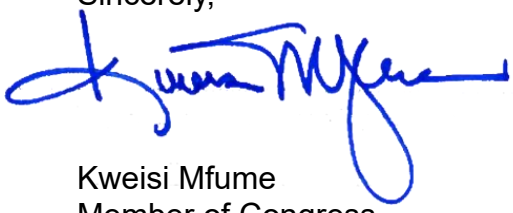
2263 Rayburn House Office Building
Washington, DC 20515-2007
(202) 225-4741

1010 Park Avenue, Suite 105
Baltimore, MD 21201-5037
(410) 685-9199

754 Frederick Road
Catonsville, MD 21228-4504
(410) 685-9199

It is time to find sensible solutions that protect both the residents of Curtis Bay and the interests of the economy. But this balance cannot be struck without ensuring that public health is at the forefront of any decision-making process. I remain committed to advocating for greater transparency, community engagement, and accountability throughout this process to ensure the people of Curtis Bay can live in a safe and healthy environment.

Sincerely,



Kweisi Mfume
Member of Congress

2263 Rayburn House Office Building
Washington, DC 20515-2007
(202) 225-4741

1010 Park Avenue, Suite 105
Baltimore, MD 21201-5037
(410) 685-9199

754 Frederick Road
Catonsville, MD 21228-4504
(410) 685-9199

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Michele Holloway <Michele.Holloway@messages.fwwatch.org> Fri, Dec 13, 2024 at 9:14 AM
Reply-To: Michele Holloway <michelegaudes@yahoo.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Michele Holloway
752 Broadwater Way
Gibson Island, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Michele Levy <Michele.Levy@messages.fwwatch.org> Sun, Dec 15, 2024 at 11:10 AM
Reply-To: Michele Levy <micheleslevy@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Sincerely,
Michele Levy
3140 Remington Ave
Baltimore, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Michele Levy <Michele.Levy@messages.fwwatch.org> Sat, Nov 16, 2024 at 10:12 PM
Reply-To: Michele Levy <micheleslevy@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Sincerely,
Michele Levy
3140 Remington Ave
Baltimore, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Mike Kabatt <Mike.Kabatt@messages.fwwatch.org> Thu, Dec 12, 2024 at 11:50 AM
Reply-To: Mike Kabatt <mike.kabatt@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

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Sincerely,
Mike Kabatt
15015 Pine Top Lane
Burtonsville, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Molly Hauck <Molly.Hauck@messages.fwwatch.org> Fri, Nov 15, 2024 at 9:26 AM
Reply-To: Molly Hauck <mollyphauck@gmail.com>
To: shannon.heafey@maryland.gov

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Sincerely,
Molly Hauck
3900 Decatur Ave.
Kensington, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Molly Hauck <Molly.Hauck@messages.fwwatch.org> Thu, Dec 12, 2024 at 9:30 PM
Reply-To: Molly Hauck <mollyphauck@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

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Molly Hauck
3900 Decatur Avenue
Kensington, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Monique Weatherspoon <Monique.Weatherspoon@messages.fwwatch.org> Thu, Dec 12, 2024 at 11:48 AM

Reply-To: Monique Weatherspoon <diamonique116@yahoo.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Sincerely,
Monique Weatherspoon
5705 Plata St
Clinton, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Nadia Carrell <Nadia.Carrell@messages.fwwatch.org> Thu, Dec 12, 2024 at 11:50 AM
Reply-To: Nadia Carrell <carrelln@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Nadia Carrell
7917 Chelton Rd
Bethesda, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Nancy Connelly <Nancy.Connelly@messages.fwwatch.org> Fri, Nov 15, 2024 at 2:50 PM
Reply-To: Nancy Connelly <enjoywildlife@yahoo.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Nancy Connelly
1803 Winans Ave
Halethorpe, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Nancy Shaw <Nancy.Shaw@messages.fwwatch.org> Fri, Nov 15, 2024 at 10:30 AM
Reply-To: Nancy Shaw <nbshaw@aol.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Nancy Shaw
7817 Tomlinson Ave
Cabin John, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Naomi Weisman <Naomi.Weisman@messages.fwwatch.org> Fri, Nov 15, 2024 at 10:52 AM
Reply-To: Naomi Weisman <marketqn@verizon.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Naomi Weisman
7318 Greentree Rd.
Bethesda, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Public Testimonial CSX coal permit (submission before Dec. 16)

1 message

Fabricant, Nicole <nfabricant@towson.edu> Fri, Dec 13, 2024 at 4:08 AM
To: "shannon.heafey@maryland.gov" <shannon.heafey@maryland.gov>

My name is Nicole Fabricant and I am a Professor of Anthropology at Towson University. I have taught courses on environmental justice, resource wars of the 21st century, and climate change. For fourteen years, I have been standing in solidarity with the community of Curtis Bay. I started organizing with the youth from Benjamin Franklin Highschool in 2010-2011 when they launched a campaign to stop the nation's largest trash-to-energy incinerator proposed/slated to be built a mile from their high school.

Every year since their victory, Free Your Voice youth, South Baltimore Community Land Trust and I have led a participatory action research class at Benjamin Franklin high school working with young scholars to document the environmental injustices of their community [topics have ranged from vacant houses/buildings to air quality and respiratory health].

WE HAVE SEEN THE WAYS IN WHICH COAL DUST (along with other cumulative impacts of stationary toxic facilities) have affected the everyday health of the young people in this community. When the coal silo exploded three years ago, we had students in our classroom at Benjamin Franklin who spoke about how the floors in their kitchen shook and plates and cups fell from the kitchen cupboard. One student said, "it felt like an earthquake!" She proceeded to show videos from her phone of the coal dust layering windowsills, floors, dining room tables.

Corporate negligence (cutting back on safety issues) leads to physical, emotional, psychological HARMS – this is root shock induced by over 100 years of toxic industrial development.

CURTIS BAY HAS BEEN USED BY THE CITY OF BALTIMORE as a WASTELAND, DUMPING GROUND for some of the city's most potent industries which have global reach. Agribusiness, fertilizers, chemical companies, and non-renewable fossil fuels are all housed alongside residents who try to live and breathe and go to school and work in this community.

The political economy of coal extraction harms not only people in South Baltimore but Appalachians who live in zones completely tied to the resource curse or the mining coal … Explosions are a daily occurrence in some of the mines extracting CSX coal. For instance, Taylor County Mine in Appalachia has received much negative publicity recently. This is the mine that supplies CSX with the coal that travels through poor low-income communities exposing them to dust, noise, and hazards along the way eventually winds up at our export pier. Several newspapers documented how The Taylor County, has had a lengthy history of safety and health violations prior to the recent death of a motorman employee which occurred in August of this past summer. This incident of harm, of danger, of putting miners and workers IN "unsafe" conditions connects everyone on the supply chain of extraction (those who extract the coal in the miens, those who drive our coal trains have had to experience driving ever bigger heavier class 1 freight trains with less support staff, and those along the route to export breathe the dust). Labor connects to EJ.

But back to Curtis Bay …

***I wanted to share some nuggets from the archives which have relevance today and point toward the contradiction of economic accumulation of capital for some VERSUS the health and well-being of community and residents

In March of 1981, the Evening Sun reported that over the next five years, coal exports from the port of Baltimore will increase dramatically. *Actually the evening sun reported that within a matter of a few years Baltimore would quadruple it's coal export. Why? In part, it had to do with the price of oil in the early 1980s and the fact that many industrializing nations were in desperate need of "energy" so they transitioned from oil to steam coal.

The papers called this, "Coal fever and it became THE dream of the business community aligned with government aligned with railroad companies and coal companies that THIS WOULD PRODUCE a billion-dollar economic bonanza for the port of Baltimore. "Huge trains," they reported "will rumble into the city; millions of tons of coal and millions of dollars will flow through the port."

The Greater Baltimore Committee estimated that the new coal terminals and related activities would pump more than $750 million a year into Baltimore's economy. Bring jobs to residents in a moment of capital flight and DEINDUSTRIALIZATION.

CSX today is a multibillion-dollar rail company accruing the lion share profits tied to coal export while externalizing the HARM, the DANGERS to residents and really all residents who live within a mile or a few of the rail lines which we know has disproportionately run through low-income communities of color & in Baltimore that is approximately 130,000 Baltimore residents live within 1 mile of the CSX coal train route.

The cost of exporting coal is not just the ongoing violence and displacements caused by climate change but it's the violence of breathing in PM 2.5 and PM10

Another headline in the evening sun from 1981

"Fugitive Dust is Pollution Culprit" [Communities like Curtis Bay were concerned over 44 years ago about quadrupling our exports of coal in a few years – how would this impact the local community? Estimates of fugitive coal fluctuated from 375 tons to 150,000 tons based on 50 million tons of coal exports from Baltimore. And there is mention of the state pollution controls adding to the cost of American export of coal …

Gloria Sipes in the article points down Church Street towards coal pier where the Chessie System (this was before CSX merged) would export 25 million tons of coal by 1985.

Gloria said, "There's no such thing as dust free coal, no matter how you stack it," those who live near coal facilities [in Curtis Bay and or along the Chessie rail system] will suffer the health consequences.

Mr. Ferrari (the Head of the Maryland Department of Environments Air Quality Management) division SAID, "All the terminals are in or near polluted areas that the state and federal agencies identify as primary or secondary non-attainment areas. If uncontrolled pollution from a terminal exceeding 50 tons of coal per year, he said 44 years ago, "coal sites must implement pollution controls regardless of the cost."

So here we have it … the head of MDE Air Quality knew this then and MDE probably knows it now that there are still no pollution controls for the facility AND this is harming all of us. MDE knows that we should have much more stringent regulations, and that the current permit is way too weak.

The current draft permit: does not require the strongest pollution controls. It does not have enforceable limits. And the ongoing monitoring is inadequate.

THE DUST is the afterlife of historic and ongoing violence of the extraction of non-renewable fossil fuels like coal, the dust gets caught inside people's lungs and forces them to live a life of respiratory illness in and out of hospitals if they can afford our privatized healthcare system. The dust is what covers a community in darkness preventing the children from playing outside. However, daily questions of safety and insecurity (explosions, fires, methane gas buildup) are also everyday realities of extractive regimes tied to big corporate rail aligned with non-renewable fossil fuel extraction. When corporations like CSX cut corners in safety measures, when mega rail (corporate rail) fails to provide sick leave, adequate pay and cuts back in protections for conductors, when our government fails to provide the most stringent regulations and PROTECT ALL OF US we all become collateral damage – we cannot allow CSX or other industries to turn us into "collateral damage" expendable and disposable. MDE must deny the permit and stand in solidarity with the community of Curtis Bay and all of Baltimore.

Thank you!

Nicole Fabricant
Professor of Anthropology | Sociology, Anthropology, and Criminal Justice
https://www.nikifabricant.com/

Fighting to Breathe: Race, Toxicity, and the Rise of Youth Activism in Baltimore (UCal Press 2023)
https://www.fightingtobreathe.us/

TOWSON UNIVERSITY

P: 410-704-5221
nfabricant@towson.edu | www.towson.edu/https://www.towson.edu/cla/departments/socioanthrocrim/?utm_source=redirect&utm_content=sociology

Tu/Th 2-3:00 p.m.

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Not in Transcript Submitted at Info Mtg 10/10/24

Intro: My name is Nicole Fabricant and I am a Professor of Anthropology at Towson University. I have taught courses on environmental justice, resource wars of the 21st century, and climate change. For fourteen years, I have been standing in solidarity with the community of Curtis Bay. I started organizing with the youth from Benjamin Franklin Highschool in 2010-2011 when they launched a campaign to stop the nation's largest trash-to-energy incinerator proposed/slated to be built a mile from their high school.

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So here we have it ... the head of MDE Air Quality knew this then and MDE probably knows it now that there are still no pollution controls for the facility AND this is harming all of us. MDE knows that we should have much more stringent regulations, and that the current permit is way too weak.

The current draft permit: does not require the strongest pollution controls. It does not have enforceable limits. And the ongoing monitoring is inadequate.

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Thank you!

Thank you for giving the time for community members to share their thoughts and concerns. I grew up in Curtis Bay. Now I am a business owner in Curtis Bay.

I am calling for MDE to deny CSX's application to renew the permit.

Residents have been calling for an end to coal dust pollution for decades

And the problem has been allowed to continue

Even after the coal terminal exploded.....accountability fell short

The coal dust continues to enter the community

The coal dust causes significant health problems

~~My adopted son, who was 38...just died from cancer on 9/30/24~~

~~He grew up on Cercal street.....a block from the coal pile~~

Help us.....we deserve to breathe cleaner air...

The children in this area have a higher rate of asthma

The draft permit falls short

It does not require the strongest possible pollution controls

It does not have clear ongoing enforcement pollution limits

The ongoing monitoring requirements are inadequate

Thank you for listening to my concerns

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Nora MILLER <Nora.MILLER@messages.fwwatch.org> Sun, Nov 17, 2024 at 6:06 AM
Reply-To: Nora MILLER <rrmiller82@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Randy Miller

Manchester, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Nora Wade <Nora.Wade@messages.fwwatch.org> Fri, Nov 15, 2024 at 6:28 PM
Reply-To: Nora Wade <norajwade@mac.com>
To: shannon.heafey@maryland.gov

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Nora Wade
903 Shawnee Dr
Frederick, MD

Buenas tardes y gracias por la oportunidad de hablar hoy. Mi nombre es Wendy Garcia y he vivido en Brooklyn por dos años. Mi familia y yo vivimos a menos de milla y media del terminal de carbón y vivimos a menos de media milla de los carriles que mueven el carbón de este sitio. Cada vez que yo limpio mi hogar o mi carro, veo la cantidad de polvo oscuro encima de todo las superficies y solo me imagino como están nuestros pulmones.

Mi comunidad en Brooklyn está demasiada contaminada. Aquí se ve basura, el aire apesta muchas veces, y se que el Bahia Curtis está totalmente contaminado por empresas como CSX que tiene permiso para contaminar. Para mi esto no solo es un problema ambiental sino algo que tiene que ver con la salud mía, de mi familia, y de mis vecinos. Brooklyn y todos los vecindarios cerca del terminal son de bajos recursos. Las familias, especialmente las familias inmigrantes, aquí no tienen acceso a ningún seguro médico mientras viven cerca del polvo tóxico en el aire y en el agua. Viviendo cerca del terminal y los carriles y respirando el aire contaminado día y día causa problemas cardiovasculares y respiratorios y hasta cáncer. Esto es algo que he visto en la salud de mis vecinos.

Hoy estoy aquí como un miembro de esta comunidad para decir ya basta con la sobrecarga de contaminantes en nuestra comunidad. Como una persona trabajador entiendo que el terminal provee trabajos para gente en la ciudad, pero eso no es razón válida para continuar la exposición local a contaminantes peligrosos a comunidades vulnerables. Los beneficios económicos que provee el terminal de carbón no son para la gente de Brooklyn o Curtis Bay; yo lo sé porque mi comunidad es de muy bajos recursos. Para mi comunidad lo único que el terminal de carbón hace es enfermar a mis vecinos.

Hoy levanto mi voz y le pido al departamento del medio ambiente que piense en las comunidades como las mías en lugar de interés comerciales y que no renueve el permiso del terminal de carbón o por lo menos que el departamento le ponga una fecha de cierre en el permiso. Gracias.

EXHIBIT H - 227

My name is Olivia Yates, and I am a co-founder of Coal Kills Baltimore. My great-grandfather was a coal miners, and members of my family, who from West Virginia, live in Virginia, currently live in close proximity to CSX's coal-bed trains. Firstly, I'd like to ask if there are there any CSX representatives here with us tonight.

"Coal has no future," is what Hunter Harrison, former CEO of CSX said in 2017 during once said in a presentation to industry analysts. Harrison knew that fossil fuels are dead and that we've reached a point in humanity in which coal is no longer practical or necessary. Harrison vowed CSX would get out of the coal business, but unfortunately, nine months after his appointment, he died. Four years later, Joe Hinrichs, a former top executive with the Ford Motor Company, replaced the interim CEO and has been leading CSX for two years since. Hinrichs's plan for CSX couldn't be more different: he has not said a word about shutting down the coal portion of CSX and instead has plans to ramp up coal's presence at the export piers in Curtis Bay.

It should not have to be explained why having a coal export pier directly next to a disproportionately poor, residential neighborhood is wrong. We

know that such a choice is purposeful, and that corporations and the government benefit from setting up destructive businesses in poor and working-class neighborhoods because they are aware that they do not have the same bargaining power, time, resources, and wealth to fight them.

CSX should also be fully aware of its selfishness in the face of global climate change. Look, your company had a good, billion-dollar run and you even got to cut a lot of corners while doing it, having consistently and actively violated your governing State Permit to Operate. The coal dust residents have reported seeing on their property and inside their homes is already a clear flag that the regulations in both the State Permit and the fugitive dust control plan are not being followed. But at the end of the day, CSX couldn't be bothered how much they pollute the community because they are an untouchable billion-dollar business that has never known the meaning of the word "consequence."

Still, it's time to wake up to the reality: we will no longer have a viable planet if we continue with fossil fuels. CSX knows that society has the

knowledge to switch to renewable energy, but companies like yours and people like Hinrichs not only hold us back but are also responsible for the harm and death due to coal pollution and their contribution to climate change.

IF NOT HERE: Lastly, CSX's missing presence is equally unsurprising as it is telling. The company has virtually never shown up to community meetings on this issue, and unresponsive to inquiries. Coal pollution is nowhere close to being a priority for them, and if it wasn't clear before, it's glaringly obvious now. Not only has their morality never compelled them to be here, but the state hasn't either.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Omar Siddique <Omar.Siddique@messages.fwwatch.org> Thu, Dec 12, 2024 at 12:16 PM
Reply-To: Omar Siddique <omars1234@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

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Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

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I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Omar Siddique
4517 Rebecca Ct
Ellicott City, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Patricia Burton <Patricia.Burton@messages.fwwatch.org> Thu, Dec 12, 2024 at 5:30 PM
Reply-To: Patricia Burton <kotipat@msn.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Patricia Burton
334 West Deer Park road
Gaithersburg, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Patricia Burton <Patricia.Burton@messages.fwwatch.org> Fri, Nov 15, 2024 at 9:40 AM
Reply-To: Patricia Burton <pdjburton@yahoo.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident and someone born and raised in Baltimore, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Patricia Burton
334 W Deer Park Rd
Gaithersburg, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Patricia Fouse <Patricia.Fouse@messages.fwwatch.org> Thu, Dec 12, 2024 at 1:48 PM
Reply-To: Patricia Fouse <pfouse@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Patricia Fouse
2241 Engle Rd
Fallston, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

2 messages

Patricia Thomas <Patricia.Thomas@messages.fwwatch.org> Fri, Dec 13, 2024 at 1:40 AM
Reply-To: Patricia Thomas <patthomas1218@icloud.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Patricia Thomas
3913 Wendy Lane
Silver Spring, MD

Shannon Heafey -MDE- <shannon.heafey@maryland.gov> Tue, Dec 17, 2024 at 12:13 PM
Draft To: Patricia Thomas <patthomas1218@icloud.com>

Shannon Heafey Public Participation Coordinator
Air Quality Permits Program, Air and Radiation Administration
Maryland Department of the Environment
1800 Washington Boulevard, Baltimore, Maryland 21230
shannon.heafey@maryland.gov
410-537-4433

[Quoted text hidden]

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Paul Eisenberg <Paul.Eisenberg@messages.fwwatch.org> Sun, Dec 15, 2024 at 8:50 PM
Reply-To: Paul Eisenberg <eisenber@iu.edu>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Paul Eisenberg
6 Upland Rd Apt C
Baltimore, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Peggy Meyer <Peggy.Meyer@messages.fwwatch.org> Thu, Dec 12, 2024 at 4:40 PM
Reply-To: Peggy Meyer <pa.meyer@comcast.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Peggy Meyer
33 Andrew Pl
Baltimore, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Peggy Meyer <Peggy.Meyer@messages.fwwatch.org> Fri, Nov 15, 2024 at 11:38 AM
Reply-To: Peggy Meyer <pa.meyer@comcast.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Peggy Meyer
33 Andrew Pl
Baltimore, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Peter Alexander <Peter.Alexander@messages.fwwatch.org> Thu, Dec 12, 2024 at 2:42 PM
Reply-To: Peter Alexander <palexand54@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Peter Alexander
15615 Camden Meadows Ct
Woodbine, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Peter Wood <Peter.Wood@messages.fwwatch.org> Thu, Dec 12, 2024 at 5:06 PM
Reply-To: Peter Wood <nativeofny1@yahoo.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Peter Wood
1133 East West Highway
Silver Spring, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Re: questions on public meeting

1 message

Phil Ateto <phil@backbonecampaign.org> Mon, Nov 4, 2024 at 5:52 PM
To: Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Hello,

Thank you for responding. My questions and concerns about the meeting are:

1. Why weren't Community members prioritized to speak first?
2. How did it happen that the first person to sign up who was from the community didn't get to speak for hours until it was too late and he had to leave?
3. Why CSX given more, seemingly unlimited time than what was allotted for everyone else?
4. Why was the amplified sound so poor?
5. FYI- Stopping person in middle of their commentary- specifically the spoken word piece towards the end was extremely rude and poor form, especially when he made clear he would be posting it written online and/or submitting it
6. I'm sure you all knew the background of this permit, facility, and the community, and what the tone and "temperature" of the room would be, why did you seem so ill prepared?

In the future I hope you will do better to consult with the community on the format and other aspects of meetings. Meetings like this and others MDE has had in the Curtis Bay in the past add insult to the decades of injuries and injustices of this "sacrifice zone" community.

Regards,

Phil

On Tue, Oct 15, 2024 at 9:54 AM Shannon Heafey -MDE- <shannon.heafey@maryland.gov> wrote:

> Good Morning Mr. Ateto,
>
> I will try to answer your questions, or get answers I may not have.
>
> Shannon
>
> > Shannon Heafey Public Participation Coordinator
> > Air Quality Permits Program, Air and Radiation Administration
> > Maryland Department of the Environment
> > 1800 Washington Boulevard, Baltimore, Maryland 21230
> > shannon.heafey@maryland.gov
> > 410-537-4433
>
> On Sat, Oct 12, 2024 at 2:49 PM Phil Ateto <phil@backbonecampaign.org> wrote:
>
> > Hello,
> >
> > Who can I/we speak with about questions and concerns regarding public meetings held by MDE? Specifically on the public meeting in Curtis Bay this past Thursday?
> >
> > Thank you,
> > --
> >
> > Phil

> Phil Ateto
> Solidarity Brigade Coordinator
> he/him/his
> www.BackboneCampaign.org
> 443.223.8202 mobile

--

Phil

Phil Ateto
Solidarity Brigade Coordinator
he/him/his
www.BackboneCampaign.org
443.223.8202 mobile

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Philip Ateto <Philip.Ateto@messages.fwwatch.org> Mon, Dec 16, 2024 at 3:32 PM
Reply-To: Philip Ateto <pateto@vt.edu>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

In addition, this facility is the 2nd largest such facility in the U.S. and must be closed down if we are taking climate change and our goals seriously. What will YOU tell your children and young people YOU did to prevent catastrophic climate change? You don't have to have an answer for me but you'd better have an answer for them.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Philip Ateto
1800 Poplar Ave
annapolis, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Testimony in Opposition Permit No. 510-2263 - CSX Curtis Bay Coal Terminal Air Pollution Permit

1 message

info uulmmd.org <info@uulmmd.org> Tue, Dec 3, 2024 at 9:43 AM
To: "shannon.heafey@maryland.gov" <shannon.heafey@maryland.gov>

Shannon Heafey, Maryland Department of the Environment

The Unitarian Universalist Legislative Ministry of Maryland (UULM-MD) strongly opposes **Permit No. 510-2263 - CSX Curtis Bay Coal Terminal Air Pollution Permit**.

The UULM-MD is a statewide faith-based advocacy organization, with over 1,200 members.Our ministry is based on the Principles of Unitarian Universalism including *Interdependence* (honoring the interdependent web of all existence) and *Justice* (where all feel welcome and can thrive).

The conditions at Curtis Bay are a prime example of the continued injustice levied on overburdened and underserved communities for generations. This terminal has long been a source of harmful coal dust emissions, and its operations continue to degrade air quality, jeopardizing the health and well-being of surrounding communities. Significant peer-reviewed research by prestigious Universities and Governmental Agencies have supported this. No amount of this pollution is safe for human health, and Curtis Bay residents have endured it for far too long. Maryland should prioritize the health of its citizens and the air quality of its state, not the interests of polluters.

The Maryland Department of the Environment must act, in the name of justice, to prevent the ongoing coal dust pollution in Curtis Bay caused by the operations of the CSX terminal by denying the request to renew its Permit to Operate.

Phil Webster, PhD
Lead Advocate for the Climate
Unitarian Universalist Legislative Ministry of Maryland

Please See Attached Letter.

Oppose Curtis Bay - UULM-Md.pdf
105K

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Randy Kliewer <Randy.Kliewer@messages.fwwatch.org> Fri, Nov 15, 2024 at 9:24 AM
Reply-To: Randy Kliewer <rkliewer3@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Randy Kliewer
3526 Newport Ave
Annapolis, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Raymond Arent <Raymond.Arent@messages.fwwatch.org> Thu, Dec 12, 2024 at 12:14 PM
Reply-To: Raymond Arent <rjarent@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Raymond Arent
1 Belleview Drive
Severna Park, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Rebecca Forte <Rebecca.Forte@messages.fwwatch.org> Mon, Dec 16, 2024 at 7:08 PM
Reply-To: Rebecca Forte <becca.chilbert@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Rebecca Forte
752 Dividing Rd.
Severna Park, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Rebekah King <Rebekah.King@messages.fwwatch.org> Fri, Nov 15, 2024 at 9:36 AM
Reply-To: Rebekah King <king.rebekah@rocketmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Rebekah King
1906 Belford Ct
Frederick, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Richard Shannahan <Richard.Shannahan@messages.fwwatch.org> Fri, Nov 15, 2024 at 9:36 AM

Reply-To: Richard Shannahan <rshannahan@verizon.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Richard Shannahan
1615 Greenspring Dr
Lutherville, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Permit No. 510-2263

1 message

Robert Wald <rwald1729@gmail.com> Mon, Nov 25, 2024 at 2:06 PM
To: shannon.heafey@maryland.gov

Dear Maryland Department of the Environment,

As a concerned Maryland resident, I am writing to express my strong opposition to the proposed draft Air Pollution Permit to Operate for the CSX coal terminal in Curtis Bay. This terminal has long been a source of harmful coal dust emissions, and its operations continue to degrade air quality, jeopardizing the health and well-being of surrounding communities. MDE must act to prevent the ongoing coal dust pollution in Curtis Bay caused by the operations of the CSX terminal by denying the request to renew its Permit to Operate.

The CSX terminal handled over seven million tons of coal in 2022, releasing coal dust that contains dangerous particulate matter (PM2.5 and PM10) and toxic elements such as arsenic, mercury, and lead. New peer-reviewed research proves what residents have long said: coal dust contaminates the community. Exposure to particulate matter has been linked to respiratory diseases, cardiovascular issues, and premature mortality. No amount of this pollution is safe for human health, and Curtis Bay residents have endured it for far too long.

Curtis Bay ranks among the highest in the nation for several pollution and health risk indicators. According to the EPA's EJ Screen, Curtis Bay is in the 99th percentile for proximity to Risk Management Program sites, 96th percentile for hazardous waste facilities, and 93rd percentile for wastewater discharge sites. The area also faces significant exposure to diesel particulate matter, air toxics, and elevated cancer and respiratory risks, making it a persistent environmental justice concern. Aubourg MA, Sawtell G, Deanes L, Fabricant N, Thomas M, Spicer K, Wagar C, Campbell S, Ulman A and Heaney CD (2023) Community-driven research and capacity building to address environmental justice concerns with industrial air pollution in Curtis Bay, South Baltimore. Front. Epidemiol. 3:1198321. doi: 10.3389/fepid.2023.1198321. https://www.frontiersin.org/journals/epidemiology/articles/10.3389/fepid.2023.1198321/full

Maryland should prioritize the health of its citizens, not the interests of polluters. MDE must deny this permit renewal to protect our community from further harm. If a permit is granted, it must include stringent conditions that effectively eliminate coal dust emissions, enforce stricter air quality monitoring, and hold CSX accountable for non-compliance.

Sincerely,

Robert Wald
Silver Spring

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Fri, Oct 11, 2024 at 6:16 AM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 10/11/2024 06:09:55 Eastern Standard Time

Response End Time: 10/11/2024 06:16:12 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Robin

2. Last Name:
Beswick

3. Email:
witchygodsmackwoman@comcast.net

4. Mailing Address:(optional)
[No Answer Entered]

5. Affiliation:(optional)
Resident

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
I think CSX is taking ever reasonable precaution they can. They were here first. They contribute a lot of money to the state economy. These people knew coal was here when they moved here. It's ridiculous that they now want to act like it's such an issue. And yet they don't have an issue with all the green space in this area being ripped out for houses. It seenms like it's a money grab & I'm sick of this "community" association acting like their opinion is the only one that matters. CSX should have their permit approved.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Robin Dumler <Robin.Dumler@messages.fwwatch.org> Thu, Dec 12, 2024 at 12:04 PM
Reply-To: Robin Dumler <robindumler@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Robin Dumler
41 Bramblewood Dr
Berlin, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Robin Hessey <Robin.Hessey@messages.fwwatch.org> Sat, Nov 23, 2024 at 8:30 PM
Reply-To: Robin Hessey <rmhessey@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Robin Hessey
10768 McGregor Drive
Columbia, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Ronald L Supporter <RonaldL.Supporter@messages.fwwatch.org> Thu, Dec 12, 2024 at 12:42 PM

Reply-To: Ronald L Supporter <ronald.lee.henry@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Ronald L Supporter
38 E. Jarrettsville Rd.
Forest Hill, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

RoseMarie Meservey <RoseMarie.Meservey@messages.fwwatch.org> Sat, Nov 16, 2024 at 9:40 PM

Reply-To: RoseMarie Meservey <rmmeserv@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
RoseMarie Meservey
9447 Brett Lane
Columbia, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Russell Dick <Russell.Dick@messages.fwwatch.org> Thu, Dec 12, 2024 at 1:30 PM
Reply-To: Russell Dick <russelldick@verizon.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Let you legacy be that you protected our planet and all its inhabitants by standing up to the coal, oil, and gas corporations' short-term profit priorities.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Russell Dick
22 Middle Grove Ct W
Westminster, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Sarah Peters <Sarah.Peters@messages.fwwatch.org> Sun, Dec 15, 2024 at 7:20 PM
Reply-To: Sarah Peters <petesa05@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a lifelong Maryland resident, I strongly urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations. Our state can be a national leader in phasing out fossil fuels and mitigating climate change.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Sarah Peters
1220 E West Hwy
Silver Spring, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Selah Thom <Selah.Thom@messages.fwwatch.org> Fri, Nov 15, 2024 at 9:28 AM
Reply-To: Selah Thom <selah.thom@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Selah Thom
12501 Ivory Pass
Laurel, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Seth Giddens <Seth.Giddens@messages.fwwatch.org> Sat, Nov 16, 2024 at 8:00 AM
Reply-To: Seth Giddens <sjgiddens@yahoo.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Seth Giddens
314 Decatur Ave
Salisbury, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Sharon Nelson <Sharon.Nelson@messages.fwwatch.org> Fri, Dec 13, 2024 at 10:42 AM
Reply-To: Sharon Nelson <s.nelson6-1@hotmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Sincerely,
Sharon Nelson
8431 Main Ave
Pasadena, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Sholey Argani <Sholey.Argani@messages.fwwatch.org> Sat, Dec 14, 2024 at 4:08 PM
Reply-To: Sholey Argani <sargani@comcast.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Sholey Argani
417 Lincoln Ave
Takoma Park, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Sirina Sucklal <Sirina.Sucklal@messages.fwwatch.org> Thu, Dec 12, 2024 at 3:44 PM
Reply-To: Sirina Sucklal <ssucklal@hotmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Sirina Sucklal
PO BOX 460
Savage, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Steve Breyman <Steve.Breyman@messages.fwwatch.org> Fri, Nov 15, 2024 at 11:20 AM
Reply-To: Steve Breyman <stevebreyman@icloud.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Steve Breyman
605 Linthicum St
Rockville, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Steve Sheffield <Steve.Sheffield@messages.fwwatch.org> Fri, Nov 15, 2024 at 2:10 PM
Reply-To: Steve Sheffield <srsheffield@comcast.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Steve Sheffield
2491 Vineyard Ln
Crofton, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

DENY PERMIT in Curtis Bay: CLEAN UP THE AIR

1 message

Sue Talbott <talbottsue@gmail.com> Thu, Oct 17, 2024 at 6:23 PM
To: shannon.heafey@maryland.gov
Cc: Governor Wes Moore <contact@maryland.gov>, laura.herrerascott@maryland.gov, info.sbclt.org@n915wm.fh79.fdske.com, Mayor of Baltimore <Mayor@baltimorecity.gov>

Dear Ms Heafey

I write in support of the residents of Curtis Bay - please deny the pending permit and begin a transition away from coal.

It is criminal that residents of this part of Baltimore have endured years and years of polluted air. In support of good health for all Maryland residents, you must lead the way and clean up the air in Curtis Bay!

Sincerely yours,

Susan W. Talbott, RN
Baltimore City

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Susan Bannister <Susan.Bannister@messages.fwwatch.org> Fri, Nov 15, 2024 at 10:02 PM
Reply-To: Susan Bannister <suebirch@earthlink.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

Please deny CSX Transportation's permit to operate its Baltimore coal terminal, for the health of Maryland's residents and to protect our clean energy future. We must end these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment determined that airborne coal dust found in South Baltimore was a result of CSX Transportation's operations. This coal dust is fine enough to enter deep into the lungs, and is implicated in several respiratory and cardiovascular diseases.

Maryland must not continue its reliance on the fossil fuel industry. To reach 100% clean energy by 2035, we must stop doing business with corporations that are harming people and our environment. In denying this permit, the Maryland Department of the Environment will movecour State away from fossil fuels and towards a cleaner, healthier future.

This September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a South Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our children and vulnerable populations, that includes our underserved, primarily low-income, communities of color.

You must deny CSX Transportation's operation permit to protect Marylanders' health and environment from these high risks. In addition to denying the permit, CSX Transportation must be required to work with local activists, the community, and Maryland Department of the Environment to address the harm already done to the community, and ameliorate further damage, pending CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Susan Bannister
5418 High Tor Hill
Columbia, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Susan Bannister <Susan.Bannister@messages.fwwatch.org> Thu, Dec 12, 2024 at 11:58 AM
Reply-To: Susan Bannister <suebirch@earthlink.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Susan Bannister
5418 High Tor Hill
Columbia, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

susan dickerson <susan.dickerson@messages.fwwatch.org> Thu, Dec 12, 2024 at 4:32 PM
Reply-To: susan dickerson <lola2danz@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
susan dickerson
6012 Woodland Ln
Clinton, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

susan dickerson <susan.dickerson@messages.fwwatch.org> Fri, Nov 15, 2024 at 4:52 PM
Reply-To: susan dickerson <lola2danz@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
susan dickerson
6012 Woodland Ln
Clinton, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Susan Levine <Susan.Levine@messages.fwwatch.org> Sat, Nov 16, 2024 at 1:44 AM
Reply-To: Susan Levine <llevine101@aol.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Susan Levine
15100 Interlachen Drive
Silver Spring, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Susannah Phillips <Susannah.Phillips@messages.fwwatch.org> Thu, Dec 12, 2024 at 4:38 PM
Reply-To: Susannah Phillips <natureloversus@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Susannah Phillips
307 Arundel Beach Rd
Severna Park, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Tammy Haller <Tammy.Haller@messages.fwwatch.org> Fri, Nov 15, 2024 at 11:14 AM
Reply-To: Tammy Haller <t.haller@comcast.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Tammy Haller
4221 Catholic Church Rd
Knoxville, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Tara Rice <Tara.Rice@messages.fwwatch.org> Mon, Nov 18, 2024 at 1:06 PM
Reply-To: Tara Rice <taramrice@yahoo.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to fossil fuel corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

In September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable residents, such as low-income communities of color.

Please deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Tara Rice
353 Market St W, Apt 222
Gaithersburg, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Ted Sober <Ted.Sober@messages.fwwatch.org> Thu, Dec 12, 2024 at 12:48 PM
Reply-To: Ted Sober <tedsober@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Ted Sober
Meadowsweet rd
Pikesville, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Permit No. 510-2263 CSXC

1 message

Ted Van Allen <tva6@verizon.net> Sat, Nov 30, 2024 at 8:38 PM
To: "Shannon.heafey@maryland.gov" <shannon.heafey@maryland.gov>

Dear Shannon Heafey,
Maryland Department of the Environment

Re: Comments in Opposition to the CSX Curtis Bay Coal Terminal Air Pollution Permit No 510-2263

I am appalled to about the amount of air pollution generated by the CSX coal trains and terminal in Curtis Bay. It is unconscionable. I live in Columbia MD and wanted to let you know about my strong opposition to the draft of the Air Pollution Permit to Operate for the CSX coal terminal in Curtis Bay.

This operation and this terminal have been generating huge coal dust emissions for a long time. These emissions pollute the air and hurt the health of everyone in the surrounding community. Please request that MDE deny the request to renew its Permit to Operate, or at least include stringent conditions to effectively eliminate coal dust emissions in Curtis Bay.

The toxic pollutants released by coal dust contain arsenic, mercury and lead. Curtis Bay residents have enduring this extremely harmful situation for a very long time.

MDE must deny this permit renewal to protect our community from further harm. If a permit is granted, it must include stringent conditions that effectively eliminate coal dust emissions, enforce stricter air quality monitoring, and hold CSX accountable for non-compliance. Maryland should prioritize the health of its citizens, not the interests of polluters.

Sincerely,

Edwin C. Van Allen
10768 McGregor Drive
Columbia, MD 21044

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Terry Scoggins <Terry.Scoggins@messages.fwwatch.org> Fri, Nov 15, 2024 at 10:14 AM
Reply-To: Terry Scoggins <terrys21@hotmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Terry Scoggins
200 Clifford Ln, Unit K
Forest Hill, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Terry Scoggins <Terry.Scoggins@messages.fwwatch.org> Thu, Dec 12, 2024 at 12:18 PM
Reply-To: Terry Scoggins <terrys21@hotmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Terry Scoggins
200 Clifford Ln, Unit K
Forest Hill, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Therese Dougherty <Therese.Dougherty@messages.fwwatch.org> Thu, Dec 12, 2024 at 1:58 PM

Reply-To: Therese Dougherty <tdougherty@amssnd.org>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Therese Dougherty
8404 Charles Valley Ct, Apt C
Towson, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

THOMAS Birdwell <THOMAS.Birdwell@messages.fwwatch.org> Thu, Dec 12, 2024 at 1:46 PM
Reply-To: THOMAS Birdwell <tmbiii@xecu.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
THOMAS Birdwell
2590 Bear Den Rd
Frederick, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Tim Crowley <Tim.Crowley@messages.fwwatch.org> Fri, Nov 15, 2024 at 2:48 PM
Reply-To: Tim Crowley <tim_j_crowley@hotmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

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I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Tim Crowley
15004 Butterchurn Ln
Silver Spring, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Tim Crowley <Tim.Crowley@messages.fwwatch.org> Thu, Dec 12, 2024 at 3:10 PM
Reply-To: Tim Crowley <tim_j_crowley@hotmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Tim Crowley
15004 Butterchurn Ln
Silver Spring, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Tom Longe <Tom.Longe@messages.fwwatch.org> Fri, Nov 15, 2024 at 7:20 PM
Reply-To: Tom Longe <Tomilonge@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Tom Longe
677 Saint Paul Street
Baltimore, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Tracey Katsouros <Tracey.Katsouros@messages.fwwatch.org> Fri, Nov 15, 2024 at 9:24 AM
Reply-To: Tracey Katsouros <traceycsmallwood@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Tracey Katsouros
1322 Harwich Dr
Waldorf, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Tracey Katsouros <Tracey.Katsouros@messages.fwwatch.org> Thu, Dec 12, 2024 at 12:18 PM
Reply-To: Tracey Katsouros <traceycsmallwood@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Tracey Katsouros
1322 Harwich Dr
Waldorf, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Victor Wittmann <Victor.Wittmann@messages.fwwatch.org> Thu, Dec 12, 2024 at 12:00 PM
Reply-To: Victor Wittmann <v1wittmann@comcast.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Victor Wittmann
4027 Log Trail Way
Reisterstown, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Victor Wittmann <Victor.Wittmann@messages.fwwatch.org> Fri, Nov 15, 2024 at 11:26 AM
Reply-To: Victor Wittmann <v1wittmann@comcast.net>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

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As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Victor Wittmann
4027 Log Trail Way
Reisterstown, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Victoria Garrison <Victoria.Garrison@messages.fwwatch.org> Sun, Dec 15, 2024 at 10:22 AM
Reply-To: Victoria Garrison <manchestervicky@hotmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

Greetings
Please deny CSX Transportation’s operation permit. And thank you for your good work!
Victoria Garrison
719 330 0121

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Victoria Garrison

Silver Spring, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Deny CSX Transportation's permit

1 message

Virginia Lawson <Virginia.Lawson@messages.fwwatch.org> Sun, Nov 17, 2024 at 12:58 PM
Reply-To: Virginia Lawson <vklawson@hotmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Virginia Lawson
8 Plateau Pl, Unit N
Greenbelt, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Virginia Lawson <Virginia.Lawson@messages.fwwatch.org> Thu, Dec 12, 2024 at 4:56 PM
Reply-To: Virginia Lawson <vklawson@hotmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

I ama Maryland resident and I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal.

For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that .

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Virginia Lawson
8 Plateau Pl, Unit N
Greenbelt, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Comment on CSX Curtis Bay Coal Terminal Air Pollution Permit No. 510-2263

2 messages

William Teng <dragonabs1@gmail.com> Mon, Dec 16, 2024 at 10:36 PM
To: shannon.heafey@maryland.gov

Dear Maryland Department of the Environment,

As a concerned Maryland resident with family members who live near Curtis Bay, I am writing to express my strong opposition to the proposed draft Air Pollution Permit to Operate for the CSX coal terminal in Curtis Bay. This terminal has long been a source of harmful coal dust emissions, and its operations continue to degrade air quality, jeopardizing the health and well-being of surrounding communities. MDE must act to prevent the ongoing coal dust pollution in Curtis Bay caused by the operations of the CSX terminal by denying the request to renew its Permit to Operate.

The CSX terminal handled over 7 million tons of coal in 2022, releasing coal dust that contains dangerous particulate matter (PM2.5 and PM10) and toxic elements such as arsenic, mercury, and lead. As you know, new peer-reviewed research by JHU et al. proves what residents have long said: coal dust contaminates the community. Exposure to particulate matter has been linked to respiratory diseases, cardiovascular issues, and premature mortality. No amount of this pollution is safe for human health, and this is even more so for vulnerable populations like children and elderly.

Curtis Bay residents have endured it for far too long. Life expectancy in Curtis Bay is 17 years shorter than in Baltimore's most prosperous neighborhoods. Why? The answer should be obvious. Would you want your loved ones to live in that kind of "sacrifice zone"? Indeed, would you want anyone? And, of course, everything is connected. This is not just a Curtis Bay or South Baltimore problem. Connected to the latter problem are other communities that suffer from environmental health issues (e.g., those who mine the coals transported to Curtis Bay) and the worsening of the climate crisis from burning of coal exported from Curtis Bay to countries around the world. Sooner or later, everyone, everywhere is affected.

Maryland should prioritize the health of its citizens, not the interests of polluters. MDE must deny this permit renewal to protect our community from further harm. If a permit is granted, it must include stringent conditions that effectively eliminate coal dust emissions, enforce stricter air quality monitoring, and hold CSX accountable for noncompliance.

Sincerely,

Bill Teng

Shannon Heafey -MDE- <shannon.heafey@maryland.gov> Tue, Dec 17, 2024 at 3:27 PM
Draft To: William Teng <dragonabs1@gmail.com>

Shannon Heafey Public Participation Coordinator
Air Quality Permits Program, Air and Radiation Administration
Maryland Department of the Environment
1800 Washington Boulevard, Baltimore, Maryland 21230
shannon.heafey@maryland.gov
410-537-4433

[Quoted text hidden]

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

No more coal dust poisoning Baltimore!

1 message

Zainab Moody <Zainab.Moody@messages.fwwatch.org> Thu, Dec 12, 2024 at 12:14 PM
Reply-To: Zainab Moody <brownindi64@gmail.com>
To: shannon.heafey@maryland.gov

Dear Ms. Heafey,

As a Maryland resident, I urge you to deny CSX Transportation's permit to operate its Baltimore coal terminal. For the health of Maryland's residents and to protect our clean energy future, we must halt these operations.

Last year, a study conducted by South Baltimore Community Land Trust, John Hopkins University, the University of Maryland, and the Maryland Department of the Environment confirmed that airborne coal dust was found in south Baltimore as a result of CSX Transportation's operations. This coal dust can be fine enough to enter deep into the lungs and is related to several respiratory and cardiovascular diseases.

Maryland cannot continue to rely on the fossil fuel industry. If we hope to reach 100% clean energy by 2035, we cannot extend lifelines to corporations that are harming people and our environment. By denying this permit, the Maryland Department of the Environment can help to move Maryland off fossil fuels and towards a cleaner, healthier future.

As recently as September, CSX Transportation was responsible for a "coal storm" that released smoke and coal dust near a south Baltimore playground. The Maryland Department of the Environment cannot allow CSX Transportation to continue poisoning our most vulnerable in already underserved, primarily low-income communities of color.

I urge you to deny CSX Transportation's operation permit because Marylanders' health and environment are too important to put at risk. In addition to denying the permit, CSX Transportation should be made to work with local activists, the community, and Maryland Department of the Environment to address the harm done to the community and prevent further damage until CSX's eventual closure.

Please protect people, not polluters, by denying CSX's permit.

Sincerely,
Zainab Moody
600 light st
Baltimore, MD

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Fri, Dec 13, 2024 at 3:01 PM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 12/13/2024 14:59:01 Eastern Standard Time

Response End Time: 12/13/2024 15:01:13 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Albert

2. Last Name:
Wynn

3. Email:
wynn.albert@gmail.com

4. Mailing Address:(optional)
2410 Enterprise Road Bowie, MD 20721

5. Affiliation:(optional)
[No Answer Entered]

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
Dear Secretary McIlwain and Maryland Department of the Environment:

Curtis Bay Piers, which handles coal, ore, limestone, and other materials, plays a critical role in sustaining Maryland's economic stability and the livelihoods of hundreds of workers.

As Maryland still works to recover fully from the recent Francis Scott Key Bridge collapse, we are reminded of the essential functions served by Baltimore's port facilities. The bridge collapse temporarily interrupted critical industry operations, but federal and state leaders, as well as private companies, swiftly mobilized to support economic continuity. As a key terminal in Baltimore, CSX's Curtis Bay operation made sure to maintain essential services, continuing employment and ensuring economic value at a time when many opted to cut back. CSX is not only an important industry in our state, but a good corporate neighbor that has donated funds to the B&O Museum in Baltimore and partnered with the state on the Howard Street Tunnel project.

Calls from some community groups to reduce or halt activities at Curtis Bay overlook the essential balance between environmental responsibility and economic equity. CSX's operations are part of a broader industrial and economic ecosystem that sustains families and communities across the state. Annually, the terminal contributes an estimated $335 million in economic activity and supports hundreds of Maryland jobs directly tied to these operations. It's crucial to

acknowledge that a sudden reduction in terminal activity would threaten thousands of good-paying jobs, pushing Marylanders into economic uncertainty.

CSX's Curtis Bay terminal provides a service critical to Maryland's industrial capabilities, supplying resources essential for steel production and other manufacturing needs nationwide. Furthermore, Maryland's reliance on industrial terminals like CSX's to sustain its economy is evident. Without operations like those at Curtis Bay, economic inequities in Baltimore could worsen due to lost wages and restricted access to essential resources.

While environmental protection is vital, a balanced approach that considers both economic stability and sustainable practices is key. Curtis Bay Piers is vital to our state economy and must be able to continue to operate with a renewed air quality permit.

Thank you for the opportunity to provide input on this matter.

Sincerely,

Albert R. Wynn
Former U.S. Representative, Maryland's 4th Congressional District

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Thu, Nov 28, 2024 at 7:09 AM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 11/28/2024 07:06:49 Eastern Standard Time

Response End Time: 11/28/2024 07:09:44 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Amanda

2. Last Name:
DeStefano

3. Email:
amandacatherinedestef@gmail.com

4. Mailing Address:(optional)
21213

5. Affiliation:(optional)
[No Answer Entered]

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
Please do not renew the coal pier's permit. It causes environmental and health problems in Curtis Bay, where the life expectancy is 10 years lower than Baltimore's wealthier neighborhoods. Climate change is barreling down on us and we have very little time left to have a meaningful attempt at mitigating the worst of it. Please do not renew the coal permit. Thank you.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Mon, Dec 16, 2024 at 10:05 PM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 12/16/2024 21 :33:23 Eastern Standard Time

Response End Time: 12/16/2024 22:05:57 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Anne

2. Last Name:
Wilson

3. Email:
annecawilson@gmail.com

4. Mailing Address:(optional)
221 Stony Run Lane, Apt H2, Baltimore, MD 21210

5. Affiliation:(optional)
[No Answer Entered]

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
I have lived in North Baltimore since 2007 and have been advocating for environmental justice for Curtis Bay and the other neighborhoods of South Baltimore (SB?) since 2019, in solidarity with local groups and individuals. I am writing to urge decision makers at MOE to deny CSX's requested permit renewal on the grounds that it is MDE's job to act in the best interest of pubic health and well-being, and renewing the permit is inconsistent with that obligation. Based on all statements thus far and the contents of the draft permit, folks at MDE appear to believe the department's hands are tied regarding the CSX coal pier, due to the need to "balance" the needs of the community against those of industry. But why does MOE exist, if not to protect the public from industrial pollution -- both particulate matter air pollution that is contributing to poor health outcomes in the area and the eventual carbon emissions that are helping to drive the climate crisis? This is an opportunity to act in the public interest rather than the interests of profit-making by industry executives and their shareholders. I understand that "it's complicated," in terms of the law and the regulatory structure governing MOE, but that is merely an illustration of the fact that the law and the regulatory structure are in need of of a massive overhaul and realignment. In the meantime, MOE owes it to this overburdened community to open the possibility of genuine protection from industrial pollution, rather than doubling down on the environmental injustices that are driving poor health and degraded quality of life for people living in Curtis Bay. Curtis Bay and South Baltimore need a just transition to a healthier local economy, one that does not treat as essentially disposable the health and well-being of the people who live there. MDE is in a position to begin to make that a real possibility. Please do not miss this opportunity.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Sun, Oct 13, 2024 at 9:04 AM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 10/13/2024 09:00:16 Eastern Standard Time

Response End Time: 10/13/2024 09:04:08 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Daniel

2. Last Name:
Broder

3. Email:
dnbroder@gmail.com

4. Mailing Address:(optional)
[No Answer Entered]

5. Affiliation:(optional)
[No Answer Entered]

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
This terminal has polluted South Baltimore communities for decades, and in recent years, it has created a dangerous explosion and a fugitive dust storm. Just this month, documentation that coal dust has been found throughout the Curtis Bay community as far away as Benjamin Franklin High School has been scientifically validated through peer review.

I urge the Maryland Department of the Environment to deny this permit or impose stricter regulations on coal dust emissions from the CSX terminal. The health of Curtis Bay residents must come first. Thank you for your time and consideration.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Sun, Sep 1, 2024 at 10:36 AM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 09/01/2024 10:32:09 Eastern Standard Time

Response End Time: 09/01/2024 10:36:05 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Daphne

2. Last Name:
Heppding

3. Email:
Daph2q4u2@gmail.com

4. Mailing Address:(optional)
[No Answer Entered]

5. Affiliation:(optional)
[No Answer Entered]

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
I have pics of coal floating on my pools surface and inside my pools pump and filters. I've had to take my pool down because of the oily black residue that has made a ring around my pools liner. My home, windows, outdoor furniture my vehicles, anything outside is covered in coal dust.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Fri, Dec 13, 2024 at 2:09 PM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 12/13/2024 12:50:28 Eastern Standard Time

Response End Time: 12/13/2024 14:09:06 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Evelyn

2. Last Name:
Hoon

3. Email:
evelynlhoon@gmail.com

4. Mailing Address:(optional)
[No Answer Entered]

5. Affiliation:(optional)
Coal Free Curtis Bay, Coal Kills Baltimore, University of Cambridge

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
To the Maryland Department of the Environment,

My name is Evelyn Hoon and I am a member and activist with Coal Free Curtis Bay, an affiliate with Coal Kills Baltimore, and an ally of the Community of Curtis Bay Association and the South Baltimore Community Land Trust. I am also a PhD Candidate at the University of Cambridge; my research examines health and environmental justice in South Baltimore. I am writing to MOE to urge against the passing of the draft permit for the CSX Curtis Bay Coal Piers, on the grounds that it does not effectively prevent harm to residents living nearby, nor does it acknowledge the harms of the terminal upon waterways near the terminal. There is inadequate evidence to support the idea that the permit can prevent such harms. Allowing CSX to operate under this draft permit would be a violation of laws regarding the protection of air and water quality.

I will not be the first to note that rates of chronic respiratory diseases like asthma, chronic obstructive pulmonary disease, and emphysema are many times higher in Curtis Bay and other neighborhoods near the terminal. The same is true for rates of chronic heart diseases and cancers known to be caused by chronic pollution exposure. There is ample research on this fact, from the EIP, from Baltimore City, and others (1, 2). Research by CCBA, JHU, UMD, and MOE itself has proven that massive quantities of coal dust blow into the community- the size of these particles (PM2.5 and PM10) is KNOWN to cause the sorts of diseases listed above (3). Any claim that we need further data to prove a connection

between coal dust and harm to health in the community is disingenuous and scientifically inaccurate – I say this as an academic who specializes in chronic health disorders and pollution exposure. There are currently no provisions in the draft permit that acknowledge these harms. There is also insufficient evidence to prove that water spraying and barriers will prevent ambient air pollution resulting in health disparities. As noted by Biliaiev et al. 2020, the type of barrier used to control coal dust has a massive variance in how effective dust control is (4). Some types of barriers have little to no preventative effect on coal dust emissions. As the draft permit currently does not specify what type of barrier must be constructed by CSX, there is no certainty as to whether barriers constructed by CSX will indeed protect the community.

It is also highly concerning that there is NO acknowledgement in the draft permit of the impacts of coal-contaminated wastewater entering waterways near the terminal. There is legal, EPA precedent for the acknowledgement of wastewater emissions from coal power plants, and from coal mining, preparation, and storage facilities (5, 6) – please review these laws as you reconsider the permit. Also consider that MDE is bound by the Clean Water Act: the act, as you well know, makes the discharge of any pollutant from a point source into navigable waters unlawful, unless a permit is obtained (7). There is currently NO language within the permit that mentions the emissions of this wastewater into the navigable waters of Curtis Creek, Curtis Bay, Masonville Cove, and the Patapsco River and Chesapeake Bay writ large. The permit calls for coal piles to be sprayed regularly with water to prevent airborne emissions; this will create coal-contaminated wastewater that is likely to reach local waterways, causing serious harm to local marine environments. There is currently no evidence to prove whether CSX wastewater emissions do discharge pollutants into navigable waterways. However, based on prior studies conducted on similar facilities (see Johnson et al. 2006), we can infer that such emissions are likely taking place, unmonitored – in violation of the Clean Water Act (8).

Without adequate information regarding the discharge of pollutants from the CSX terminal into waterways, the passing of the draft permit in its current form would, to my reading, not meet the demands of the Clean Water Act. As noted above, the permit also cannot claim to remediate the risks of air pollutants entering the community, leading to severe harms to community health, and potentially breaking the demands of the Clean Air Act (9).

The rates of asthma that prevent kids from playing sports in the community ought to be enough to make you deny the permit outright. However, I know that you, MDE, are limited in your capacity to work off reason alone, and are tied in legal knots. So, I hope you will listen to what I have written here and deny the renewal of the permit in its current form on the basis of solid legal and scientific evidence. If you don't, best believe we will see you on the streets, and in the courts (10, 11).

In hopeful solidarity,
Evelyn Louise Hoon
evelynlhoon@gmail.com
240-565-5928
PhD Candidate, University of Cambridge / Member, Coal Free Curtis Bay / Affiliate, Coal Kills Baltimore

Sources for you to review:
Environmental Integrity Project (EIP). Asthma and Air Pollution in Baltimore City. 2017 https://www.environmentalintegrity.org/wp-content/uploads/2017/12/Baltimore-Asthma.pdf.
Baltimore City Health Department (BCHD). 20-Year Gap In Life Expectancy Between Richer, Poorer Areas Of Baltimore. 2017. https://health.baltimorecity.gov/news/news-coverage/2017-07-07-20-year-gap-life-expectancy-between-richer-poorer-areas-baltimore-cbs#:~:text=New%20data%20says%20a%20baby,life%20expectancy%20is%20around%2079.
Community of Curtis Bay Association (CCBA), South Baltimore Community Land Trust, Mt. Winans Community Association, SB7 Coalition, Air and Radiation Administration, Maryland Department of the Environment, Department of Environmental Health & Engineering, Johns Hopkins Bloomberg School of Public Health, Department of Atmospheric and Oceanic Science, & University of Maryland. Collaborative Investigation of Coal Dust, Air Pollution, and Health Concerns in Curtis Bay, South Baltimore, Maryland, USA, 2022-2023. 2023. https://mde.maryland.gov/programs/permits/AirManagementPermits/Documents/FINAL_Full_CB%20Collab_%20Report.pdf.
Biliaiev, M.; Biliaieva, V.; Berlov, O.; Kozachyna, V.; Kirichenko, P.; Olatoye, O.M.; Poltoratska, V. Modeling coal dust dispersion from pile with protection barriers. E3S Web Conf. 168 00021, 2020. https://doi.org/10.1051/e3sconf/202016800021.
EPA coal mining wastewater guidance: https://www.epa.gov/eg/coal-mining-effluent-guidelines
EPA coal burning/coal ash wastewater guidance: https://www.epa.gov/coalash/coal-ash-rule
Summary of the Clean Water Act: https://www.epa.gov/laws-regulations/summary-clean-water-act
Johnson, R.; Bustin, R.M. Coal dust dispersal around a marine coal terminal (1977–1999), British Columbia: The fate of coal dust in the marine environment. International Journal of Coal Geology, 68(1–2): 57-69, 2006. https://doi.org/10.1016/j.coal.2005.10.003.
Summary of the Clean Air Act: https://www.epa.gov/laws-regulations/summary-clean-air-act
The Curtis Bay community is ready to take to the streets in action. https://foxbaltimore.com/news/local/activists-urge-state-action-as-coal-dust-threatens-health-in-curtis-bay
There is legal precedent for suits against state agencies that fail to protect oppressed communities: https://www.hud.gov/press/press_releases_media_advisories/hud_no_23_095; we are ready to take action if MDE is unwilling to take brave action towards environmental justice.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Thu, Oct 10, 2024 at 6:36 PM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 10/10/2024 18:15:47 Eastern Standard Time

Response End Time: 10/10/2024 18:36:44 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Forest

2. Last Name:
Feldenzer

3. Email:
eaeafeldenzer@gmail.com

4. Mailing Address:(optional)
3201 Westerwald Ave

5. Affiliation:(optional)
[No Answer Entered]

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
I'm writing in favor of denying renewal for CSX's permit to operate an open-air coal pier in Curtis Bay. For years they have operated without regard for the toxic pollution they are spreading to the surrounding community, and they will continue to drag their feet on implementing basic safety precautions. The coal industry is projected to die out by 2033, but the cancer, asthma, and pulmonary disease it leaves in its wake will be costing us far longer into the future. Is it really worth it to let this pollution continue? Curtis Bay residents deserve clean air to breathe.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Fri, Oct 25, 2024 at 6:27 PM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 10/25/2024 18:23:09 Eastern Standard Time

Response End Time: 10/25/2024 18:27:07 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Glenn

2. Last Name:
Rabut

3. Email:
glennrabut@verizon.net

4. Mailing Address:(optional)
806 Cedarcroft Rd Baltimore, MD 21212

5. Affiliation:(optional)
[No Answer Entered]

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
I strongly oppose the continuation of the permit for CSX to operate its coal terminal in Curtis Bay. It is severely affecting the health of the nearby residents, including school children, as well as contributing to the continued use of coal which is a major cause of climate change. MDE must listen to reason and to ists citizens and deny the permit to CSX.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Thu, Nov 28, 2024 at 8:56 AM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 11/28/2024 08:54:09 Eastern Standard Time

Response End Time: 11/28/2024 08:56:38 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Hannah

2. Last Name:
Freedman

3. Email:
Hannah.r.freedman@gmail.com

4. Mailing Address:(optional)
21210

5. Affiliation:(optional)
[No Answer Entered]

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
Deny the permit!! Curtis Bay residents have been sweeping coal off their porches, fighting asthma and cancers, and going to school less than a mile from uncovered coal piles.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Thu, Aug 29, 2024 at 1:49 PM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 08/29/2024 13:48:13 Eastern Standard Time

Response End Time: 08/29/2024 13:49:38 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Jean

2. Last Name:
Cushman

3. Email:
jeanpcushman@gmail.com

4. Mailing Address:(optional)
[No Answer Entered]

5. Affiliation:(optional)
[No Answer Entered]

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
People are dying from air pollution in Curtis Bay.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Fri, Dec 13, 2024 at 4:11 PM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 12/13/2024 15:14:32 Eastern Standard Time

Response End Time: 12/13/2024 16:11:43 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
John

2. Last Name:
Astle

3. Email:
jastle3578@gmail.com

4. Mailing Address:(optional)
[No Answer Entered]

5. Affiliation:(optional)
[No Answer Entered]

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
Dear Maryland Department of the Environment,

Throughout my career – from my service as an officer in the U.S. Marine Corps to my time as a State Senator in the Maryland General Assembly – I have championed efforts to protect and honor this balance between community strength and environmental stewardship. Today, I proudly write in support of the air permit renewal for CSX's Curtis Bay Piers facility, a key part of Maryland's infrastructure and recovery efforts.

The collapse of Baltimore's Francis Scott Key Bridge was a tragedy that shook our community to its core. In the face of loss and disruption, CSX stepped forward – not only to keep vital operations running, but to provide critical support to the region. From donating $50,000 to the Maryland Tough Baltimore Strong Key Bridge Fund to creating innovative temporary shipping solutions, CSX's actions demonstrated a commitment to people, not just profits.

The rapid reopening of Curtis Bay Piers after the bridge collapse was a testament to the resilience and ingenuity of CSX's operations team. CSX was the first to open up a new route between New York, New Jersey to Baltimore to move containers and keep the flow of goods to the Baltimore community. Their ability to adapt and maintain service continuity ensured that Maryland remained connected to global markets during a time of great uncertainty. It also ensured workers were not without a job and pay during the tumultuous time.

In general, CSX provides significant economic value to the state of Maryland. They generate thousands of good-paying jobs and over $20 million in state and local taxes. Beyond just job creation, they have previously donated $5 million to the B&O museum in Baltimore and provided $113 million towards the Howard Street Tunnel project, which recently launched the double-stacked rail operations to and from the Helen Delich Bentley Port of Baltimore.

CSX has also taken proactive steps to invest in the facility's environmental future, such as installing advanced air monitoring systems to ensure transparency and environmental safety. Rejecting its air permit renewal would not only threaten this progress but undermine a proven partnership between industry and community.

As Maryland continues to chart a path forward, I strongly urge the Maryland Department of the Environment to recognize the importance of Curtis Bay in this vision for the future. By renewing CSX's air quality permit, we can honor the balance of progress and preservation that defines Maryland's heritage.

Sincerely,

John C. Astle
Former Maryland State Senator, District 30

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Mon, Oct 21, 2024 at 9:25 AM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 10/21/2024 09:22:03 Eastern Standard Time

Response End Time: 10/21/2024 09:25:32 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Julian

2. Last Name:
Goresko

3. Email:
julian.goresko@gmail.com

4. Mailing Address:(optional)
838 W 37th St., Baltimore, MD 21211

5. Affiliation:(optional)
Johns Hopkins University

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
Hello,

I'm writing to express my concern for the continued permitting of the CSX coal terminal in South Baltimore. CSX's operations are a documented hazard to public health and affecting vulnerable communities in our area through airborne coal dust, fires, and other hazardous incidents.

As MDE knows, this facility is operating in a sensitive community area, impacting people's lives and public health.

If MDE cannot pull the permit, it should advise concerned residents how to engaged with federal regulators. And at a minimum significant improvements to the facility operations need to be required to prevent air pollution.

Thank you,
Julian Goresko

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Wed, Sep 11, 2024 at 7:49 PM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 09/11/2024 19:18:04 Eastern Standard Time

Response End Time: 09/11/2024 19:49:36 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Kathy

2. Last Name:
Bartolomeo

3. Email:
kbartolo30@gmail.com

4. Mailing Address:(optional)
[No Answer Entered]

5. Affiliation:(optional)
[No Answer Entered]

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
The residents of Curtis Bay have been payng the price of Maryland's use of coal for over 140 years. Residents experience health issues from asthma to cancer and unhealthy living. Living with ash entering homes is not suitable. Maryland leaders could have moved away from coal in yeasrs earlier but now we know this slowness in reducing the use of coal and a rise in electrical needs with Data Centers puts us in a predicament. We need to push heavily for PJM to build better electric transmission grid and make sure we find ways to put as much money into renewal infrastructure as possible. In the meantimes, we must support the residents with air cleaners and prevention of further health problems.
https://www.thebaltimorebanner.com/community/climate-environment/curtis-bay-residents-fight-csx-coal-traveling-through-port-of-baltimore-I5TS5TZ3MJGUHJFN7TMOFQVLVU/

https://www.baltimoresun.com/2024/09/11/csx-baltimore-coal-terminal-explosion-lawsuit-settlement-approved/

Sincerely, Kathy Bartolomeo

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Thu, Nov 28, 2024 at 2:55 PM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 11/28/2024 14:50:52 Eastern Standard Time

Response End Time: 11/28/2024 14:55:20 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Kenneth

2. Last Name:
Crandell

3. Email:
kencrandell@yahoo.com

4. Mailing Address:(optional)
[No Answer Entered]

5. Affiliation:(optional)
[No Answer Entered]

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
As a former resident of Brooklyn Park, and current resident of Columbia, I wish to support my former neighbors in opposing the CSX Permit outright, or at a minimum to modify it to eliminate the health issues that transportation of coal through the neighborhood causes.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Wed, Sep 4, 2024 at 2:37 PM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 09/04/2024 14:36:32 Eastern Standard Time

Response End Time: 09/04/2024 14:37:54 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Kyle

2. Last Name:
Dickens

3. Email:
unknown

4. Mailing Address:(optional)
379 Shayna Spurs

5. Affiliation:(optional)
salmon

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
[No Answer Entered]

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Thu, Nov 28, 2024 at 9:11 AM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 11/28/2024 09:08:09 Eastern Standard Time

Response End Time: 11/28/2024 09:11:43 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Lauren

2. Last Name:
Paniati

3. Email:
lauren.paniati@gmail.com

4. Mailing Address:(optional)
[No Answer Entered]

5. Affiliation:(optional)
[No Answer Entered]

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
Do not renew the permit for the coal pier. Protect the right of curtis bay resident to clean air and wellbeing. Allow the residents self determination to create a healthy community for themselves and future generations. I am against these proposed protective measures

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Mon, Oct 7, 2024 at 3:44 PM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 10/07/2024 10:19:21 Eastern Standard Time

Response End Time: 10/07/2024 15:44:23 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Leonardo

2. Last Name:
Soto

3. Email:
lsoto1@umd.edu

4. Mailing Address:(optional)
6420 Ivy Ter

5. Affiliation:(optional)
UMD

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
I commend the Maryland Department of the Environment for incorporating community feedback into the draft permit and recognizing the need for effective dust control measures at the CSX Transportation facility in Curtis Bay. The inclusion of physical barriers and enhanced water application systems is a positive step toward mitigating environmental impact. However, I recommend that the Department consider establishing more rigorous, continuous air quality monitoring at multiple points around the perimeter of the facility to ensure real-time compliance and efficacy of the dust suppression measures. Additionally, engaging with community health professionals to conduct a longitudinal health impact study could provide essential data to further refine air quality management at this site.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Fri, Dec 6, 2024 at 8:46 PM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 12/06/2024 20:45:16 Eastern Standard Time

Response End Time: 12/06/2024 20:46:05 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Lynda

2. Last Name:
Davis

3. Email:
lyndadvis@aol.com

4. Mailing Address:(optional)
[No Answer Entered]

5. Affiliation:(optional)
[No Answer Entered]

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
Deny the permit because no community should be left behind when it comes to clean air. Thank you.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Thu, Oct 10, 2024 at 4:18 PM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 10/10/2024 16:13:39 Eastern Standard Time

Response End Time: 10/10/2024 16:18:15 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Michael

2. Last Name:
Middleton

3. Email:
Executivedirector@sb7coalition.org

4. Mailing Address:(optional)
[No Answer Entered]

5. Affiliation:(optional)
SB7 Coalition Inc.

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
Permit requirements do not go far enough.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Sat, Oct 19, 2024 at 3:27 PM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 10/19/2024 15:22:59 Eastern Standard Time

Response End Time: 10/19/2024 15:27:00 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Peggy

2. Last Name:
Meyer

3. Email:
pa.meyer@comcast.net

4. Mailing Address:(optional)
[No Answer Entered]

5. Affiliation:(optional)
[No Answer Entered]

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
What CSX has done to the Curtis Bay area is unconscionable! Johns Hopkins studies on the asthma there is enough and there are so many more problems. I have been to many City Council meetings about this but the pollution continues. Do not give them a permit to continue sickening people. Thank you

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Mon, Nov 11, 2024 at 1:32 PM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 11/11/2024 12:57:44 Eastern Standard Time

Response End Time: 11/11/2024 13:32:35 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Perry

2. Last Name:
Ellis

3. Email:
perrywmellis@gmail.com

4. Mailing Address:(optional)
3155 Keswick Rd, Baltimore, MD 21211

5. Affiliation:(optional)
[No Answer Entered]

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
I would like to see provisions in the permit that specify allowable amounts of particulate matter permitted to exit the Curtis bay facility. I appreciate that there are enhanced mitigation measures in the draft permit but I don't see anything that tells me to what specific measurables must be achieved. The recent air quality study did a good job an establishing the current, unacceptable, baseline. From this perspective, what would an acceptable result, and what are the consequences if violations are measured?

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Fri, Oct 11, 2024 at 3:10 PM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 10/11/2024 15:05:47 Eastern Standard Time

Response End Time: 10/11/2024 15:10:02 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Ryan

2. Last Name:
Gattis

3. Email:
Ryangattis1@verizon.net

4. Mailing Address:(optional)
Ryangattis1@verizon.net

5. Affiliation:(optional)
[No Answer Entered]

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
Curtis Bay CSX facility is there to make money ar the expense of human lives. The state has a right to remove the permit because they have the right to renew it. They continue to put lives at risk for profit. There have been numerous studies that support this and also effects of coal on the body. This facility needs to be shut down and restorative justice needs to be enacted in order to protect the people living here. Schools and houses are right up against the plant and CSX acts like they aren't there. You can see the dust on the cars and buildings if you drive. CSX turns a blind eye to the people who are suffocating.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Fri, Nov 29, 2024 at 6:27 AM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 11/29/2024 06:24:50 Eastern Standard Time

Response End Time: 11/29/2024 06:27:53 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Samantha

2. Last Name:
Williams

3. Email:
Swwillia89@gmail.com

4. Mailing Address:(optional)
[No Answer Entered]

5. Affiliation:(optional)
[No Answer Entered]

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
Evidence now conclusively shows us the damage to a community of having coal dust and fumes nearby. I urge you not to renew permits that allow continued operation of coal industry in Curtis Bay or anywhere in Baltimore City. Every resident deserves clean air.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Mon, Oct 7, 2024 at 7:40 PM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 10/07/2024 19:37:18 Eastern Standard Time

Response End Time: 10/07/2024 19:40:42 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Samia

2. Last Name:
Lalani

3. Email:
sahim.lalani@gmail.com

4. Mailing Address:(optional)
[No Answer Entered]

5. Affiliation:(optional)
[No Answer Entered]

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
I strongly oppose the renewal of CSX's operating permit. The coal dust caused by the pier has been blowing into South Baltimore and endangering the health of all residents, including children who play at playgrounds nearby. The air quality nearby is NOT okay. Please do the right thing and refuse to renew CSX's permit!

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Thu, Dec 12, 2024 at 11:32 AM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 12/12/2024 11:31:41 Eastern Standard Time

Response End Time: 12/12/2024 11:32:43 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Sonia

2. Last Name:
Portnoy-Leemon

3. Email:
Sonia.portnoyleemon@gmail.com

4. Mailing Address:(optional)
[No Answer Entered]

5. Affiliation:(optional)
[No Answer Entered]

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
Please reject the permit and close the CDX facility. The people of Curtis Bay have been being poisoned for generations. It must stop now!!!!

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Tue, Oct 8, 2024 at 7:20 PM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 10/08/2024 19:11:07 Eastern Standard Time

Response End Time: 10/08/2024 19:20:18 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
John

2. Last Name:
Garofolo

3. Email:
johngstoneybeach@gmail.com

4. Mailing Address:(optional)
7838 Creek Shore Way, Curtis Bay, MD 21226

5. Affiliation:(optional)
None

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
MDE should immediately take action to disallow the continued pollution from CSX. It is the responsibility of the polluter to prove that they have cleaned up their act. Citizens of Curtis Bay should not have to suffer further. Moreover, MDE should more aggressively enforce their own statutes in Curtis Bay. The medical waste incinerator at Curtis Bay Energy continues to produce toxic noxious fumes which can be smelled for miles around. And MDE should do its job of properly monitoring the Brandon Shores powerplant for SO2, NO2, particulates and soil and water contamination. Curtis Bay deserves clean air, soil, and water and has been overlooked for far too long.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Thu, Oct 17, 2024 at 5:55 PM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 10/17/2024 17:53:47 Eastern Standard Time

Response End Time: 10/17/2024 17:55:26 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Timothy

2. Last Name:
Hreha

3. Email:
timhreha@gmail.com

4. Mailing Address:(optional)
4209 Roland Ave

5. Affiliation:(optional)
[No Answer Entered]

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
I support the community calls to deny the permit and begin a just transition away from coal to a safer material. Maryland should assert itself as a leader in decarbonizing our economy by refusing to participate in any part of the fossil fuel supply chain.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Tue, Dec 3, 2024 at 12:38 PM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 12/03/2024 12:31:47 Eastern Standard Time

Response End Time: 12/03/2024 12:38:21 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
William

2. Last Name:
Dusold

3. Email:
wdusold05@verizon.net

4. Mailing Address:(optional)
400 Ridgely Road Glen Burnie, MD 21061

5. Affiliation:(optional)
[No Answer Entered]

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
I oppose the renewal of the Air Quality Permit Construct because it will pollute the environment further.

EXHIBIT I

MDE Final Determination Appendix D
(Community Organization Comments)

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Public Comments on Draft State Operating Permit for CSX Terminal (Permit No. 510-2263)

1 message

Leah Kelly <lkelly@environmentalintegrity.org> Mon, Dec 16, 2024 at 8:32 PM
To: "shannon.heafey@maryland.gov" <shannon.heafey@maryland.gov>

Dear Ms. Heafey,

Attached please find comments from the South Baltimore Community Land Trust, Community of Curtis Bay Association, Environmental Integrity Project, and Chesapeake Bay Foundation on the Maryland Department of the Environment's tentative determination to issue the above-referenced renewal operating permit to CSX Transportation, Inc. for the operation of a coal terminal in South Baltimore. We are also including supporting attachments A through X. If the full set of attachments is not transmitted, we will send the attachments in parts.

We thank MDE for the opportunity to comment on this draft permit.

Best regards,

Leah Kelly (she/her)

Senior Attorney

888 17th St. NW, Suite 810

Washington, DC 20006

Office: (202) 263-4448

lkelly@environmentalintegrity.org

ENVIRONMENTAL INTEGRITY PROJECT

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6 attachments

FINAL SBCLT CCBA EIP CBF Comments.pdf
459K

EXHIBIT I - 1

List of Attachments and Combined Atts A-E.pdf
4745K

Combined Atts F-M.pdf
9674K

Combined Atts N-P.pdf
7663K

Combined Atts Q-U.pdf
3081K

Combined Atts V-X.pdf
5983K

EXHIBIT I - 2

December 16, 2024

Via e-mail
Ms. Shannon Heafey
Air Quality Permits Program
Air and Radiation Administration
1800 Washington Boulevard, Baltimore
Maryland 21230
shannon.heafey@maryland.gov

RE: Public Comments on Draft Renewal State Permit to Operate for CSX Transportation, Inc. – Curtis Bay Piers (Permit No. 510-2263)

Dear Ms. Heafey:

The South Baltimore Community Land Trust, Community of Curtis Bay Association, Environmental Integrity Project, and Chesapeake Bay Foundation (collectively, "Commenters") respectfully submit these comments on the Maryland Department of the Environment's ("MDE's") tentative determination to issue a renewed state operating permit ("Draft Permit") to CSX Transportation, Inc. ("CSX") for the operation of a coal storage, transport, and export terminal at 1910 Benhill Avenue, Curtis Bay, MD 21226 ("CSX Terminal" or "Terminal.")

We appreciate the time and attention that MDE has given to the issuance of this permit, including the public hearing that MDE held on October 10, 2024 to accept comments from the public on the Draft Hearing. While we thank MDE for including a few improvements in the Draft Permit, it still remains highly inadequate without further revision. As an initial matter, the best outcome for the nearby communities – and the decision that Commenters request – would be denial of the permit. MDE has been made aware of the dust problems from the Terminal for years, yet pollution problems have persisted while throughput at the Terminal has increased. MDE's regulations at COMAR authorize MDE to deny a permit to operate under the circumstances present in this matter.

In the alternative, the Draft Permit and the two attached and incorporated plans – the Draft Fugitive Dust Control Plan and the Draft Fenceline Monitoring Plan[1] - must be revised substantially in order to strengthen them and reduce the impacts of particulate and other pollution on nearby residents. In the comments section below, we provide detailed explanations, with supporting information, of our recommendations, which we summarize here. MDE must revise the Draft Permit to:

- Require full enclosure of the coal piles;
- Ensure the ongoing optimized operation of the physical barrier, which must be full enclosure, at the coal piles;
- Revise the fenceline monitoring plan to require corrective actions if pollution levels exceed a meaningful threshold. If corrective action is not clearly required for pollution exceedances within three years, the program should be discontinued;
- Set specific, enforceable permit conditions, including numeric limits where possible, for the control of particulate matter from the Terminal;
- Require CSX to submit key information about Terminal emissions and operations to MDE rather than maintaining it on site and providing it upon request;
- Require CSX to submit information about volatile organic compound ("VOC") emissions from the coal handling and piles at the Terminal;

[1] As attachments to the Draft Permit, which is being renewed, Commenters consider both the fugitive dust control plan and the fenceline monitoring plan to be in draft form and subject to improvement during the renewal process.

- Require CSX to submit information about dockside emissions from vessels at the Terminal; and
- Use the VOC and vessel emissions information to determine whether the CSX Terminal constitutes a major source of air pollution requiring a Title V operating permit.

I. MDE Should Deny the Application for a Renewed State Operating Permit for the Terminal.

MDE should deny CSX's application for renewal of its operating permit. Such denial is permissible and warranted based on the record of neighbor complaints about the Terminal, evidence of airborne particulates from the Terminal reaching residential areas nearby in Baltimore City, and recent violations.

MDE is fully authorized under COMAR to deny a state permit to operate under certain conditions, which are met here. MDE may deny an application for a state permit to operate if the agency:

> determines that the applicant has not demonstrated that the applicant and the source shall:
> (1) Comply with all applicable emission standards contained in this subtitle . . .;
> (2) Comply with the terms and conditions of all approvals, permits [and other requirements] issued or adopted by [MDE] . . .[2]

MDE may also deny an application for a state permit to operate if "[b]ased on past history of the applicant or source, [MDE] determines that the source is not expected to comply with all applicable requirements of the State air pollution control law."[3]

Many residents of the communities located close to the Terminal have testified about the pollution that they experience from the Terminal at multiple meetings. These include meetings held by MDE, such as the public hearing held on the Draft Permit on October 10, 2024, and the Baltimore City Council. MDE has a record of such statements dating back to 2013.[4] In addition, scientific studies, including a peer-reviewed study, have resulted in findings that coal dust is present in the residential area near the Terminal.

MDE has also notified CSX of several violations of its existing permit over the past three years. These include violations caused by the December 2021 explosion[5] and violations during a September 5, 2024 event.[6] During the September 5 event, track work at the Terminal, caught on video by a drone flying over the Terminal, appeared to cause a visible dust plume over the facility, which was caught on video by community advocates who were nearby at the time.[7]

The September 5 event was recorded and noticed as a violation due to happenstance: a video camera and a drone happened to be trained on the Terminal by private members of the public at the time. With the Draft Permit in its present state, there is no way to ensure that such an event does not recur or even to document its occurrence as members of the public cannot monitor the Terminal constantly with drones and video cameras for dust plumes. In fact, the Draft Fugitive Dust Plan states

[2] COMAR 26.11.02.06(C).
[3] COMAR 26.11.02.06(D).
[4] 2013 petition seeking stronger CSX permit conditions signed by 40 residents of zip codes 21225 and 21226 (Attachment A).
[5] MDE July 20, 2022 Notice of Violation to CSX (Attachment B).
[6] MDE September 9, 2024 Notice of Violation to CSX (Attachment C).
[7] The footage of both events is available online at https://www.youtube.com/watch?v=7eudBwa-6RY .

that, in November 2022, CSX submitted a "Curtis Bay Piers Visible Emissions (VE) Camera Test Protocol to [MDE] which contained descriptions of the program's proposed objectives, test methods, equipment, and timeline."[8] However, no such video camera program is being proposed as part of the permit renewal and MDE does not appear to have in its possession the referenced November 2022 camera test protocol.[9]

Taken as a whole, the September 5 event, the lack of any meaningful, ongoing monitoring for visible dust migration from the Terminal, and the multitude of resident complaints indicates that there are likely recurring but unrecorded events at the Terminal during which CSX's operations violate: (1) the prohibition on nuisance activities at COMAR 26.11.06.08 and in CSX's permit; and (2) the requirements to take reasonable precautions to prevent particulate matter from becoming airborne at COMAR 26.11.06.03 and in CSX's permit.

Based on all of these factors, MDE should determine that CSX has not demonstrated that the Terminal "shall . . . [c]omply with all applicable emission standards" in COMAR Subtitle 11 or with the terms and conditions of its permit and should determine that the Terminal "is not expected to comply with all applicable requirements of the State air pollution control law."[10] Thus, MDE should deny the application for a permit.

II. In the Alternative, MDE Must Revise the Draft Renewal Permit to Impose Stronger Permit Conditions.

If MDE does not deny CSX's application for a renewal permit, then it must revise the Draft Permit to impose stronger conditions. Despite a robust record of neighbor complaints and evidence of airborne coal particle deposition in the nearby neighborhood, the Draft Permit remains woefully inadequate. Apart from the proposed addition of a physical barrier around the coal piles, the Draft Permit fails to set forth specific and enforceable requirements for the control of pollution from the Terminal. Even the section on the proposed barrier suffers from notable deficiencies, including the failure to require complete enclosure of the coal piles and the failure to require ongoing operation of the barrier after operation commences.

With one minor exception (for throughput through one storage section of the Terminal),[11] the Draft Permit sets forth no numeric limits, which allow for the greatest clarity and enforceability. The Draft Fenceline Monitoring Plan and the Draft Fugitive Dust Control Plan contain few, if any, enforceable requirements, as described in more detail below. These plans are certainly insufficient to ensure the detection of events like the September 5, 2024 one. It is discouraging, after years of work, that these plans remain paper tigers.

MDE must revise the Draft Permit to require complete enclosure of the coal piles and mandate the operation and maintenance of the enclosure (or enclosures) on an ongoing basis. MDE must also revise the Draft Permit to set forth specific and enforceable requirements for the control of pollution from the Terminal, using numeric limits where possible, based on the numerous examples of stronger

[8] Draft Fugitive Dust Control Plan at 2.
[9] It is Commenters' understanding that (1) on or around November 5, 2024, students with the University of Maryland Environmental Law Clinic submitted a public records request seeking "[a]ll records, reports, and data related to visible emissions monitoring at the CSX coal terminal in Curtis Bay" and (2) on November 22, 2024 date, MDE responded to this stating that it "has no records responsive to [the] request." MDE's November 22, 2024 response is attached hereto as Attachment D along with the language that we believe was included in the initial request.
[10] COMAR 26.11.02.06(C)(D).
[11] Draft Condition C(4) at 8.

requirements in other jurisdictions. If the Draft Fenceline Monitoring Plan is not revised within three years to clearly require specific corrective actions that must be taken if emissions exceed identified thresholds, then the fenceline monitoring program should be discontinued. Finally, MDE should require submission of key information rather than allowing CSX to maintain it on site and submit it upon request.

A. MDE Must Revise the Draft Permit to Require Full Enclosure of the Coal Storage Piles

In the Draft Permit, MDE has proposed the installation of a physical barrier surrounding the coal piles. Specifically, the Draft Permit states that:

> The Permittee construct a physical barrier to prevent coal dust from being transported from any coal storage piles on the site into the surrounding community. The physical barrier must at a minimum surround all coal storage piles completely, either individually or in a single enclosure within the facility's property boundary, except where openings are needed to allow vehicular access into and out of the interior of the structure or where necessary to allow for the movement of coal into or out of the physical barrier via conveyors. If the barrier is open to the atmosphere from above, the maximum coal pile height shall be maintained at a level that is less than the height of the physical barrier at all times.[12]

MDE must revise the Draft Permit to require complete enclosure of the coal piles. MDE is fully authorized to require such pollution controls, which are technically feasible, exist at multiple sites both inside and outside of the U.S., and are identified as reasonable controls for bulk or aggregate material stockpiles by multiple states. In the alternative, MDE must at minimum require engineered and optimized wind screens surrounding the coal piles.

i. *Full enclosure is technically feasible, considered reasonable control technology for stockpiles by multiple permitting agencies, and MDE may consider the proximity of the source to nearby human habitation in its determination.*

There is no question that full enclosure of coal storage piles is technically feasible. As explained in the attached Expert Report of Dr. Ranajit Sahu, it is technically feasible to enclose coal piles using either hard or soft covers.[13]

There are multiple examples of existing and permitted coal piles that are fully enclosed both inside and outside of the U.S. The tables below provide information on several projects, including location, technology, and citations to supporting information.

[12] Draft Permit Condition (D)(1) at 9.
[13] Expert Report on Costs for Cover the Coal Piles at the CSX Baltimore Terminal, or Otherwise Reducing Such Dusts, and on the Estimated VOC Emissions from the Terminal by Dr. Ranajit (Ron) Sahu, Consultant, Dec. 15, 2024 at 1 (Attachment E).

Table 1: Existing fully enclosed coal piles in the U.S.

Project	Location	Technology	Supporting Information
Coal storage barn at Spring Creek Mine	Big Horn County, Montana	Coal storage barn	Current air permit issued 10/16/14[14] 2020 Environmental Impact Statement[15]
Domes at JEA Northside Power Generating Facility	Jacksonville, Florida	Aluminum domes for coal and petcoke	JEA facility information online[16] Geometrica vendor information[17]
Coal storage dome at ADM Cogeneration Facility, Iowa	Clinton, Iowa	Hard dome	Vendor (Dome Technology) information[18]
Coal storage dome at ADM Cogeneration Facility, Nebraska	Columbus, Nebraska	Hard dome	Vendor (Dome Technology) information online[19]
Coal storage dome	Kemper, Mississippi	Hard dome	Vendor (Dome Technology) white paper[20]
Affinity Coal Prep Plant	West Virginia	Silo	Coal Age Magazine[21]
Coal storage building at manufacturing and possibly coal preparation plant[22]	Muncy, Pennsylvania	Unknown	Air pollution permit[23]

[14] Montana Department of Environmental Quality, Air Quality Permit #1120-12, Spring Creek Coal, LLC, October 16, 2014, at 3 https://deq.mt.gov/files/Air/AirQuality/Documents/ARMpermits/1120-12.pdf. (Excerpts attached as Attachment F).

[15] Final Environmental Impact Statement for the Spring Creek Mine TR1 Project Big Horn County, Montana, March 2020, at 55 https://deq.mt.gov/files/Public/EIS/Spring%20Creek%20TR1/SpringCreekMine_TR1_Final%20EIS.pdf. ("Fugitive dust is controlled per SCM's MAQP #1120-12 (DEQ, 2014) and would continue to be controlled the same way under the No Action Alternative and as per ARM 17.8.308. Measures used to control fugitive dust according to the Air Pollution Control Plan (SCM, 2002) and the best available control capability that is technology practicable and economically feasible (ARM 17.8.752) requirements in MAQP #1120-12 (DEQ, 2014)) include: . . . [c]ompletely enclosed storage barn for the coal storage pile.") (Excerpts attached as Attachment G).

[16] JEA, Appendix A – Technical Specifications Independent Quarterly Survey of Storage Domes and Limestone Covered Storage Building at JEA – Northside Generating Station, https://www.jea.com/About/Procurement/Informal_Procurement_Opportunities/96150_Appendix_A_-_Technical_Specifications.aspx (Attachment H along with Geometrica Power Generation, Powering up Florida at note 17 below).

[17] Geometrica, Power Generation, Powering Up Florida https://www.geometrica.com/en/latestnews/power-generation (Attachment H along wih JEA Technical Specifications at Note 16 above); Geometrica Flickr Photo Album, https://www.flickr.com/photos/geometricainc/albums/72157671867958237/.

[18] Dome Technology, ADM Coal Storage – Clinton, Iowa, https://www.dometechnology.com/projects/adm-coal-storage-clinton-iowa/ ADM coal storage; Dome Technology, *Dome's seamless construction yields ultimate control for coal storage*, March 25, 2022, https://www.dometechnology.com/domes-seamless-construction-yields-ultimate-control-for-coal-storage/ (Both prior citations attached as Attachment I); *see also* Power Magazine, *Top Plant: ADM Clinton Cogeneration Plant, Clinton, Iowa*, Oct. 1, 2010, https://www.powermag.com/top-plantadm-clinton-cogeneration-plant-clinton-iowa/.

[19] Dome Technology, ADM Columbus Cogeneration Plant, https://www.dometechnology.com/projects/adm-columbus-cogeneration-plant-coal-bulk-storage-united-states/ (Attachment J).

[20] Dome Technology, Coal Storage, Kemper County, USA, https://media.dometechnology.com/wp-content/uploads/Dome-Technology-Project-Summary-Kemper-Coal-Kemper-County_MS-16.10.26.pdf (Attachment K).

[21] Coal Age Magazine, *The New United Affinity Prep Plant: The Apex In Prep Design For the Pocahontas Seam*, April 2012, at 26, 28 https://www.coalage.com/wp-content/uploads/2019/09/apr-2012min.pdf.

[22] It is not clear whether this facility includes a coal preparation plant, though the facility name in the permit includes "Coal Prep Pt."

[23] Pennsylvania Department of Environmental Protection, State Only Permit No. 41-00020, Condition #23, Section C, Site-Level Requirements, p. 20, https://files.dep.state.pa.us/air/AirQuality/AQPortalFiles/Permits/PermitDocuments/1249323[41-00020]_Issued_v1.pdf. (Excepts attached as Attachment L.)

Warehouse at Kinder Morgan coal terminal	Blytheville, Arkansas	Warehouse	EPA letter attached to CSX permit materials submitted to MDE (2022)[24]

Table 2: Existing fully enclosed coal piles outside of U.S.

There are numerous examples of coal stockpiles with full enclosures outside of the U.S. Below is an example of a few of these.

Project	Country	Technology	Supporting Information
Lunen Power Plant	Germany	Silo	Vendor (Eurosilo) information[25]
Bocamina covered coal yard	Chile	Dome	Vendor (Geometrica) information[26]
Tai Power coal storage domes	Taiwan	Coal domes	Geometrica online information[27]
PT Pupuk Kalimantan Timur Fertilizer Plant	Indonesia	Coal dome	Vendor (Geometrica) information[28]

Table 3: Facilities permitted or proposed but not built with fully enclosed coal pile design in the U.S.

Project	Location	Technology	Supporting Information
Coyote Island Coal Terminal Coal Export Project	Boardman, Oregon	Up to 3 coal storage buildings, each with five wet scrubbers with exhaust vents	Air Pollution Permit[29]
TransGas Development, LLC Coal-to-Gas Plant (permit appears to have issued)[30]	Wharncliffe, Mingo County, West Virginia	Coal storage building equipped with baghouses	State Agency Air Permitting Engineering Evaluation/Fact Sheet[31]
Enclosures at proposed Oakland terminal	Oakland, CA	Unknown	Bases for Design[32]

[24] EPA Region 6 letter to Kinder Morgan Terminals at 1 (April 6, 2017) ("Coal is brought into the Hickman Bulk Terminal either by rail or truck and then stored inside a covered warehouse.") Appendix E (NSPS Determination) to CSX Air Quality Permit Determination Request, May 22, 2022 Revised August 25, 2022, available at https://mde.maryland.gov/programs/permits/AirManagementPermits/Documents/2022%20CSXT%20Permit%20Determination%20Request%2020220825_final.pdf (Attachment M hereto).

[25] Eurosilo, Case Study – Lünen Coal-Fired Power Plant**,** https://eurosilo.com/cases/lunen-coal-fired-power-plant/.

[26] Geometrica, Making History - Bocamina Coal Cove, https://www.geometrica.com/en/latestnews/making-history.

[27] Geometrica Articles, Tai Power Coal Storage Domes, https://articles.geometrica.com/1897.html.

[28] Geometrica, Keeping Coal Clean, https://www.geometrica.com/en/latestnews/keeping-coal-clean.

[29] Oregon Department of Environmental Quality, Standard Air Contaminant Discharge Permit, Coyote Island Terminal, LLC, Feb. 11, 2014 at 1, https://www.oregon.gov/deq/FilterDocs/coyoteis-airpermitRep.pdf. (Excerpts attached as Attachment N).

[30] West Virginia Department of Environmental Protection ("WVDEP"), TransGas Development Systems, LLC Ammonia Production Facility (R13-3622), March 26, 2024 at 1, https://dep.wv.gov/daq/permitting/Documents/2024-02--Transgas-Development-Ammonia/059-00102_PERM_13-3622.pdf ("Construction ofsix (6) identical 6,000 metric tons/day (MTPD) ammonia manufacturing plants on the site of the previously permitted (but not constructed) coal-to-gasoline facility (Permit Number R13-2791A").

[31] WVDEP, Engineering Evaluation/Fact Sheet, TransGas Development, LLC, at 4, https://dep.wv.gov/daq/Documents/13-2791-ee.pdf ("From the crusher, the coal will be belted (BC2, BC3, and BC4) to a building that fully encloses the coal storage pile (OS1). Exhaust from the coal storage building will be controlled by four baghouses (BHCS1 - BHCS4)".)

[32] Oakland Bulk and Oversize Terminal, Oakland, Alameda County, California, Basis of Design (Draft), Volume 1, 7/21/15 at 13 (Section 9.8.2, Commodity B: "Enclosed storage domes with vents"); West Gateway Bulk Cargo Terminal Basis of Design (Draft) at 9/33 ("[T]he conveying system will be completely enclosed and the material will be stockpiled in warehouses, domes or silos.")(Both Oakland documents attached hereto as Attachment O). To our knowledge, no environmental permit application materials have been submitted yet for the proposed Oakland, California terminal.

In addition, full or partial enclosure is identified as reasonable control technology for bulk or aggregate material stockpiles by multiple environmental permitting agencies. The following are examples of this:

- Oregon's laws state that " reasonable precautions may include, but not be limited to the following: . . .[f]ull or partial enclosure of materials stockpiles in cases where application of water or other suitable chemicals are not sufficient to prevent particulate matter from becoming airborne[.]."[33]

- EPA Region 10's fugitive PM requirements for application to Indian Reservations state that "[r]easonable precautions include, but are not limited to. . .[f]ull or partial enclosure of materials stockpiles in cases where application of oil, water, or chemicals is not sufficient or appropriate to prevent particulate matter from becoming airborne."[34]

- Within California, a few different air quality management districts have identified full or partial enclosures as a reasonably available control measure for open storage piles.[35]

- Michigan's air quality laws state that: "Typical control methods for controlling fugitive emissions resulting from the loading or unloading of piles may include, but are not limited to, the following: . . . (i) Completely enclosing the pile within a building furnished with department-approved air pollution control equipment."[36]

MDE has clear authority under COMAR 26.11.06.03(C) (unconfined sources) or COMAR 26.11.06.03(D) (materials handling and storage) to require full enclosure of the coal piles at the CSX Terminal as a reasonable precaution for the control of fugitive emissions of particulate matter. This is especially true given the proximity of densely settled residential areas and recreation areas to the Terminal and the record of resident complaints about pollution from the Terminal.

The State of Idaho's air quality laws state that:

> All reasonable precautions must be taken to prevent particulate matter from becoming airborne. In determining what is reasonable, consideration will be given to factors such as the proximity of dust emitting operations to human habitations and/or activities, the proximity to mandatory Class I Federal Areas, and atmospheric conditions that might affect the movement of particulate matter.[37]

COMAR 26.11.06.03(C) and/or (D) provide MDE with significant discretion to consider proximity to and effects on human habitations and activities, such as the residential area and nearby community recreation center equipped with outdoor basketball courts and a park.

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[33] OAR 340-208-0210.
[34] 40 C.F.R. § 49.126(2)(iii).
[35] Eastern Kern County Air Quality Management District, Rule 401, https://ww2.arb.ca.gov/sites/default/files/classic/technology-clearinghouse/rules/RuleID4881.pdf;
Tehama County Air Pollution Control District, Rule 4:24, https://ww2.arb.ca.gov/sites/default/files/classic/technology-clearinghouse/rules/RuleID3844.pdf ; San Joaquin Valley Unified Air Pollution Control District, Rule 8031 – Bulk Materials, https://ww2.arb.ca.gov/sites/default/files/classic/technology-clearinghouse/rules/RuleID3397.pdf (control technology for bulk storage piles includes "a 3-sided structure with a height at least equal to the height of the storage pile and with less than 50% porosity.")
[36] Mich. Admin. Code R 336.1372.
[37] IDAPA 58.01.01.651.

In addition, our understanding is that scientists with Johns Hopkins University and other academic institutions will be submitting information during the comment period showing a correlation between bulldozer activity at the site and measured particulate matter levels at nearby monitors. CSX states, in the Draft Fugitive Dust Control Plan, that "[b]ulldozers are only used for shaping the storage piles and for coal reclamation during ship loading."[38] Given the limited use of bulldozers on site and our understanding that the Johns Hopkins study is focused on the activity of bulldozers at the coal piles, it appears that full enclosure of the coal piles would reduce, if not eliminate, the impacts from a significant number of events at the Terminal during which particulate matter is becoming airborne.

ii. *The cost of full enclosure is reasonable, especially in light of expected offsetting reduction in stormwater treatment costs.*

According to two engineering estimates, the capital cost of installing a full enclosure using hard or soft covers at the CSX Terminal would likely be between $10 million and $17 million. This range is based on the Sahu Report and a separate estimate by EA Engineering, Science, and Technology, Inc., PBC ("EA Engineering") attached hereto as Attachment P.[39] Each estimate is summarized briefly below. It is important to note that the Community of Curtis Bay Association requested that CSX grant access to the site for the purpose of this assessment in late October 2024. As of the date of these comments, CSX has not granted or denied this request. Therefore, these assessments were performed based on certain assumptions about the site noted in each report.

1. Sahu Report.
   Without access to the site, Dr. Sahu scaled costs for a hard cover using site information from documents and based on the cost to build bulk material storage domes in Pittsburg, CA. Dr. Sahu's estimate of the costs to install hard covers based on this estimate is around $15 million. While these domes were built to store petcoke, Dr. Sahu does not expect the need to ventilate for methane emissions from coal would add significant expense.[40]

   For soft covers, Dr. Sahu used costs provided by vendors for smaller projects and and scaled to the size of the Terminal, estimating a total of about $14 million for both the north and south areas of the Terminal. Taking into account other factors, such as costs for the smaller sheds that would not scale, Dr. Sahu concludes that a soft cover capital cost of $10-15 million is reasonable. Dr. Sahu notes that the soft cover is expected to be gas permeable, avoiding the need for specific engineering to vent methane.[41]

2. EA Engineering Conceptual Estimate.
   EA Engineering also provided conceptual estimates for soft and hard cover enclosure of the coal piles at the Terminal using a different methodology but resulting in similar estimates to Dr. Sahu's. Using a set of identified assumptions in the absence of site access, prior reports, and building in a 40% contingency, EA Engineering used a set of industry-standard resources[42] (e.g. RSMeans, MDOT-SHA Price Index) to estimate enclosure costs. For the

[38] Draft Fugitive Dust Control Plan at 6.
[39] Memo to Marsha Wills-Karp, Ph.D, Johns Hopkins University, Chair, Department of Environmental Health and Engineering, from Geoff Tizard, PE, EA Engineering, Science, and Technology, Inc, PBC, Project Manager on Conceptual Rough Order of Magnitude Cost for CSX Coal Terminal Enclosure (December 5, 2024) (Attachment P hereto).
Baltimore, Maryland
[40] Sahu Report at 16.
[41] Sahu Report at 16-17.
[42] EA Engineering Report at 1.

hard cover enclosure, EA Engineering's estimate was about $12.6 million and for the soft cover enclosure, EA Engineering's estimate was about $16.9 million.

As noted by Dr. Sahu, there would likely be some additional annual operating and maintenance costs, though more robust initial design and implementation would minimize these costs.[43]

In addition, if CSX were to fully enclose its storage piles, this would almost certainly reduce CSX's costs associated with stormwater treatment at the Terminal as discussed in more detail below. Commenters understanding is that CSX Representative Brian Hammock testified regarding some of the costs associated with this stormwater treatment system at the October 10, 2024 public hearing held by MDE on the Draft Permit. MDE must consider the reduced cost of stormwater treatment that will be achieved by full enclosure of the storage piles in its analysis.

These costs are reasonable in light of the environmental and public health benefits – both to air and water quality - and other voluntary expenditures that the company has made recently in Baltimore. In 2023, CSX made a voluntary donation of $5 million to the Baltimore and Ohio (B&O) Railroad Museum in Baltimore, MD (sometimes known as the Museum of Industry).[44]

iii. *Full enclosure will reduce stormwater pollution from the Terminal, which MDE is authorized to consider in its determination on the air quality permit.*

When selecting controls for unconfined sources of particulate matter under COMAR 26.11.06.03(C), MDE must consider "the environmental consequences of the decision" and this is not limited to air quality effects. MDE must consider the benefits of reduced contamination of stormwater that would occur if the coal piles were fully enclosed.

Runoff from coal piles after a precipitation event can be significantly contaminated. In 2015, the EPA finalized new effluent limitation guidelines ("ELGs") for the steam electric power plant category ("2015 Steam Electric ELG"). As part of the extensive and robust factual record that supported EPA's development of these standards, EPA issued a 2009 report titled "Steam Electric Power Generating Point Source Category: Final Detailed Study Report."[45] In that report, EPA characterized coal pile runoff as follows:

> The type and amount of contaminants generated in coal pile runoff depends upon the coal characteristics and the residence time of water within the coal pile. The rainfall generating the coal pile runoff can dissolve inorganic salts or cause chemical reactions in the coal piles, which will be carried away in the runoff. Coal pile runoff is typically acidic due to the oxidation of iron sulfide, which produces sulfuric acid, and ferric hydroxide or ferric sulfate. Coal pile runoff may contain high concentrations of copper, iron, aluminum, nickel, and other constituents present in coal [U.S. EPA, 1982]. [46]

[43] Sahu Report at 2.
[44] CSX.com, CSX Announces $5 Million Donation to the B&O Railroad Museum to Launch a Transformation of the Campus in Southwest Baltimore, June 8, 2023, https://www.csx.com/index.cfm/about-us/media/press-releases/csx-announces-5-million-donation-to-the-b-o-railroad-museum-to-launch-a-transformation-of-the-campus-in-southwest-baltimore/#:~:text=JACKSONVILLE%2C%20Fla.,railroad's%20bicentennial%20anniversary%20in%202027.
[45] EPA, Steam Electric Power Generating Point Source Category: Final Detailed Study Report (Oct. 2009), at https://www.epa.gov/sites/production/files/2015-06/documents/steam-electric_detailed_study_report_2009.pdf.
[46] *Id.* at 3-22 to 3-23 (emphasis added).

EPA further stated: "Although coal pile runoff is not the result of a combustion process, it can contain many of the pollutants present in coal combustion wastewater."[47] EPA's final solid waste rule for coal ash, discussed in more detail below, requires monitoring for certain constituents in groundwater.[48] These are: aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, calcium, chloride, chromium, cobalt, fluoride, lead, lithium, manganese, mercury, molybdenum, radium 226/228, selenium, sulfate, thallium, total dissolved solids

Fully enclosing the coal piles at the Terminal would not completely eliminate stormwater pollution from the Terminal as stormwater could filter through coal, picking up its contaminants elsewhere at the Terminal. However, given the large size of the coal pile storage area, the stormwater benefits of full enclosure would likely be significant. In addition, as discussed above, CSX's costs associated with stormwater treatment would also likely be reduced if it were to fully enclose the coal piles.

B. In the Alternative, At Minimum MDE Must Require Engineered and Optimized Wind Screens Surrounding the Coal Piles.

If MDE does not require full enclosure, the minimum it must require is an engineered series of wind fences that completely surrounds the coal piles. Dr. Sahu addresses this option in his report on pages 17-29. Computer modeling is performed first to determine height of the fences and their locations at the site.[49] Fabric selection is also an important design element of this approach and would need to be optimized for maximum dust reduction.[50] Dr. Sahu does not provide a specific dollar range for this technology but notes that capital costs are likely to be substantially smaller for this option.[51]

C. MDE Must Revise the Draft Permit to Require Ongoing Operation and Maintenance of the Physical Barrier Surrounding the Coal Piles.

Given that the Draft Permit is a permit to operate, not a permit to construct, the Final Permit must require CSX to operate the barrier on an ongoing basis after its construction. As with any pollution control, operation and maintenance will be important.[52] Currently, the Draft Permit requires installation of the barrier and "plac[ing] it into operation" but does not require ongoing operation or maintenance after these events.

The process for approval of the design of the physical barrier is set forth in Draft Permit Condition D(2)-(3) and summarized below:

1. Final Permit issued.
2. Within 120 days, CSX submits notice to and request for MDE's approval of the type of physical barrier for use in complying with the barrier requirement. This includes revisions to the Fugitive Dust Plan governing the barrier's operation.
3. "Once approved by [MDE], the revisions will be incorporated into the Permit to Operate."[53]

[47] *Id.* at 6-1. While EPA did not, in the 2015 Steam Electric ELG, revise the standards for coal pile runoff, it appears likely that this is because coal pile runoff at power plants is often commingled with other waste streams. *See, e.g,. id.* ("The wastewaters sent to surface impoundments can also include coal pile runoff.")
[48] Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals From Electric Utilities; Final Rule, 80 Fed. Reg. 21,302 (April 17, 2015); 40 C.F.R. Part 257.
[49] Sahu Report at 22-23.
[50] Sahu Report at 17.
[51] Sahu Report at 2.
[52] *See* Sahu Report at 2.
[53] Draft Permit at 9.

4. Within 18 months of MDE's approval, CSX shall "complete construction and place into operation" the physical barrier.

There are some aspects of the process that are not clear from the language of Draft Permit Condition D. It is not clear whether "the revisions will be incorporated into the Permit to Operate" means that the operational requirements will be set forth in the permit or in the Fugitive Dust Control Plan, which is incorporated by reference in the permit. To our knowledge, MDE has never attempted to enforce any provisions of the Fugitive Dust Control Plan. The Draft Fugitive Dust Control Plan is almost entirely descriptive, as opposed to prescriptive, as discussed in more detail in Section II.D.i below. In addition, in the Draft Permit, MDE is not proposing to require that CSX submit either the most recent Fugitive Dust Plan or the records required by the plan to ensure compliance with COMAR.[54]

The requirement that the physical barrier be operated and maintained on an ongoing basis, as well as key final operating conditions for the barrier, must be mandatory and clearly enforceable. As such, they must be set forth in the permit, not the Fugitive Dust Control Plan.

MDE must require ongoing operation of the physical barrier to "prevent particulate matter from becoming airborne."[55] Specifically:

- Draft Permit Condition D(3) should be revised to add the following sentence: "The Permittee shall thereafter operate the physical barrier at all times" and should allow exceptions from this requirement only for required maintenance of the barrier.
- Draft Permit Condition D(2) should be revised to state that "Once approved by the Department, the Permit to Operate will be revised to add conditions for the operation of the physical barrier" instead of "Once approved by the Department, the revisions will be incorporated into the Permit to Operate."[56]

D. MDE Must Revise the Draft Permit to Set Specific and Enforceable Requirements, Including Numeric Limits Where Possible, for the Control of Particulate Matter from at the Terminal.

In the absence of a final requirement mandating add-on controls around the coal piles, the Draft Permit would remain impermissibly lax for the reasons described below. Even with the addition of full enclosure of the coal piles, it remains unclear why numeric emission limits have not been added to the Draft Permit to prevent particulate matter from becoming airborne at other parts of the Terminal.

The Draft Permit fails to set forth any numeric emission limits and its conditions fall far short of the stringency of conditions set in multiple other jurisdictions to limit fugitive dust. The Draft Fugitive Dust Control Plan adds few, if any, enforceable requirements to the conditions set forth in the Draft Permit. MDE must revise the Draft Permit to set forth ongoing enforceable requirements for the control of fugitive particulates.

i. *The draft fugitive dust control plan sets forth few, if any, enforceable requirements.*

The Draft Fugitive Dust Control Plan is about 13 pages (the spacing appears to be 1.5-line spacing) not counting attachments. About two full pages of this consists of recitation of existing

[54] *See* Draft Permit Condition E(1)(C) at 9.
[55] COMAR 26.11.06.03(C)(D).
[56] Draft Permit at 9.

regulatory requirements from COMAR.[57] Almost an additional two full pages is spent describing a video camera monitoring program that appears not to exist. As stated above, a public records request submitted to MDE for records relating to this program yielded a reply from MDE that it has "no responsive records to [the] request"[58] and this camera program is discussed nowhere else in any of the draft permit materials. If this camera program does not exist or is no longer under discussion, the sections related to it should be removed from the Draft Fugitive Dust Control Plan.

Finally, the Draft Fugitive Dust Control Plan is almost entirely descriptive rather than prescriptive. A search for the word "shall" in this document yields no results that are not part of the recitation of existing regulatory requirements. Even use of the word "will" is primarily limited to CSX (1) conducting ongoing evaluations of existing practices with no deadline for completion, e.g. "CSX will continue to evaluate and measure the effectiveness of the existing wind fence as well as model potential effectiveness and feasibility of additional wind fence locations"[59] or (2) complying with requirements that are already set forth in its permit or in MDE's regulations. Other than these examples, requirements using the word "will" that are unique to the Fugitive Dust Control Plan (not set forth elsewhere) are limited and include:

- "If the [dust suppression] system detects onsite wind speeds greater than 12 miles per hour …, the Wind Detection Mode will activate and increase the water frequency to once every hours."[60]
- "Vehicles traveling on paved will be predominately restricted to employee, CSXT, and contractor vehicles with an average weight of less than 5 tons."[61]
- "The average vehicle weight traveling on the unpaved roadways will be predominately restricted to CSXT vehicles that average less than 5 tons."[62]
- "A water spray truck will be utilized at least weekly on primary pathways . .. . unless weather has deemed the activity unnecessary(e.g. rain, ice, or snow.")"[63]

In the absence of enforceable requirements, the Draft Fugitive Dust Control Plan sets forth very few, if any, pollution control conditions in addition to those in the Draft Permit.

ii. *Other jurisdictions have set specific and enforceable conditions, including numeric limits, for the control of fugitive particulates.*

Other agencies have set far more specific and enforceable requirements for limiting fugitive dust than those in the Draft Permit. Over the past twelve years, some Commenters have provided an extensive set of recommendations for adding numerical limits and other enforceable conditions to CSX's permit to operate based on models from other jurisdictions, including Texas. These have included opacity limits, minimum moisture requirements accompanied by associated testing conditions, and other provisions.

On January 20, 2023, South Baltimore Community Land Trust ("SBCLT"), Community of Curtis Bay Association ("CCBA"), and Environmental Integrity Project ("EIP") submitted comments

[57] There is no need for sections of COMAR to be quoted in the fugitive dust control plan as (1) these requirements are applicable to the facility whether or not they are included in the plan; and (2) these requirements are set forth in the permit. This section of the plan should be removed or set forth in the attachments.
[58] *See* MDE Nov. 22, 2024 Public Information Act response at Attachment D.
[59] Draft Fugitive Dust Control Plan at 9.
[60] *Id*. At 7.
[61] *Id*. at 5
[62] *Id*. at 4. While "will" is used in this sentence, it is not clear how a requirement applying to "the average vehicle weight" could be enforced without associated reporting.
[63] *Id*. at 5.

summarizing several examples of superior requirements, including in regulations by the South Coast Air Quality Management District ("SCAQMD") and the City of Chicago.[64]

The Texas Commission on Environmental Quality ("TCEQ") issued two permits in 2012 with numeric limits, one to P-L Jacintoport I, LLC ("Jacintoport Permit")[65], and the other to Kinder Morgan Petcoke LP ("Kinder Morgan").[66] The terminals were not ultimately constructed but the conditions remain a useful model. These permits:

- Set facility-wide opacity limits for fugitive dust that prohibit exceeding 10% opacity for more than six minutes in an hour.[67] Compliance in each case is to be demonstrated using EPA Method 9.
- Stated that "there shall be no visible fugitive emissions leaving the property," and require quarterly performance and recording of observations during normal plant conditions. If visible emissions are observed during this time, a follow-up evaluation using EPA Method 22 is required, and, if emissions exceeding that standard are viewed, immediate corrective action must be taken and recorded. [68]
- For all transfer points not controlled by a fabric filter baghouse, required the maintenance of minimum material moisture content of 6% and 8% respectively for Jacintoport and Kinder Morgan;[69]
- Established facility-wide throughput limits on an hourly and annual basis;[70]
- Established hourly and annual Maximum Allowable Emissions Rates (MAER) for specific emissions points, including stockpiles and transfer points, within the facilities.[71]

In addition to these previously submitted examples, which remain relevant today, we also offer the following:

1. The Allegheny County Health Department has set numerical limits for fugitive particulate matter emissions from paved and unpaved roadways based on AP-42 factors in a draft Title V permit for a landfill as shown below.[72]

[64] These January 20, 2023 comments are hereby incorporated into these comments and attached hereto as Attachment Q. ("January 20, 2023 Comments.")
[65] TCEQ Permit No. 99217, Jacintoport, Aug. 24, 2012 (Attached as Attachment R).
[66]TCEQ No. 95307, Kinder Morgan, May 7, 2012 (Attached as Attachment S)
[67] Jacintoport Permit Condition 4; Kinder Morgan Permit Special Condition 4.
[68] Jacintoport Permit Special Condition 5; Kinder Morgan Permit Special Condition 5.
[69] Jacintoport Permit Special Condition 12, Kinder Morgan Permit Special Conditions 12,18.
[70] Jacintoport Permit Special Conditions 2, Kinder Morgan Permit Special Condition 14.
[71] Jacintoport Permit Special Condition 1, MAER Attachment at 1-2; Kinder Morgan Permit Special Condition 1, MAER Attachment at 1-3.
[72] Allegheny County Health Department, Draft Title V Operating Permit No 0215-OP24, Monroeville Landfill, Aug. 21, 2024 at 76, (Excerpt attached as Attachment T).

Landfill Construction and Operation Activities

Emissions from the landfill construction and operation activities are fugitives and limits are based on AP-42, Table 11.9.1 (for overburden blasting emission), Table 11.19.2-2 (for soil screening emission) and the potential soil screening throughput. The emissions are shown in Table 3 below and Appendix A.

Table 6
Landfill Construction Emission Limitations

Pollutant	Annual Emission Limit (tons/year)*
Particulate Matter	25.38
PM_{10}	25.36
$PM_{2.5}$	25.34

*A year is defined as any consecutive twelve-month period.

Table 7
Paved and Unpaved Emission Limitations

Pollutant	Annual Emissions Limit (tons/year)*
Particulate Matter	34.98
PM_{10}	9.12
$PM_{2.5}$	1.04

*A year is defined as any consecutive twelve-month period

2. The Albuquerque-Bernadillo County Air Quality Board has relatively strong fugitive dust control requirements, including a requirement that "[s]tockpiles shall be no higher than 15 feet above the existing natural or man-made grade that abuts the stockpile, unless otherwise approved in advance and in writing by the department."[73]

3. We also refer MDE again to the fugitive dust requirements of the air permitting agencies cited above in section II.A.i (Oregon, EPA Region 10, Michigan, and air quality districts within California) and the permit for the Coyote Island Coal Export Terminal in Oregon also discussed in section II.A.i above.

E. MDE Must Revise the Draft Permit to Improve the Fenceline Monitoring Plan to Clearly Require that Corrective Action is Taken When Pollution Levels Exceed Certain Thresholds. Otherwise, the Fenceline Monitoring Program Should be Discontinued.

As explained in a recent EPA white paper on potential approaches to fenceline monitoring for landfills, the concept of fenceline monitoring is tied closely to detection of high emissions and responsive corrective actions at pollution sources of concern. CSX's Draft Fence Line Monitoring Plan, which was first required under a 2022 permit changes, is presently a plan for collecting data and very little more.

The January 20, 2023 Comments of SBCLT, CCBA, and EIP identified shortcomings of and recommended improvements for the Draft Fenceline Monitoring Control Plan. Based on the date of the Draft Fenceline Monitoring Plan (November 6, 2022) attached to the Draft Permit in 2024, it appears that no changes have been made to the Fenceline Monitoring Plan in response to those comments. Almost two years later, the same problems appear to persist. Revisions to this plan must be made in order to develop a program for identifying pollution spikes and requiring responsive corrective action. If this does not occur, then the fence line monitoring is an information-collection exercise serving no pollution mitigation purpose. If MDE and CSX do not improve the Draft Fenceline Monitoring Plan to

[73] Albuquerque-Bernadillo County Air Quality Board, Fugitive Dust Control, https://www.srca.nm.gov/parts/title20/20.011.0020.html.

require specific corrective action when pollution exceeds meaningful numeric thresholds within three years, then the plan should be discontinued.

i. Fenceline monitoring is not meaningful if exceedance of threshold levels is not tied to corrective actions.

On December 9, 2024, EPA issued a fenceline monitoring white paper in its white paper series on technology advances for municipal solid waste ("MSW") landfills.[74] In the introduction, EPA states:

> This white paper investigates the use of fenceline monitoring as a technique to detect emissions from landfills early such that the landfill owner/operator can take action to address and mitigate the source of the emissions. Fenceline monitoring and associated work practice requirements have been promulgated in other regulations developed by EPA as an important component of mitigating emissions from fugitive and other difficult-to-monitor sources such as equipment leaks, storage tanks, loading operations, and wastewater treatment systems.[75]

Identification of a pollution threshold at which action must be taken and appropriate corrective action is an essential aspect of a meaningful fenceline monitoring plan. For example, in EPA's refinery rule, "[i]f the facility exceeds the threshold specified in the rule (the action level), , the work practice requirements are triggered and the facility must investigate the root cause of the exceedance, and if appropriate, take corrective action to mitigate the emissions."[76]

EPA has issued national regulations establishing fenceline monitoring requirements for six categories of facility: petroleum refineries, chemical plants, Group 1 polymer and resin plants, coke ovens, and integrated iron and steel facilities.[77] In addition, fenceline monitoring plans have developed on a case-by-case basis for specific ffacilities as the result of permit or enforcement actions in several instances, including the Arbor Hills Landfill, Michigan[78] settlement agreement described in the EPA white paper and the MarkWest Harmon Creek Processing Plant plan described in the January 20, 2023 Comments at Attachment Q.

ii. CSX's Draft Fenceline Monitoring Plan must be substantially improved.

In the Draft Fenceline Monitoring Plan, CSX contemplates (as it has apparently done since November 2022) that pollution levels triggering action will eventually be established but describes no specific process or timetable for this assessment, stating:

> Monitoring requirements will be established during FLMP implementation. As the project progresses actionable data will be defined with reliable, repeatable, reproducible data at specific time increments. Data alert levels and subsequent actions will be defined to sustain operations. See Table 9.0 for an example of data alert levels.[79]

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[74] EPA, White Paper Series: Municipal Solid Waste Landfills – Advancements in Technology and Operating Practices, Fenceline Monitoring, (Dec. 2024), https://www.epa.gov/stationary-sources-air-pollution/non-regulatory-public-docket-municipal-solid-waste-landfills (hereinafter "EPA Landfill Fenceline Monitoring Paper") (Attachment U.)
[75] EPA Fenceline Monitoring Landfill White Paper at 2.
[76] *Id*. at 2.
[77] *Id*. at 1.
[78] EPA Landfill Fenceline Monitoring Paper at 4-8.
[79] CSX Draft Fenceline Monitoring Plan at 9-10.

Table 9.0 of the Draft CSX Fenceline Monitoring Plan which is titled "Potential Data Checks," identifies alert levels equal to the primary 24-hour National Ambient Air Quality Standards ("NAAQS") for PM2.5 and PM10 (over 35 mcg/m3 for PM2.5 and 150 mcg/m3 for PM10). The most specific corrective action identified in Table 9.0, or anywhere in the Draft Fenceline Monitoring Plan, is "[t]rigger controls."

As explained in the January 20, 2023 Comments, fenceline monitoring is not a NAAQS attainment exercise and corrective actions must be specified. Furthermore, MDE must impose reporting requirements on CSX to determine when exceedances of the threshold are measured and what the corrective actions are.[80] Failure to take corrective action when required should constitute a permit violation.

iii. The fenceline monitoring program should be discontinued if it cannot be tied to corrective action requirements.

The September 5, 2024 violation described in Section I above demonstrates that activities at the Terminal can and have caused particulate matter to become airborne, and the fenceline monitoring program is presently the only program required under the Draft Permit that could theoretically be adjusted to detect such events. However, given that the Draft Fenceline Monitoring Plan, as written, is entirely unequipped to address such events and no changes have been made in two years to improve its major deficiencies, the plan is serving as a distraction.

While the fenceline monitoring plan is relatively new, CSX has repeatedly referenced it in public statements as a sign of environmental progress at the Terminal.[81] However, given that Commenters see no indication that corrective action is being taken based on the data measured, even if short-term elevated levels are registered, the plan currently serves as a distraction from the need to take real action at the Terminal. If the plan is not improved within three years, it should be discontinued rather than used as a talking point when, in fact, it does not result in pollution mitigation benefits for the nearby community.

F. MDE Should Require CSX to Submit Important Information to MDE on The Terminal's Emissions and Operations.

MDE should not continue to propose permit conditions that allow CSX to keep important emissions and operational information on site and make it available on request. Instead, MDE should require CSX to submit this information directly to MDE.

MDE should revise Part E of the Draft Permit, which currently allows CSX to "maintain" certain important information and make it available to MDE only upon request. This includes the following:

Records required under Draft Permit Condition E(1):

[80] January 20, 2023 Comments at 10-11, 23 (e.g. "Logs of corrective action and dust control measures should be submitted quarterly at minimum.")

[81] *See, e.g.* Aman Azhar, South Baltimore Communities Press City, State Regulators for Stricter Pollution Controls on Coal Export Operations InsideClimate News, June 12, 2024, https://insideclimatenews.org/news/12062024/south-baltimore-csx-coal-protest/.

- A copy of the current, MDE-approved Fugitive Dust Plan and all records required by the plan to ensure compliance with COMAR.
- A copy of the current Fence Line Monitoring plan and all records required by the plan
- Monthly throughput records for materials passing through the storage area of the Terminal associated with ARAA Registration No. 510-2263-9-335 and subject to a 1 million ton throughput limit.
- Records used to determine toxic air pollutant emissions and a copy of the most recent, premises-wide air toxics compliance demonstration.

In the Final Permit, MDE should require CSX to submit this information to MDE.

In addition, the Fugitive Dust Control Plan includes a list of records pertaining to that plan. Given the lack of any numeric conditions or associated monitoring requirements in the Draft Permit, all of these records should be submitted to MDE rather than maintained on site. These records are:

• Water suppression system operations (existing)
o Date/time and duration of each nozzle
o Reason for water spray (operation mode recorded)
o Daily weather conditions
o Maintenance inspection and repair
• Water truck operations
o Electronic log of date/time and duration
o Electronic log of path traveled
o Comments and observations during activity
o Routine inspection and maintenance records
• Log of visual observations (Updated)
o Date/time
o Person
o Activities observed
o If VE is observed, a summary of actions taken
• Log of employee and contractor training

Lastly, when MDE revises the Draft Fenceline Monitoring Plan to require reporting on exceedances and corrective actions, it should require submission of quarterly or biannual reports summarizing these events to MDE.

III. MDE Must Require CSX to Report VOC Emissions from Storage and Handling of Coal and to Report Dockside Marine Vessel Emissions. MDE Must Use this Information to Determine Whether CSX Must Obtain a Major Source Operating Permit for the Terminal.

CSX does not report emissions of volatile organic compounds ("VOC") from the handling and storage of coal or any emissions from marine vessels while docked at the Terminal. Yet these emissions must be reported and they could make the Terminal a major source of air pollution requiring a Title V operating permit. MDE must require CSX to report these emissions and must use the information to determine whether CSX must obtain a Title V/Part 70 major source operating permit.

A. CSX Must Report VOC Emissions from the Coal Stored and Handled at the Terminal and MDE Must Determine Whether These Emissions Require the Terminal to Obtain a Major Source Operating Permit.

CSX does not report VOC emissions from the coal handling operations or storage piles at its facility.[82] However, as explained in the Sahu Report, it is likely that coal emits VOC after it leaves the mine and likely that the CSX Terminal emits more than 25 tons per year of VOC. Therefore, MDE must require CSX to submit information on VOC emissions from the coal handled and stored at the Terminal and MDE must determine whether these emissions require CSX to obtain a major source operating permit.

i. Sources emitting 25 tons per year or more of VOC in Baltimore City must report total actual VOCs on an annual basis.

Facilities are subject to mandatory annual emissions reporting requirements in Maryland for any "installation, source, or premises" located in Baltimore City that has "total actual emissions of either VOC or NOx from all installations and sources on premises of 25 tons or more during a calendar year."[83]

"Actual emissions" are defined as follows:

> the average rate, in tons per year, at which a source discharged a pollutant during a 2-year period which precedes the date of a completed application for an NSR source or other specified date, and which is representative of normal source operation. . . . Actual emissions shall be calculated using the source's operating hours, production rates, and types of materials processed, stored, or combusted during the selected time period.[84]

Notably, fugitive emissions are not excluded from the definition of "actual emissions."

Sources subject to these reporting requirements must submit annual reports identifying "each installation or source at the premises that discharges VOC or NOx, and the actual daily and annual emissions from each installation or source" and explaining the methodology for the calculations.[85]

ii. *The CSX Terminal likely emits more than 25 tons per year of VOC.*

Following the explosion at the Terminal in 2021, the likely cause of which is considered a build-up of methane emitting from the coal in an underground tunnel,[86] CSX started reporting its annual methane emissions to MDE, which were previously unreported. The two most recent emission reports (for years 2022 and 2023) show estimated methane emissions of about 5,100 tons per year. The vast majority of this (over 99%) is from the storage piles. [87]

[82] CSX Terminal annual Emission Certification Reports ("ECRs") for years 2022 and 2023, pdf ps. 17, 41 (Attachment V).
[83] COMAR 26.11.01.05-1(A)(1) (emphasis added).
[84] COMAR 26.11.01.01(B)(1)(a).
[85] COMAR 26.11.01.05-1(C).
[86] GHD, Curtis Bay Piers Coal Facility Explosion Investigation, Cause and Origin Evaluation, CSX Transportation, Executive Summary, page i, July 29, 2022 (hereinafter "GHD Report").(Attachment W).
[87] CSX Terminal 2022 and 2023 ECRs (Att. V)

Coal likely emits VOC after it leave the mine. In fact, as explained in the Sahu Report, coal is more likely to emit VOC after leaving the mine than methane because VOCs have a higher molecular weight and lower diffusivity than methane.[88]

As explained in the attached Sahu Report, the methods that CSX has used to calculate its methane emissions can also be used to estimate its VOC emissions if the percent of VOC in the coal can be estimated. Using available information, Dr. Sahu concludes that it is reasonable to assume that VOC can account for about 0.9% of coal gas from the Terminal. Using this assumption and CSX's reported methane emissions from 2022 and 2023, Dr. Sahu calculated that VOC emissions from the Terminal were about 47 tons per year without correcting for the higher molecular weight of VOC, which would increase the VOC estimate.[89] If CSX is underestimating methane emissions, as Dr. Sahu notes may be the case based on the assumed in-situ methane content, then VOC would also be underestimated using the same methods. In this case, the Terminal's VOC be around 64 tons per year in 2022 and 2023, again without accounting for the molecular weight of VOC which would increase the VOC estimate.[90]

iii. *Some of the VOC emissions from coal at the Terminal are not fugitive emissions*.

When emissions are considered to be "fugitive emissions," there is a question about whether they must be counted in determining whether a facility is a major source of pollution that requires a Title V operating permit. However, when emissions are clearly not fugitive emissions, then they must be included in such a determination.

Fugitive emissions are "those emissions that could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening."[91] Previous technical information indicates that the subsurface tunnels beneath the Terminal, through which coal is shipped on conveyors, may include multiple, discrete vents. Among other things, a report related to plans to repair the North Reclaim Tunnel following the 2021 explosion made clear that CSX planned to equip the North Reclaim Tunnel with a new ventilation system. The report states that the Applicant "is continuing its design of a new ventilation system for the North Reclaim Tunnel." [92] If discrete vents are part of the design of these subsurface tunnels, MDE must determine whether emissions from the tunnels are fugitive emissions and whether any additional control or monitoring requirements are triggered.

After obtaining VOC emission estimate for the Terminal, MDE must determine which emissions are properly considered fugitives. Any non-fugitive VOC emissions must be counted in determining whether the Terminal is a major source of air pollution.

iv. *MDE must consider fugitive VOC emissions from the coal storage piles and transfer equipment in its major source determination if the coal is prepared by breaking, crushing, or screening.*

Fugitive emissions from coal storage piles and transfer equipment must be considered in major source determinations when those facilities are located in a coal preparation and processing plant.[93] A

[88] Sahu Report at 30.
[89] Sahu Report at 34-35.
[90] Sahu Report at 35.
[91] COMAR 26.11.02.01(B)(21); 40 C.F.R. § 70.2
[92]GHD Report at i.
[93] 40 C.F.R. § 70.2 (fugitive emissions must be considered for "[a]ny other stationary source category, which as of August 7, 1980 is being regulated under section 111 or 112 of the Act." EPA regulations coal preparation and processing plants under section 111 of the Clean Air Act. 40 C.F.R. Part 60, Subbpart Y.

coal preparation and processing plant is defined to mean "any facility (excluding underground mining operations) which prepares coal by one or more of the following processes: breaking, crushing, screening, wet or dry cleaning, and thermal drying."[94] CSX maintains in its Draft Fugitive Dust Control Plan that it does not process coal at the Terminal.[95] Nevertheless, if CSX does commence these activities at some point in the future, MDE will likely be required to count fugitive VOC emissions from the coal storage piles and transfer equipment in the major source determination for the Terminal.

B. CSX Must Report Dockside Vessel Emissions and These Emissions Must Be Included in Determining Whether CSX is a Major Source.

Dockside emissions (for all pollutants) from any ships, barges, or other maritime vessels, including vessel emissions while at berth and transferring materials, at the Terminal must also be counted when determining whether the Terminal is a major source requiring a Title V Permit. These emissions are stationary source emissions and must be considered in determining whether the Terminal is a major source. MDE must require CSX to submit information on these emissions.

EPA has stated that, while "to and fro" emissions from marine vessels are properly treated as non-stationary source emissions,

> We . . . intend to consider . . . the emissions from activities in support of the port's function – i.e., those related to processing and transferring gas at the port, regardless of whether they occur on the metering platform or on marine vessels propelled by external combustion engines, as stationary emissions of the port for [Clean Air Act] Title I and Title V purposes. The nature of controls, if any, EPA will propose to impose on those emissions will be reflected in a draft preconstruction/Title V permit.[96]

In a 2023 letter regarding a proposed permit for Bluewater Texas Terminals, LLC, EPA stated that:

> Accordingly, and following from the discussion above, EPA views the *NRDC* holding to support the conclusion that, when the [Offshore Supply Vessel] is holding a stationary position and transferring and treating emissions from marine loading operations, the emissions from the marine turbines onboard should be included in the [potential to emit] of the [Deepwater Port] for NSR permitting purposes.[97]

The principle that dockside emissions are stationary source emissions is recognized by, among others, the Texas Commission on Environmental Quality ("TCEQ"). TCEQ's air permit writer guidance states:

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[94] 40 C.F.R. § 60.251(e).
[95] Draft Fugitive Dust Control Plan at 4.
[96] EPA New Source Review Workshop Manual Draft Oct. 1990("NSR Manual") at A.18, https://www.epa.gov/nsr/nsr-workshop-manual-draft-october-1990 ("As a result of a court decision in NRDC v. EPA, 725 F.2d 761 (D.C. Circuit 1984), emissions from vessels at berth ("dockside") [sic] not to be included in the determination of secondary emissions but are considered primary emissions for applicability purposes.") (Excerpt at Attachment X)
[97] Enclosure (BWTX Proposed DWP Project Clean Air Act (CAA) Permit Application Review) to Letter from David Garcia, Director, Air and Radiation Division, EPA Region 6, to Mr. B.R. Sutaria, Vice President Bluewater Texas Terminals, LLC, April 18, 2023, at 5 of 13, At 5, https://downloads.regulations.gov/EPA-R06-OAR-2020-0510-0375/content.pdf.

> Certain emissions from ships and barges located at berth are considered to be primary emissions and must be included in the PTE determination. These emissions include loading emissions, any vessel equipment meant to support the transfer of materials between the vessel and shore, and the emissions from the ship's boilers used to support the transfer of materials between the vessel and shore facilities while the ship is docked.[98]

Further, TCEQ's air permit regulations require information demonstrating that emissions from the facility, "including any associated dockside vessel emissions," meet air quality requirements.[99]

Therefore, MDE must require CSX to submit information on dockside emissions from vessels and those emissions must be counted when determining whether the Terminal constitutes a major air pollution source requiring a Title V operating permit.

Thank you for your time and consideration of these comments.

Respectfully submitted,

Dr. Meleny Thomas
Executive Director
South Baltimore Community Land Trust

Greg Sawtell
Board Co-Chair
Community of Curtis Bay Association

Leah Kelly
Senior Attorney
Environmental Integrity Project
202-263-4448
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Matt Stegman
Taylor Lilley
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[98] Air Permit Reviewer Reference Guide, APDG 5881, Major New Source Review - Applicability Determination, Air Permits Division Texas Commission on Environmental Quality, January 2022 at 8, https://www.tceq.texas.gov/assets/public/permitting/air/Guidance/NewSourceReview/fnsr_app_determ.pdf.
[99] 30 TAC 116.111(a)(2).

List of Attachments

Attachment	Document
Attachment A	2013 petition seeking stronger CSX permit conditions signed by 40 residents of zip codes 21225 and 21226
Attachment B	MDE July 20, 2022 Notice of Violation to CSX
Attachment C	MDE September 9, 2024 Notice of Violation to CSX
Attachment D	MDE Public Information Act Request Response Dated Nov. 22, 2024 and information request language
Attachment E	Expert Report on Costs for Cover the Coal Piles at the CSX Baltimore Terminal, or Otherwise Reducing Such Dusts, and on the Estimated VOC Emissions from the Terminal by Dr. Ranajit (Ron) Sahu, Consultant, Dec. 15, 2024
Attachment F	Excerpts from Air Quality Permit for Spring Creek Mine, Montana (2014) Relating to Coal Storage Barn
Attachment G	Excerpts from Environmental Impact Statement for Spring Creek Mine, Montana (2020) Relating to Coal Storage Barn
Attachment H	Information on Coal and Petcoke Storage Domes at JEA Northside Power Generating Facility
Attachment I	Vendor (Dome Technology) Information on Coal Storage Dome at ADM Cogeneration Facility, Iowa
Attachment J	Vendor (Dome Technology) Information on Coal Storage Dome at ADM Cogeneration Facility, Nebraska
Attachment K	Vendor (Dome Technology) Information on Coal Storage Dome in Mississippi
Attachment L	Excerpts from Air Quality Permit for Manufacturing and Possibly Coal Preparation Plant in Pennsylvania Relating to Coal Storage Building
Attachment M	EPA 2017 letter to Kinder Morgan Referencing Coal Storage Warehouse at Blytheville, Arkansas Terminal
Attachment N	Air Quality Permit for Coyote Island Coal Terminal Expert Project (2014)
Attachment O	Oakland Bulk and Oversize Terminal, Oakland, Alameda County, California, Basis of Design (Draft), Volume 1, 7/21/15 and West Gateway Bulk Cargo Terminal Basis of Design (Draft)
Attachment P	EA Engineering Conceptual Rough Order of Magnitude Cost for CSX Coal Terminal Enclosure, Baltimore, Maryland, Dec. 5, 2024
Attachment Q	SBCLT, CCBA, and EIP January 20, 2023 Comments on CSX Draft Fugitive Dust Control Plan and Draft Fenceline Monitoring Plan
Attachment R	Texas Commission on Environmental Quality, Jacintoport Permit, Permit No. 99217, Aug. 24, 2012
Attachment S	Texas Commission on Environmental Quality, Kinder Morgan Permit, Permit No. 95307, May 7, 2012
Attachment T	Excerpt from Allegheny County Health Department Draft Title V Operating Permit No. 0215-OP24, Monroeville Landfill, Aug. 21, 2024
Attachment U	EPA, White Paper Series: Municipal Solid Waste Landfills – Advancements in Technology and Operating Practices, Fenceline Monitoring, December 2024
Attachment V	2022 and 2023 Annual Emission Certification Reports for CSX Terminal
Attachment W	GHD, Curtis Bay Piers Coal Facility Explosion Investigation, Cause and Origin Evaluation, CSX Transportation, July 29, 2022
Attachment X	Excerpt from EPA New Source Review Workshop Manual (Draft 1990)

Attachment A

CHESAPEAKE CLIMATE ACTION NETWORK

Karen Irons
Manager, Air Quality Permits Program
Maryland Department of the Environment
1800 Washington Blvd
Baltimore, Maryland
21230

Craig Blinke
CSX Transportation, Inc.
1910 Benhill Ave
Baltimore MD
21226

Dear Ms. Irons and Mr. Blinke,

Please consider the attached comments from residents of Curtis Bay and Brooklyn on the renewal of the air pollution permit for the CSX coal export facility (Permit No. 510-02263). More detailed legal and technical comments on the renewal of this permit are also being submitted by CCAN, the Environmental Integrity Project, and partner groups.

Please feel free to contact me if you have any questions.

Sincerely,

Leslie Morrison
Healthy Communities Campaign Director
6930 Carroll Ave, Suite 720
240-396-2140
leslie@chesapeakeclimate.org

CC: George (Tad) Aburn
Director, Air and Radiation Management Administration
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, Maryland 21230

I am a concerned resident of Curtis Bay and respectfully submit this comment in reference to CSX's application for an air pollution permit. I live nearby and experience the impact of this facility frequently through noise and air pollution from coal dust. Please take into account the surrounding community when you finalize this permit, and consider implementing the following improvements:

- Set specific and enforceable requirements in CSX's permit which limit the amount of air pollution that the facility can produce;

- Require the use of best available control technology and best management practices to prevent coal dust from blowing into nearby neighborhoods; and

- Require ongoing monitoring of air pollution at the CSX site and placement of an air quality monitor at the Curtis Bay Recreation Center, where children play in close proximity to the open coal piles.

Thank you.

Sincerely,

Hilda Hatfield
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Baltimore, MD 21225
hildahatfield@gmail.com
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Elizabeth Fry
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Brooklyn, MD 21225
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443-377-8687

GW Fhiady
Baltimore, MD 21228
410-717-3354

Attachment B

Maryland
Department of
the Environment

Larry Hogan, Governor
Boyd K. Rutherford, Lt. Governor

Horacio Tablada, Secretary
Suzanne E. Dorsey, Deputy Secretary

July 20, 2022

Mr. Aleek Young, General Manager
CSX Transportation, Inc. – Curtis Bay Piers
1090 Benhill Ave
Baltimore, MD 21226

RE: Notice of Violation – December 30, 2021 Curtis Bay Terminal Coal Explosion

Dear Mr. Young,

Enclosed please find a Notice of Violation (NOV) for violations of the Maryland Air Quality Act, Maryland Code, Environment Article, §2-101 et seq. The NOV is being issued in regard to the December 30, 2021 North Reclaim Tunnel coal explosion at CSX's Curtis Bay Terminal.

If you have any questions, please do not hesitate to contact me.

Sincerely,

Steven Lang, Division Chief
Air Quality Compliance Program
Maryland Department of the Environment

cc: R. Hensley, CSX-Environmental Programs
A. Bianca MDE-ARA
F. Courtright, MDE-AQCP
D. Davis, MDE-AQCP

EXHIBIT I-31

State of Maryland
Department of the Environment

Air and Radiation Administration
1800 Washington Boulevard, Suite 715
Baltimore, MD 21230-1720

Notice of Violation of Air Pollution Regulations

Date of Notice: July 20, 2022

Name of Responsible Person or Company: CSX Transportation Inc. – Curtis Bay Piers
Attention: Mr. Aleek Young, General Manager

Address: 1090 Benhill Ave Baltimore, MD 21226

County: Baltimore City

You are hereby notified that you have been observed to violate the Air Pollution Control Regulations of the State of Maryland.

The specific regulations violated are COMAR 26.11.02.05, **COMAR** 26.11.06.02C(2), **COMAR** 26.11.06.03, **COMAR** 26.11.06.08, **and COMAR** 26.11.06.09. **The circumstances are as follows:**

Date and Time of Occurrence: December 30, 2021 at 11:24 a.m. EST

Source of Pollution: North Reclaim Tunnel of the Curtis Bay coal terminal

Description of Violation: CSX did violate or cause to be violated terms or conditions of a permit issued under COMAR 26.11.03. CSX did cause or permit the discharge of emissions from an installation which was visible to human observers. CSX did cause or permit emissions without taking reasonable precautions to prevent particulate matter from becoming airborne. CSX did operate or maintain an installation or premise that resulted in the discharge of emissions into the atmosphere in such a manner that a nuisance or air pollution was created. CSX did cause or permit the discharge of unpermitted emissions, including CO_2, CO, NOx, VOC, and SO_2 into the atmosphere.

Description of Weather: Cloudy – Light precipitation Temperature- approximately 50 °F

Estimated Wind Speed: Light - Approximately 3 **mph; Direction:** Easterly

Comments: On December 30, 2021 at 11:24 a.m. EST a coal explosion occurred in the North Reclaim Tunnel of the CSX - Curtis Bay Terminal that resulted in the above cited violations.

You should take steps to prevent recurrence of this situation. Violations of the Maryland Air Quality Act, Maryland Code, Environment Article, §2-101 et seq., and the regulations adopted under the Act are subject to civil penalties of up to $25,000 for each day of violation and to criminal penalties. See Environment Article, Title 2, Subtitle 6.

If you have any questions about this Notice, please contact me.

Steven Lang
Name of Inspector

443-695-7437
Telephone Number

ARA-20A

EXHIBIT I - 32

Attachment C

Maryland
Department of the Environment

Wes Moore, Governor
Aruna Miller, Lt. Governor

Serena McIlwain, Secretary
Suzanne E. Dorsey, Deputy Secretary

(Correspondence via e-mail.)

September 9, 2024

Mr. Aleek Young, General Manager
CSX Transportation, Inc. – Curtis Bay Piers
1090 Benhill Ave
Baltimore, MD 21226

RE: Notice of Violation

Dear Mr. Young,

Enclosed please find a Notice of Violation (NOV) for violations of the Maryland Air Quality Act, Maryland Code, Environment Article, §2-101 et seq. The NOV is being issued in regard to the railroad track maintenance work being performed on September 5, 2024 at CSX's Curtis Bay Terminal.

If you have any questions, please contact me at roland.gorschboth@maryland.gov or phone 410-537-4130.

Sincerely,

Roland Gorschboth
Air Quality Compliance Program
Maryland Department of the Environment

cc: R. Hensley, CSX-Environmental Programs
R. Chatrathi, CSX-Environmental Programs
C. Hoagland, MDE-ARA Director
M. Strande, Maryland Office of the Attorney General

EXHIBIT 1-34

State of Maryland
Department of the Environment

Air and Radiation Administration
1800 Washington Boulevard, Suite 715
Baltimore, MD 21230-1720

Notice of Violation
of Air Pollution Regulations

Date of Notice: Sept. 9, 2024

Name of Responsible Person or Company: CSX Transportation Inc. – Curtis Bay Piers
Attention: Mr. Aleek Young, General Manager

Address: 1090 Benhill Ave Baltimore, MD 21226

County: Baltimore City

You are hereby notified that you have been observed to violate the Air Pollution Control Regulations of the State of Maryland.

The specific regulations violated are COMAR 26.11.02.05; COMAR 26.11.06.03.D; COMAR 26.11.06.08 , COMAR _____ , and COMAR _____ . The circumstances are as follows:

Date and Time of Occurrence: September 5, 2024 approximately 5:45 p.m. EST

Source of Pollution: Track repair work on CSX property

Description of Violation: CSX did violate or cause to be violated terms or conditions of a permit issued under COMAR 26.11.03. CSX did cause or permit emissions without taking reasonable precautions to prevent particulate matter from becoming airborne. CSX did operate in such a manner that a nuisance or air pollution was created.

Description of Weather: Clear / Temperature- approximately 74 °F

Estimated Wind Speed: Approximately 8 mph **mph; Direction:** Easterly

Comments: On September 5, 2024 at 5:45 p.m. EST CSX – Curtis Bay Terminal was conducting track maintenance work that resulted in the above cited violations.

You should take steps to prevent recurrence of this situation. Violations of the Maryland Air Quality Act, Maryland Code, Environment Article, §2-101 et seq., and the regulations adopted under the Act are subject to civil penalties of up to $25,000 for each day of violation and to criminal penalties. See Environment Article, Title 2, Subtitle 6.

If you have any questions about this Notice, please contact me.

Name of Inspector

410-537-4130
Telephone Number

EXHIBIT I - 35

Attachment D

Maryland
Department of the Environment

Wes Moore, Governor
Aruna Miller, Lt. Governor

Serena McIlwain, Secretary
Suzanne E. Dorsey, Deputy Secretary

1800 Washington Boulevard | Suite 620 | Baltimore, MD 21230 | 1-800-633-6101 | 410-537-3000 | TTY Users 1-800-735-2258

www.mde.maryland.gov

November 22, 2024

Ezana Assefa
University of Maryland Francis King Carey School of Law Environmental Law Clinic
121 South Fremont Avenue
Baltimore, MD 21201

RE: Tracking Number: 2024-02929
Request Received November 5, 2024
Curtis Bay Piers Facility

Dear Ezana Assefa:

The Maryland Department of the Environment (MDE) received your recent request for information under the Public Information Act (PIA).

After conducting a thorough search of our files, MDE has no records responsive to your request. There were no charges incurred as a result of this search.

When requesting information regarding this request, please cite the tracking number referenced above. If you have any questions, please email alison.ray@maryland.gov.

Sincerely,

Alison Ray

Alison Ray
PIA Liaison
Air & Radiation Administration

Pursuant to the Maryland Public Information Act (General Provisions Article §§ 4-101 through 4-601), I am requesting access to and copies of the following records:

- All records, reports, and data related to visible emissions monitoring at the CSX coal terminal in Curtis Bay.
- Records of coal throughput monitoring conducted under the same permit.
- Any communications or documents detailing next steps or outcomes resulting from these monitoring efforts.

I request these records in electronic format if available, to reduce paper use and minimize any associated costs. If there are any fees, I respectfully request a waiver, as the requested information will serve the public interest by promoting transparency and environmental accountability. I am a student at the University of Maryland Francis King Carey School of Law Environmental Law Clinic, providing pro bono legal services to citizens of the state, and I expect to share the information with other students in the clinic to further our educational and public service mission.

Please confirm receipt of this request. If the request requires clarification or narrowing, feel free to contact me at 301-385-2185 or eassefa1@clinic.law.umaryland.edu. I understand that the PIA provides for a response within 30 days and look forward to your timely reply.

Thank you for your attention to this matter.

Attachment E

Expert Report on

Costs for Covering the Coal Piles at the CSX Baltimore Terminal, or Otherwise Reducing Such Dusts, and on the Estimated VOC Emissions from the Terminal

by

Dr. Ranajit (Ron) Sahu, Consultant[1]

December 15, 2024

A. Introduction and Summary

These comments address two aspects related to the CSX Baltimore coal terminal. Specifically, I have been asked to discuss: (i) the feasibility and capital costs associated with controlling coal dust from the currently open coal piles that are located at the terminal; and (ii) the estimated emissions of volatile organic compounds (VOCs) that are likely being emitted from the facility as a result of the coal handling and storage activities at the terminal.

I should note that for the costs associated with options for controlling dust from the facility, the information provided in this report was based on engineering judgement since a site visit by me and potential vendors could not be arranged prior to the preparation of these comments. Nonetheless, there is no question that covering the coal piles, either using hard covers (such as one or more metal sheds) or soft covers (using various types of fabric materials) is technically feasible. I provide some examples of such covered piles used in the same or similar applications (i.e., to cover materials susceptible to dust generation). Only the costs for such covers is in question and I attempt to estimate some costs for soft covers based on scaling from other recent applications that I am familiar with, where costs were obtained from vendors. I have concluded that the capital cost for implementing a soft cover option is in the range of 10 to 15 million dollars. I believe that these costs are conservative, meaning that actual costs are likely to be lower based on a more detailed and thorough assessment with full access to the site, including collection of samples, assessment of site conditions including geotechnical data for foundation designs, as well as incorporating needed measures to ensure that the cover design is not only safe but fully compatible with terminal operations at current levels and as configured.[2]

In addition to the soft cover option, I also provide some discussion of implementing one or more engineered wind-screens to ensure that the dust from open piles of coal would not migrate beyond the property boundary of the terminal. I provide several examples of these types of screens used for dust mitigation while handling dusty materials. While this is not a cover option, nonetheless,

[1] Resume provided in Attachment A.

[2] Obviously, the costs for dust control, under any option, would be lower, the lower the amount of coal stored at the facility. These comments do not presume lower storage volumes of coal in order to explore such additional lower dust control option.

designing and implementing wind screens based on detailed fluid dynamic modeling can provide substantial reduction in the entrainment of coal dust from the piles and their subsequent entrapment by wind screens placed strategically in and around the terminal. For this option I do not provide cost estimates but note that capital costs, including modeling, design, and implementation are likely to be substantially smaller than the cover option.

The soft cover (or any hard cover) option as well as engineered wind screens do have some ongoing operating and maintenance (O/M) costs. However, the extent of these costs are a function of the robustness of the initial design and implementation of either the cover(s) or wind screens. A more robust initial design and implementation will minimize these periodic O/M costs while a less robust initial implantation will naturally lead to potentially higher O/M costs. Thus, these annual or periodic O/M costs have not been estimated at this time.

Last, I will address the issue of potential VOC emissions from the terminal. I note that while the terminal does estimate and report its methane emissions, it does not report VOC emissions. Using the reported methane emissions values for 2022 and 2023, which are very similar, I have provided my estimates of VOC emissions using most of the same assumptions used by the terminal, with some key differences and additional data, which I discuss later in these comments. I conclude that annual VOC emissions from the terminal are greater than 25 tons per year and likely substantially greater.

B. Description and Pertinent Details of the Terminal and Current Dust Controls

I provide the following contextual information, drawn mainly from the terminal's fugitive dust control plan.[3]

"CSXT maintains several areas for outdoor material storage at Curtis Bay Piers. Coal is conveyed to storage piles via a network of covered belt conveyors and coal stacker tubes. Coal is released inside the stacker tube to the height of the active pile; coal flows out of perimeter windows on the tubes to forms storage piles…."

Figure A below shows a site map taken from one of the terminal's submittals to the MDE. It shows the two coal pile areas at the site, which I will refer to the north and south areas.

[3] CSX Curtis Bay Piers – Fugitive Dust Control Plan, Version 05/24/2023

Figure A – Site Map

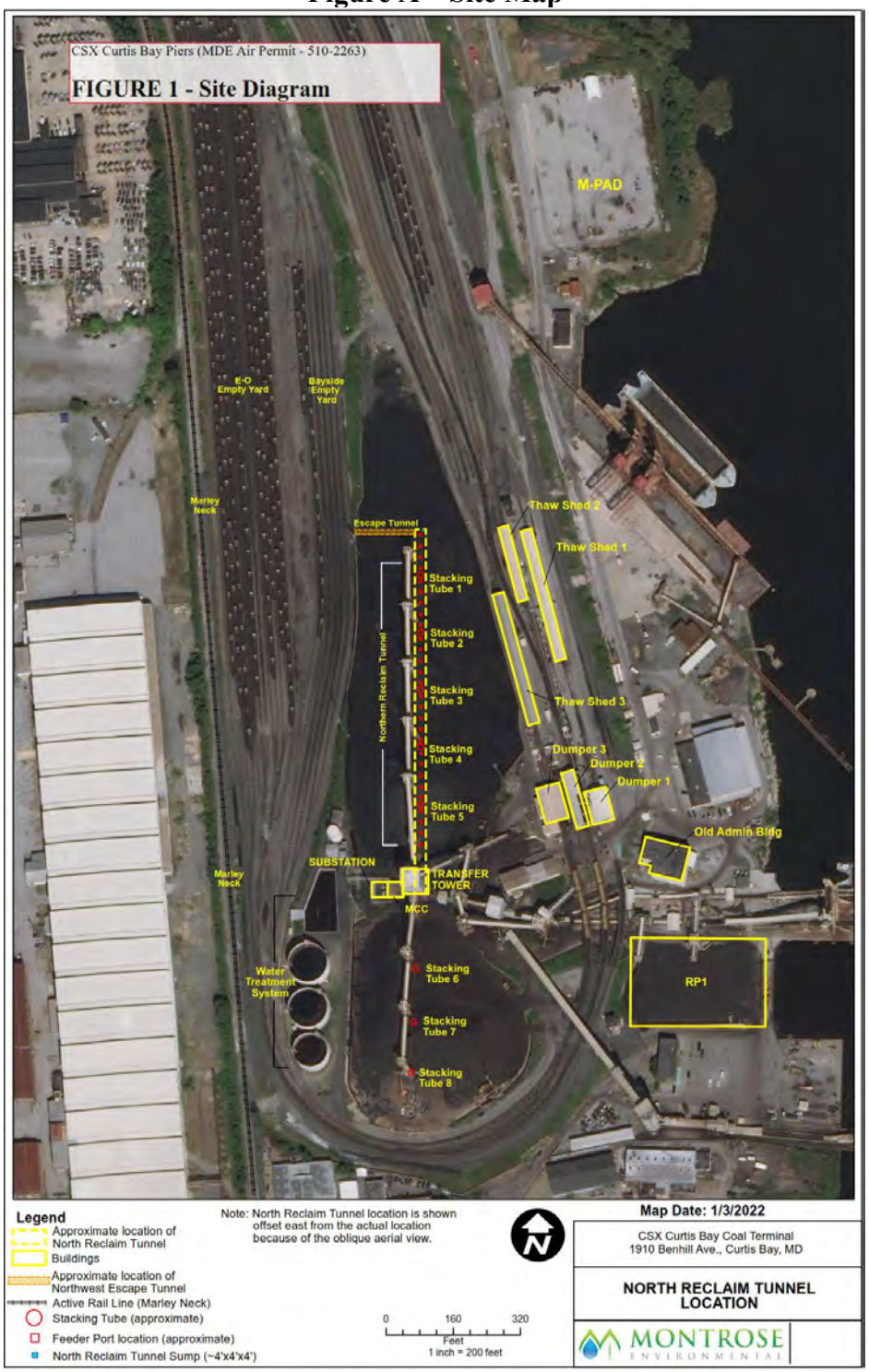


Figure B below shows a closer view of the north area with an approximate total perimeter (including the individual piles shown) of approximately 2400 ft and an area of around 306,500 square feet or around 7 acres.

Figure B – North Area and Perimeter

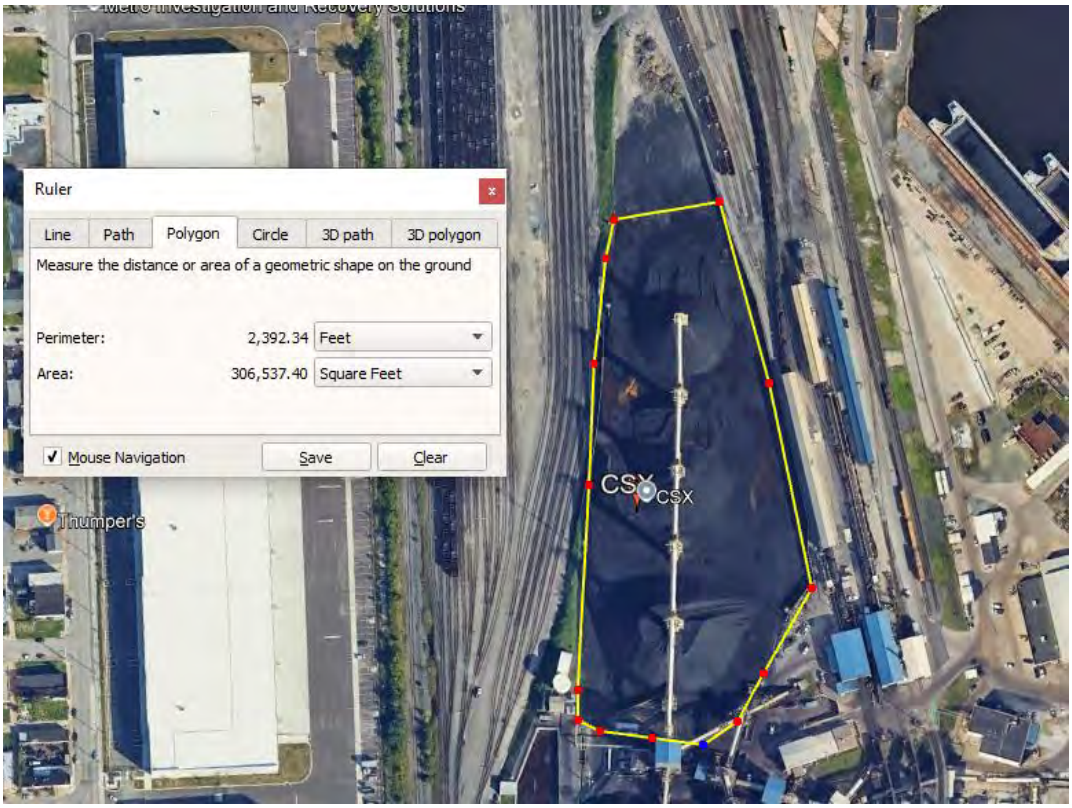
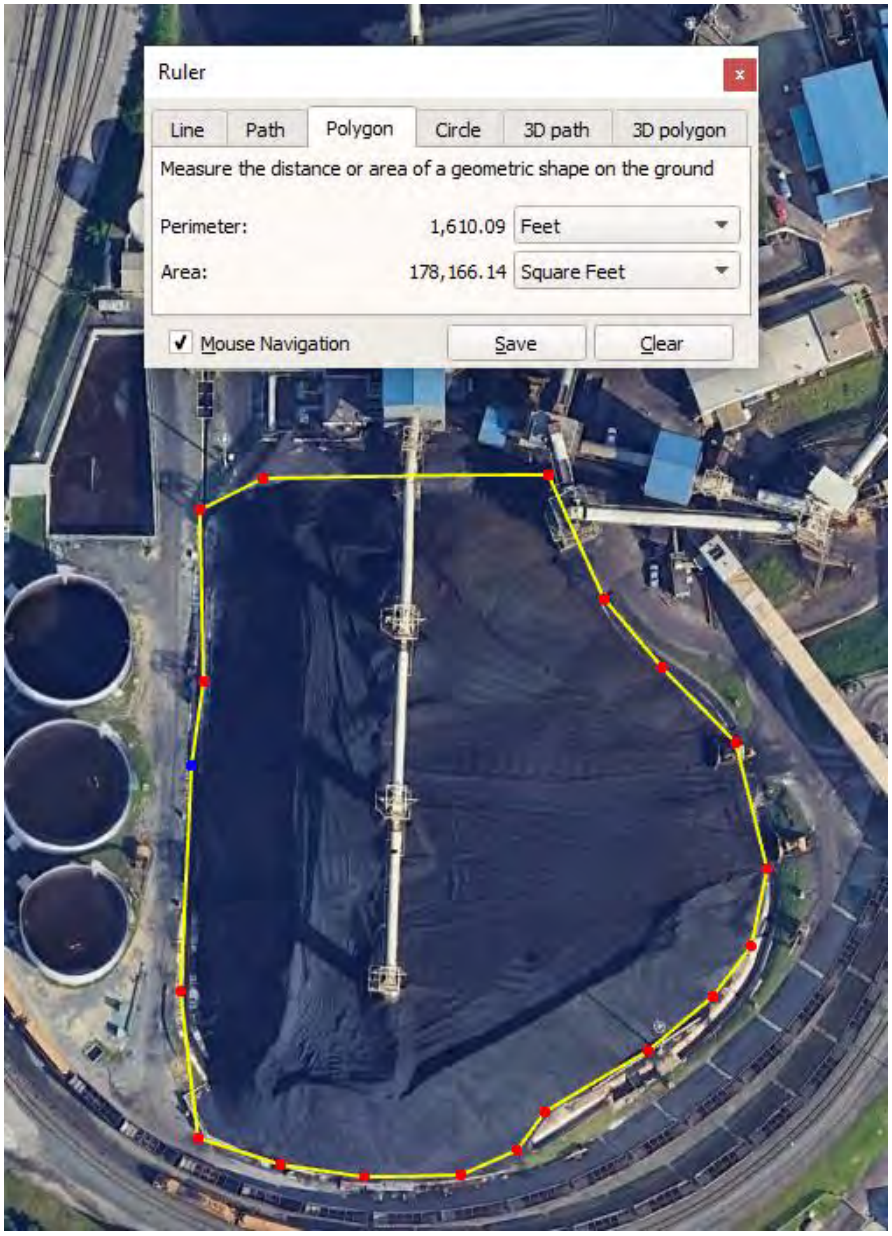


Figure C below shows a closer view of the south area with an approximate total perimeter (including the individual piles shown) of approximately 1600 ft and an area of around 178,170 square feet or around 4 acres.

Figure C – South Area and Perimeter



I am aware that the terminal current has provisions for managing dust from the open piles. These are described in Sections 3.4.1 (Dust Suppression System) and Section 3.4.2 (Wind Fence) of the terminal's fugitive dust control manual.

Based on this, it is my understanding that the dust suppression system consists of "…a network of water sprays….[which have]… been strategically placed around the perimeter of the north and south storage piles, around the RP1 storage area, and on top of each stacking tower (there are 8 stacking towers in total) to ensure the highest degree of dust control. The dust suppression system

is capable of operating in automatic and manual modes. The dust suppression system utilizes real time weather data to monitor wind speed, wind direction, and rain activity….." The dust suppression activates at wind velocities greater than 12 miles per hour. The fugitive dust plan claims that "[F]ugitive dust emissions from the storage piles are expected at wind velocities of greater than 12 mph and the maximum pile height is approximately 100 feet." However, I have not seen any support for either the velocity or the pile height of 100 ft as the minimums needed for dust generation from the coal piles.

With regard to the wind fence, the fugitive dust plan states that the terminal "…installed a thirty (30) foot high DustTamer Wind Fence for 315 linear feet along the south side of the property in order to help effectively reduce the wind speeds and minimize potential fugitive dust. The DustTamer Wind Fence is designed to exert a drag force on oncoming wind velocity and reduce wind speeds. The fence allows air to pass through and help equalize the differential pressure, thereby lowering the wind velocity and minimizing particulate matter from becoming airborne. The placement of the existing wind fence along the southern border was selected to minimize wind action on the coal storage piles and minimize dust that could travel in the north and northwest direction from the facility; in the direction of the closest residential areas." The record does not provide any details for how the 30 foot height of the wind fence was selected nor the linear extent at the south side of 315 feet. Therefore I could not evaluate the effectiveness of the wind fence.

I am also aware of how the terminal (and MDE) have characterized the coal piles in certain dispersion modeling ("TAP Modeling") that has been conducted.[4] As part of that modeling, emissions of PM were estimated using a coal throughput of 17,250 tons in an 8-hour period. This translates to an average hourly throughput of around 2,156 tons per hour of coal throughput.[5]

Figure D below shows how the coal piles were depicted in the model, including 5 circular piles in the north and 3 piles in the south.

[4] Maryland Department of the Environment (MDE) TAPs Dispersion Modeling Summary for CSX Transportation Inc. - Curtis Bay Piers Application for Air Quality Permit to Construct August 2022

[5] I am aware that this average hourly throughput is different from loading rates to ships and barges, which can be much higher. For example, CSX can load up to 6700 tph of coal if the coal is of larger size and or up to 2700 tph if the coal size is finer.

Figure D – Depiction of Coal Piles in the TAP Model



Figure 3-1 Emission Sources Layout

The two tables below, excerpted from the TAP Model documentation show some of the geometry assumptions used in the TAP modeling. Specifically, as highlighted in the blue boxes, the pile heights were assumed to be roughly 50 feet (i.e., for dropping the coal on to the pile) and the pile radii were assumed to be a little less than 68 feet. Using a radius of 68 feet, the area of each pile is around 14,500 square feet or 0.33 acres. Thus the total pile area for all 8 piles is 2.64 acres.

Table 3-3 Source Parameters for Horizontal Point Sources

Source ID	Location		Base Elevation (m)	Emission Rates (lb/hr)		Stack Height (m) [1,2]	Stack Height (ft) [1,2]	Stack Diameter (m) [3]	Exit Velocity (m/s) [4]	Exit Temperature (K) [5]
	UTM E (m)	UTM N (m)		Crystalline Silica	Coal Dust					
EP1	363,360.88	4,342,756.52	8.54	2.57E-04	7.56E-03	15.9	52.17	1.34	0.001	0.00
EP24	363,360.88	4,342,756.52	8.54	2.57E-04	7.56E-03	15.9	52.17	1.34	0.001	0.00
EP2	363,359.38	4,342,826.97	8.96	2.57E-04	7.56E-03	14.7	48.23	1.37	0.001	0.00
EP3	363,359.72	4,342,868.73	9.15	2.57E-04	7.56E-03	14.7	48.23	1.37	0.001	0.00
EP4	363,360.52	4,342,910.45	8.44	2.57E-04	7.56E-03	14.7	48.23	1.37	0.001	0.00
EP5	363,361.36	4,342,952.30	8.14	2.57E-04	7.56E-03	14.7	48.23	1.37	0.001	0.00
EP6	363,361.99	4,342,993.81	8.35	2.57E-04	7.56E-03	14.7	48.23	1.37	0.001	0.00
EP8	363,354.82	4,342,703.80	10.89	2.57E-04	7.56E-03	14.7	48.23	1.37	0.001	0.00
EP9	363,352.69	4,342,663.53	8.62	2.57E-04	7.56E-03	14.7	48.23	1.37	0.001	0.00
EP10	363,350.12	4,342,623.27	8.38	2.57E-04	7.56E-03	14.7	48.23	1.37	0.001	0.00
EP12_19	363,444.16	4,342,735.63	2.17	2.57E-04	7.56E-03	13.7	44.95	1.3	0.001	0.00
EP13	363,440.30	4,342,727.52	2.13	2.57E-04	7.56E-03	15.5	50.85	5.37	0.001	0.00
EP14	363,386.52	4,342,729.45	8.11	2.57E-04	7.56E-03	11	36.09	6.33	0.001	0.00
EP15	363,383.97	4,342,747.80	7.53	2.57E-04	7.56E-03	12.8	41.99	7.5	0.001	0.00
EP16	363,395.01	4,342,779.84	7.92	2.57E-04	7.56E-03	12.8	41.99	3.73	0.001	0.00
EP18_25	363,413.60	4,342,739.52	7.34	2.57E-04	7.56E-03	10	32.81	1.81	0.001	0.00
EP20	363,459.91	4,342,733.39	2.19	2.57E-04	7.56E-03	3.4	11.15	0.95	0.001	0.00
EP21	363,508.63	4,342,751.43	2.4	2.57E-04	7.56E-03	4	13.12	7.4	0.001	0.00
EP22	363,558.09	4,342,746.48	2.38	2.57E-04	7.56E-03	3.7	12.14	2.57	0.001	0.00
EP23	363,552.16	4,342,701.80	1.94	2.57E-04	7.56E-03	10.7	35.10	2.08	0.001	0.00
EP29	363,712.50	4,342,564.80	0	2.14E-04	6.30E-03	18	59.06	2.68	0.001	0.00
EP30	363,507.14	4,342,732.24	2.03	2.57E-04	7.56E-03	3	9.84	3.85	0.001	0.00
EP31	363,516.86	4,342,731.51	2.12	2.57E-04	7.56E-03	6.7	21.98	5.4	0.001	0.00
EP32	363,655.11	4,342,747.76	1.22	2.14E-04	6.30E-03	18	59.06	2.68	0.001	0.00

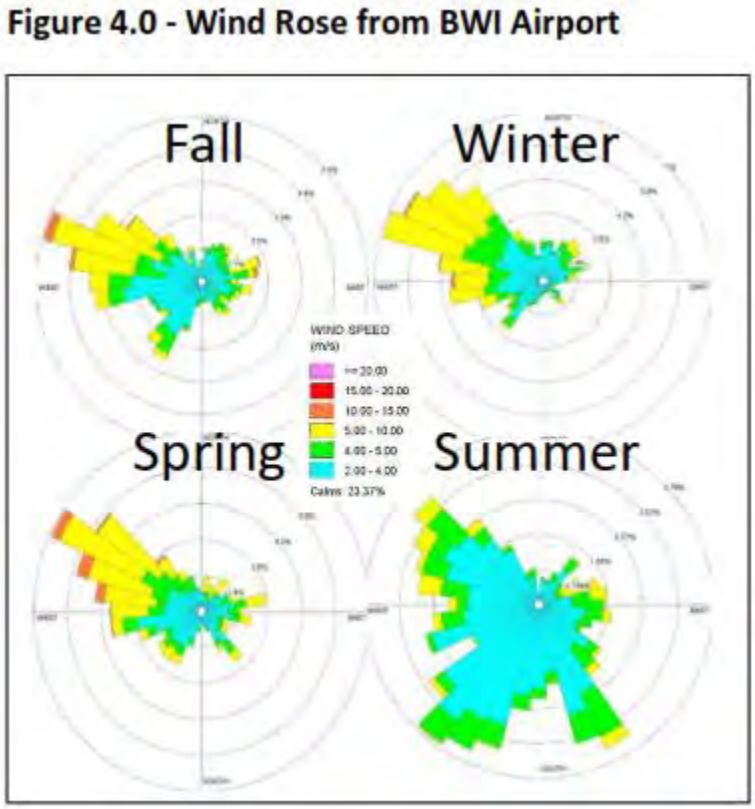
Table 3-4 Source Parameters for Circular Area Sources

Source ID	Location		Base Elevation (m)	Emission Rates (lb/hr)		Emission Rates (lb/hr-ft^2)		Release Height (ft) [1]	Radius of Circular Area (ft)	Number of Vertices (or Sides)	Area (ft^2)
	UTM E (m)	UTM N (m)		Crystalline Silica	Coal Dust	Crystalline Silica	Coal Dust				
CAREA1	363,359.50	4,342,993.80	8.32	9.01E-04	2.65E-02	6.26E-08	1.84E-06	40	67.68	20	14,391.91
CAREA2	363,358.89	4,342,952.30	8.14	9.01E-04	2.65E-02	6.26E-08	1.84E-06	40	67.68	20	14,391.91
CAREA3	363,358.03	4,342,910.44	8.44	9.01E-04	2.65E-02	6.26E-08	1.84E-06	40	67.68	20	14,391.91
CAREA4	363,357.28	4,342,868.73	9.14	9.01E-04	2.65E-02	6.26E-08	1.84E-06	40	67.68	20	14,391.91
CAREA5	363,356.79	4,342,826.95	9.01	9.01E-04	2.65E-02	6.26E-08	1.84E-06	40	67.68	20	14,391.91
CAREA6	363,352.34	4,342,703.80	10.91	9.01E-04	2.65E-02	6.26E-08	1.84E-06	40	67.68	20	14,391.91
CAREA7	363,350.15	4,342,663.52	8.61	9.01E-04	2.65E-02	6.26E-08	1.84E-06	40	67.68	20	14,391.91
CAREA8	363,347.54	4,342,623.29	8.37	9.01E-04	2.65E-02	6.26E-08	1.84E-06	40	67.68	20	14,391.91

Notes:
1) Release height taken as half of the average pile height.

Lastly, to round out this description sections, the seasonal wind roses in the area from the BWI airport are shown below in Figure E, taken from terminal documents. These wind roses show that wind can occur in more than just the north-south alignment, depending on the season.

Figure E – Seasonal Wind Roses from BWI Airport



Finally, the fact that activities at the terminal are capable of creating coal dust is confirmed by numerous observations and other studies. As a simple example, I have reproduced a photograph from one such observation below.[6]

[6] Collaborative Investigation of Coal Dust, Air Pollution, and Health Concerns in Curtis Bay, South Baltimore, Maryland, USA, 2022-2023, December 14, 2023.



Figure 4. Plume of visible dust at the coal terminal, June 1, 2021.

C. Examples of Covered Storage Piles

There are numerous examples worldwide of covered storage piles in order to ensure the proper protection of the materials themselves as well as for dust control. In this section, I provide some examples.

In the US, in Southern California, petroleum coke handled at the San Pedro ports have implemented covers for many years.[7] Since roughly around 2000, petcoke has been handled using covers of various types. While the Port of Los Angeles does not currently handle petcoke, the adjacent Port of Long Beach continued to handle such material using metal A-frame sheds.[8] Figure F below shows the sheds.

[7] https://polb.com/port-info/timeline/
[8] https://www.freightwaves.com/news/los-angeles-port-set-to-start-over-on-coke-shed-demolition-bids

Figure F – Port of Long Beach Covered Sheds for Petcoke



Another example of covered petcoke handling is the Pittsburg CA terminal. This is a terminal located in Pittsburg, California, "…located on the Sacramento River at its confluence with San Joaquin River in the Sacramento Delta, consists of three reinforced concrete 160 foot diameter hemispherical domes which store petroleum coke produced at nearby oil refineries. Foundations consist of circumferential ring beams, while reclaim is made through conveyors in tunnels running beneath the domes…."[9]

[9] https://www.opacengineers.com/projects/PittsburgDome

Figure G – Domes at the Pittsburg



Notably, construction was complete for these hard-domes in circa 1997 at a cost of $2 million.

Additional examples of covered piles of coal and other dusty materials are shown below.[10]

The system for storing, stacking, and reclaiming coal that Sandvik designed and supplied to the Ho-Ping Power Plant — just north of Hualien on the island of Taiwan. For storage, there are two circular stockpiles enclosed in domes. See Figure H Each has a capacity of more than 270,000 tons, making them two of the largest circular coal piles ever built. Coal unloaded from ships is conveyed through the domes near their top to either of two radial stackers, each rated at 3,500 tph, centered inside. Stacking, by a boom roughly 105 feet long.

[10] https://www.powermag.com/plant-design-trends-in-coal-pile-design/

Figure H – Ho-Ping Power Plant Domes



Additional examples are shown below.[11] This article noted that covered stockpiles have been around since 1992. Covers are provided for coal piles in various shapes such as conical, ring, longitudinal, and free-form and can range in size from 30 meters to 300 meters (or roughly 100 feet to 1000 feet). The individual piles at the CSX terminal are conical in shape, while the north and south years, collectively are more free-form or longitudinal.

As an example of a cover for a conical pile is shown below in Figure I.

[11] https://www.drycargomag.com/covered-coal-strorage-in-varying-shapes-and-sizes

Figure I – Cover for Conical Coal Pile



Just as examples for other shapes, Figures J through L below shows a covers for other shaped stockpiles.

Figure J – Cover for Ring Stock Pile



Figure K – Cover for Longitudinal Stock Pile



Figure L – Geodesic Cover for a Free-Form Stock Pile



D. Capital Cost Estimates for Covers

As noted earlier, site access could not be arranged as of the writing of these comments. While it is clear that covered coal piles of various sizes are entirely feasible, obtaining accurate cost estimates will require site visits with vendors and discussions with the terminal operator. For example, it may be possible to implement either hard or soft covers. And, the geometry of the cover(s) can range from individual covers for each of the 8 piles or combinations of a north and south cover or additional shapes and configurations to match terminal operating needs. There is no doubt that cover shapes and configurations can accommodate terminal constraints, as the various examples I have shown above attest.

D1. Hard Cover Cost Estimate

As noted previously the Pittsburg CA domes had a cost of approximately 2 million in 1997 dollars for three 160 feet diameter (or 80 feet radius) domes. Therefore simply scaling (and not adjusting for the diameter, since an 80 feet diameter would accommodate the individual 68 feet diameter piles at the terminal, the 1997 cost for 8 such domes is roughly 2 million x (8/3) or 5.3 million. Adjusting for inflation from 1997 to November 2024 using a CPI deflator,[12] this cost is approximately double or around 10.6 million.

Even making additional allowances, an order of magnitude cost for this option would be around 15 million in my opinion. While this estimate is based on scaling of the Pittsburg CA domes, which are used to store petcoke, any additional ventilation costs associated with methane emissions from coal are not expected to add significant expense to this estimate.

D2. Soft Cover Cost Estimate

I am aware of recent costs for a couple of soft cover pile covers in mining applications for a project in Utah. Two different vendors[13] provided recent (late 2023) costs in the range of $300,000 to $350,000 for covering a pile of roughly 75 feet x 110 feet (or an area of 8,250 square feet and perimeter of 370 feet), with a height of 23 feet. The area of the four sides and roof is approximately 8510 + 8250 or 16,760 square feet. While this height is smaller than what a longitudinal-type shed would require for the north and south areas (i.e., one in each area, covering all of the piles in the respective north and south areas), a reasonable scaling can provide some approximation for costs.

As I have shown earlier the north area has a perimeter of approximately 2,400 feet and an area of around 306,500 square feet. Using the TAP modeling height of 50 feet, the , the area of a cover would be 2,400*50+306,500 = 426,500 square feet. Scaling the costs based on these areas with no other adjustments would result in a cost of $350,000 x (426,500/16,760) = $8.9 million. A similar analysis for the south area would result in a cost of $350,000 x ((1600*50+178170)/16,760) = 5 million. The total would be 13.9 million. I should note that some of the costs included for the smaller sheds, such as mobilization, etc. would not scale (i.e., would be lower) for the north of

[12] https://www.bls.gov/data/inflation_calculator.htm

[13] The vendors were Beehive Buildings and Roper Buildings

south areas. Regardless, a soft cover capital cost of 10 to 15 million dollars is reasonable. A soft cover can be expected to be gas permeable, meaning no additional costs for methane or other gas ventilation would be needed.

E. Engineered Wind Fences

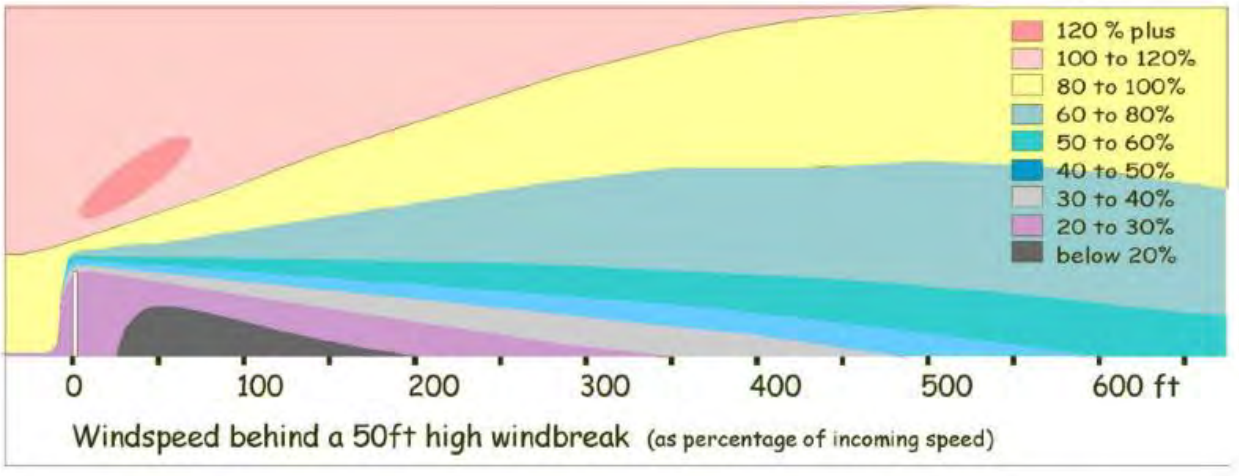
While I acknowledge that the current terminal has a 30 foot high x 315 foot long wind fence, as I have noted above there is nothing in the record to show how this was designed and engineered and therefore how effective it is in actually preventing dust generation to begin with and then trapping dust particles once generated from leaving the facility.

I have been personally involved in the design of engineered wind fences and I provide a few basic details about them along with some examples of computer modeling and implementation at a facility in the north-west US. This facility handles various grades of scrap metal including automobile shredder fluff and similar materials. The following discussion is drawn from that project, including from vendor literature.

At a basic level, wind fences are optimized for wind speed reduction when wind movement through the fence is dampened without being completely obstructed. The porous fabric panels used typically facilitate bleed-through of the wind without completely obstructing air flow. The porosity of the fabric is an important design element to allow effective control the level of wind dampening for any given fence design.

Figure M below is a cross-section of a typical shelter envelope generated by a wind fence. The diagram assumes that the wind direction is perpendicular to the face of the wind fence.

Figure M – Shelter Envelope for a Typical Wind Fence

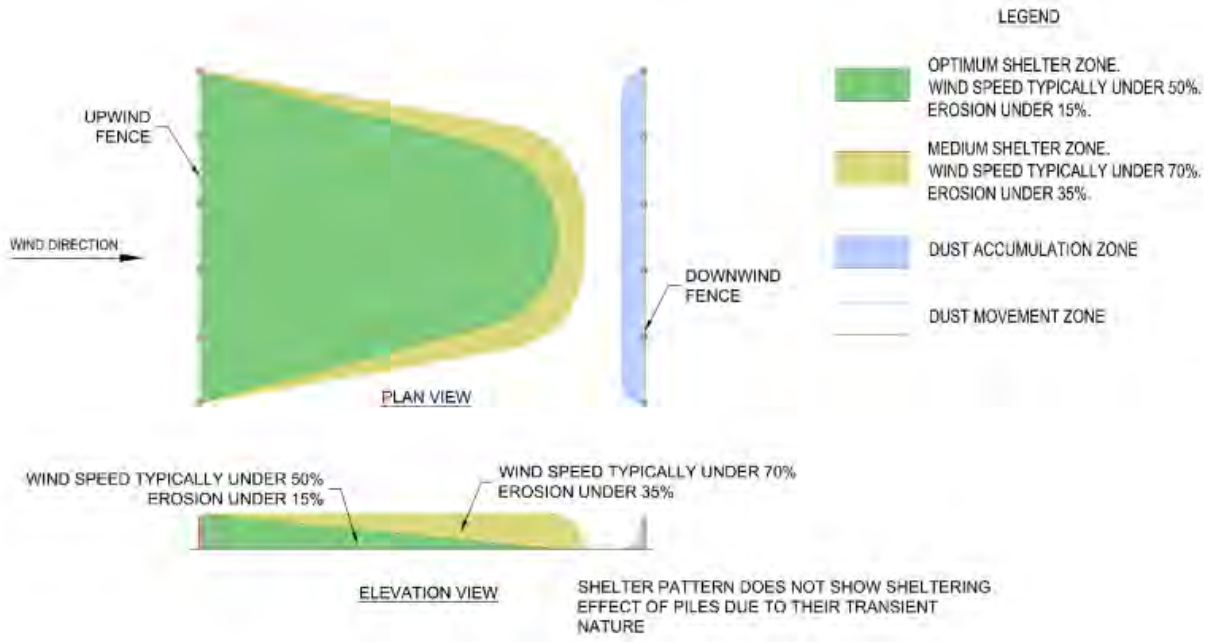


The point is that, with proper design, wind speeds can be reduced by 80% or more of the unimpeded levels on the leeward side of the fence. In general, a level of 50% reduction is considered optimal. And, a well-designed wind fence produces an 'optimal' wind shelter envelope that is roughly 10-12 times the height of the fence. Wind loading is often expressed in terms of wind

pressure, which is proportional to the square of wind speed. Therefore, a 50% reduction in wind speed means a 75% reduction in wind pressure. The amount of dust generated, however, is an even stronger function of wind speed, typically the cube of wind speed. So, reducing the wind speed by 50% would result in reducing the dust generation potential by 87.5%. Dust that is already entrained in the wind will drop out in time, with the amount of time required for it to drop out being a function of particulate size, temperature, wind turbulence, and the height above ground that it starts out at. Will all this in mind, selecting the wind fence height, in the upwind location(s) is a critical engineered parameter. The terminal does not appear to have an upwind wind fence when the winds are from the north, as the fugitive dust plan acknowledges.

Figure N below shows the arrangement of both upwind and downwind fences in order to provide a quiescent, shelter area (i.e., the north and south areas), where dust generation should be minimized.

Figure N – Upwind and Downwind Fences, and Sheltered Area



In the next few pages, I show examples of wind fences from various locations around the world.

Location:	Oman
Description:	3.3km x 28m high
WSS involvement:	Design assistance and material supply
Completed:	2011





Location:	Idaho, USA
Description:	350m circle x 28m and 20m high
WSS involvement:	Design and build
Completed:	2013



Location:	Port of Ubu, Brazil
Description:	Steel Pellet Plant. Port facility. ~2,800 m long, 22 – 28m tall.
WSS involvement:	Design assistance and material supply
Completed:	2014





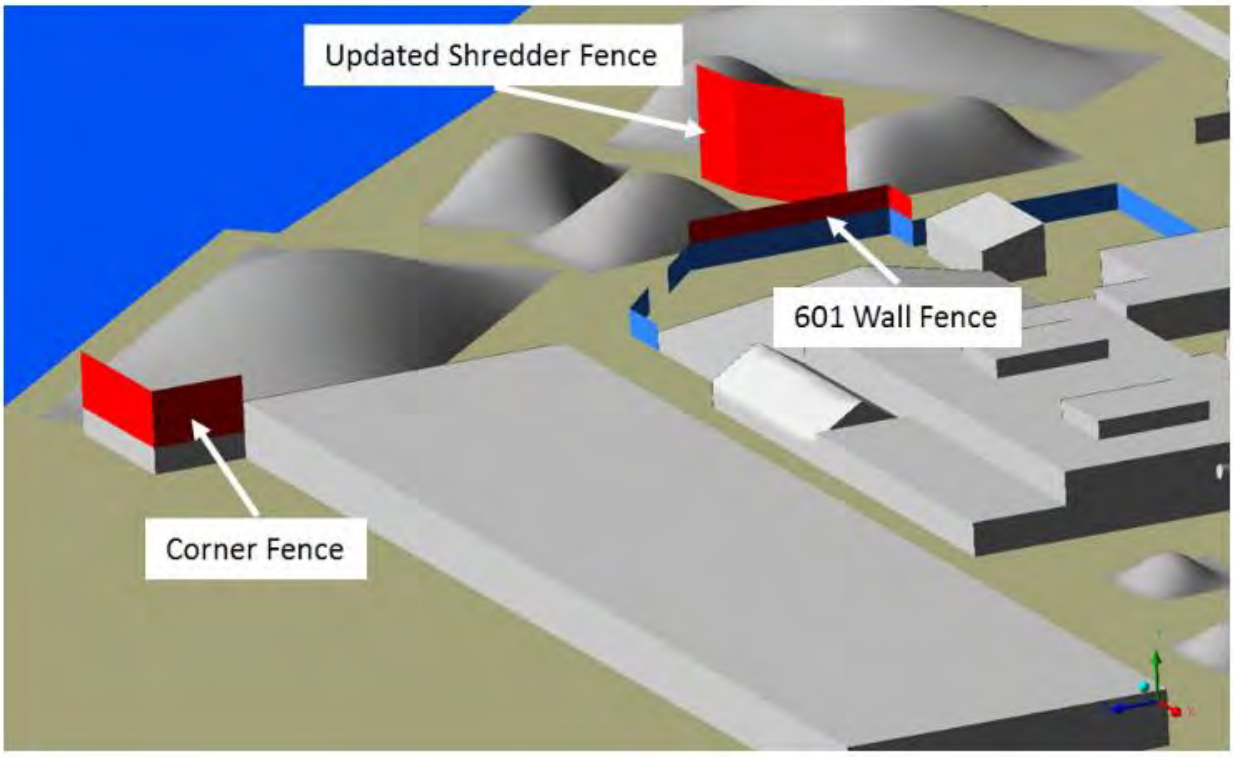
Location:	Florida, USA
Description:	800m, varying heights. Includes 15m high section built above 9m earth berm (24m total height) and 18m high section built above flat ground.
WSS involvement:	Structural and aerodynamic design, material supply, installation excluding excavation.
Completed:	2017

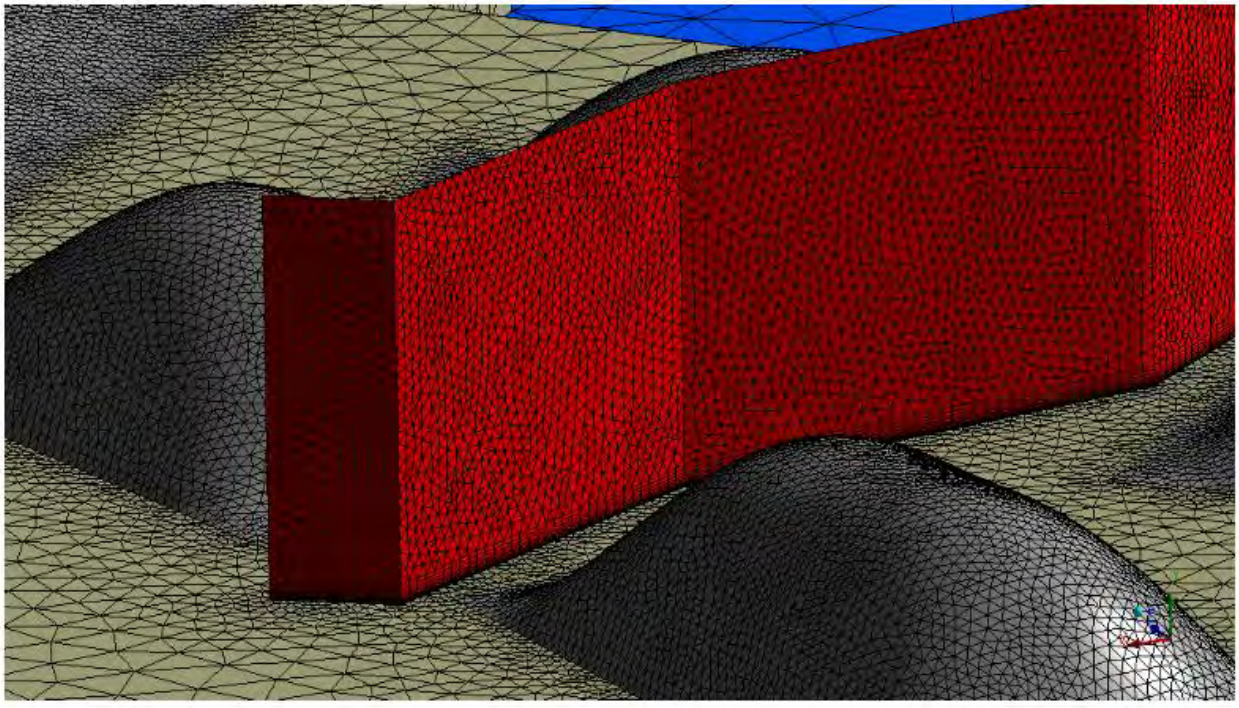


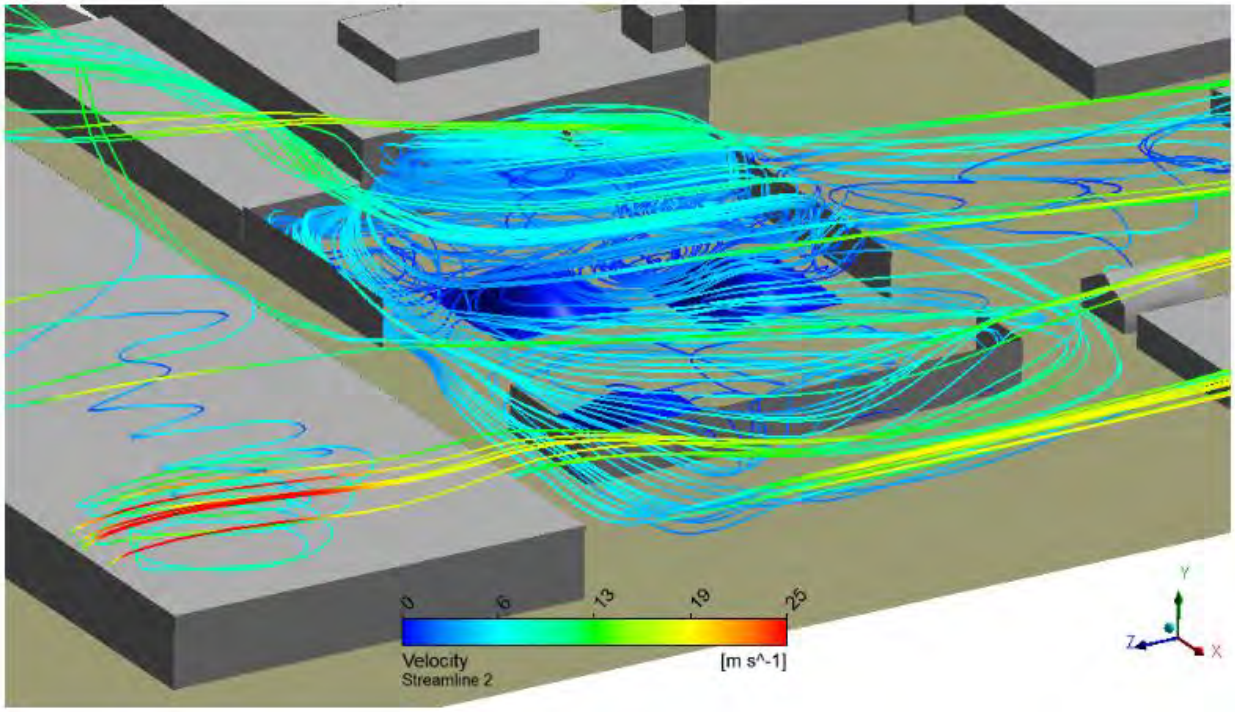


Finally, in the next several pages, I show computer modeling that is typically conducted in order to not only determine the height(s) of the fences but also their locations at a site. Again, this example is drawn from the shredder site in the north-west US. I provide these as examples of what

should be done by way of design in order to determine a proper, engineered, wind fence – so that the fence system will minimize dust entrainment to begin with and then prevent dust migration from the site, if dust is generated.



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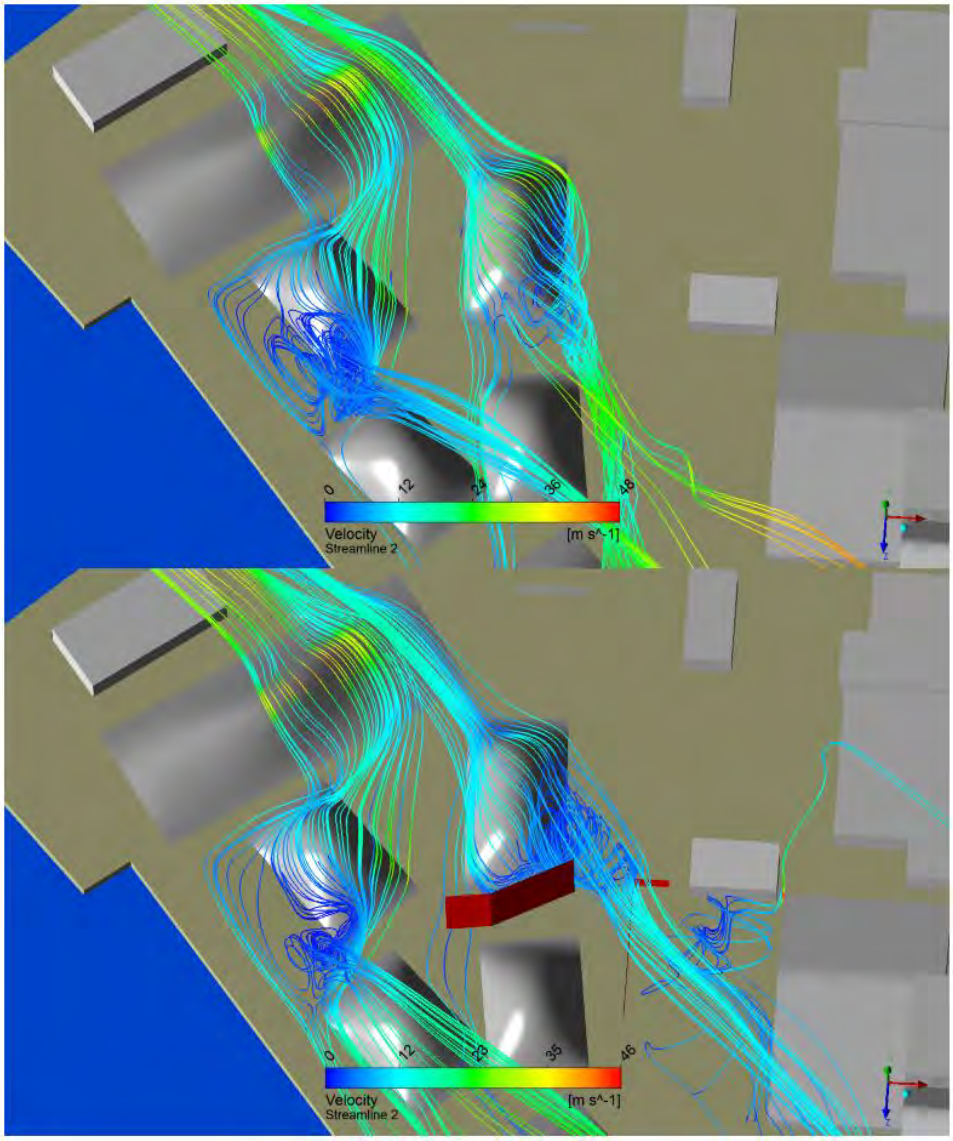
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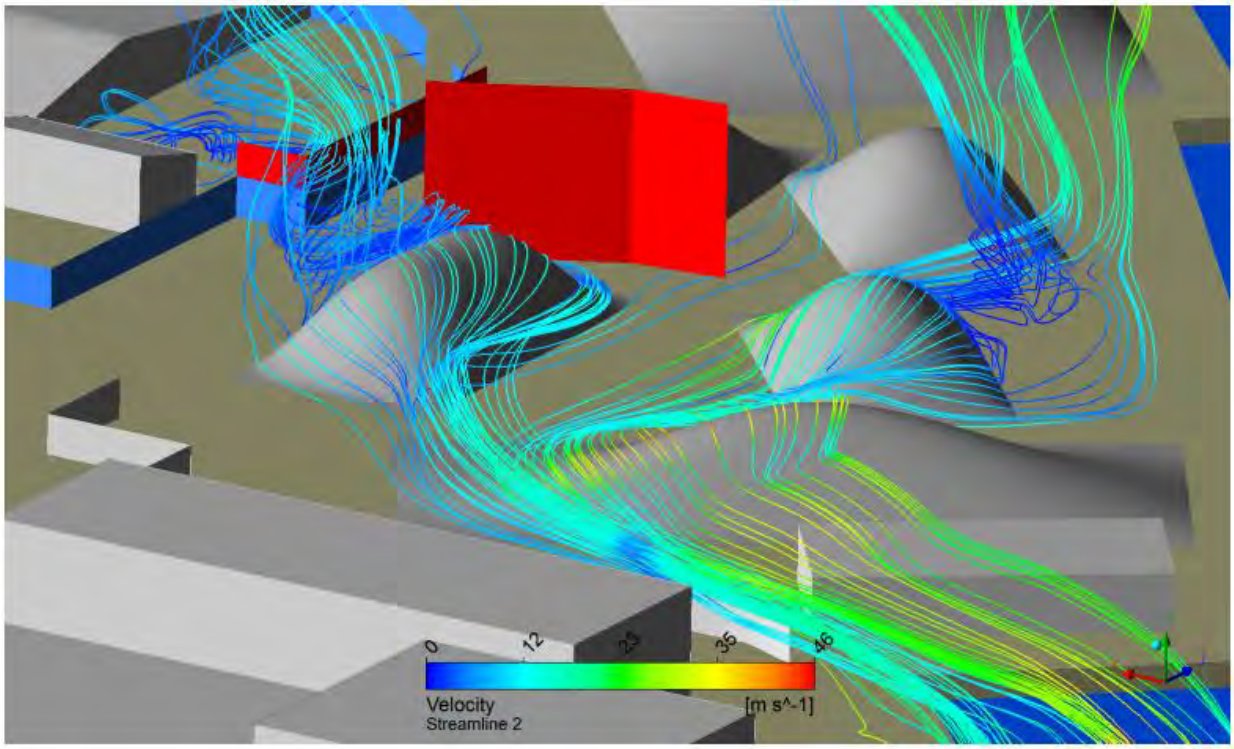
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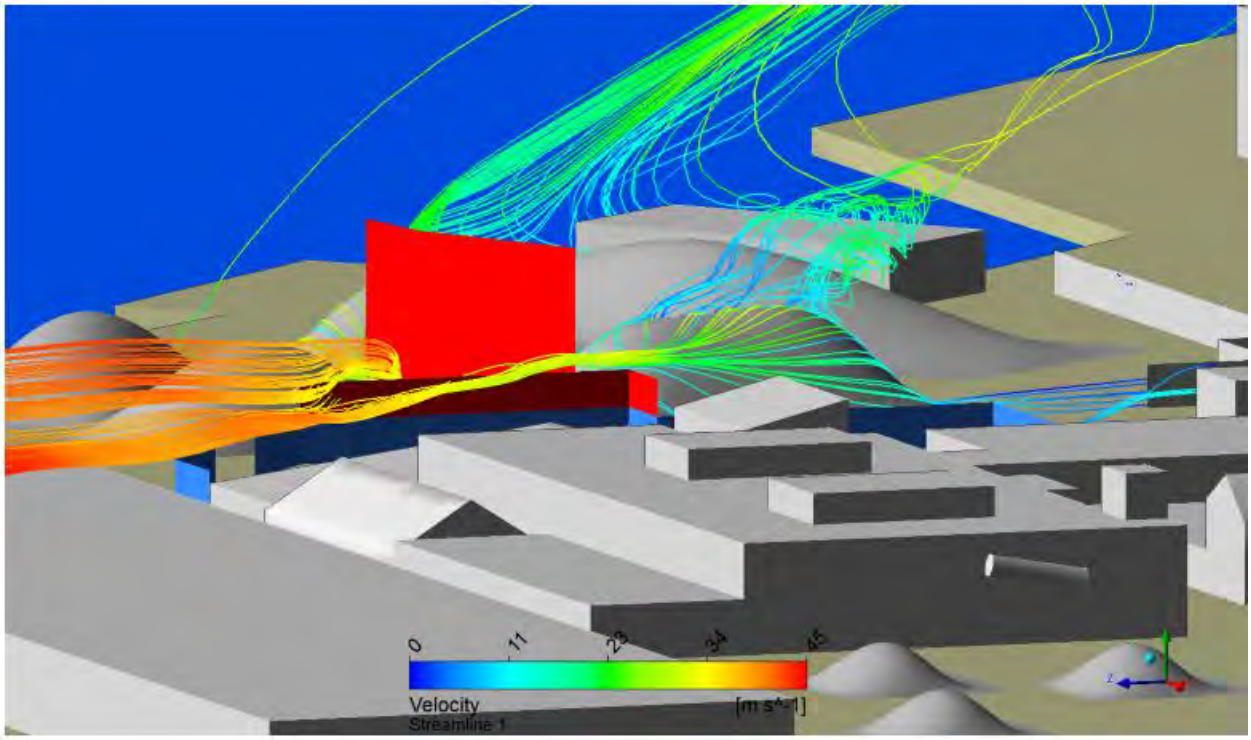
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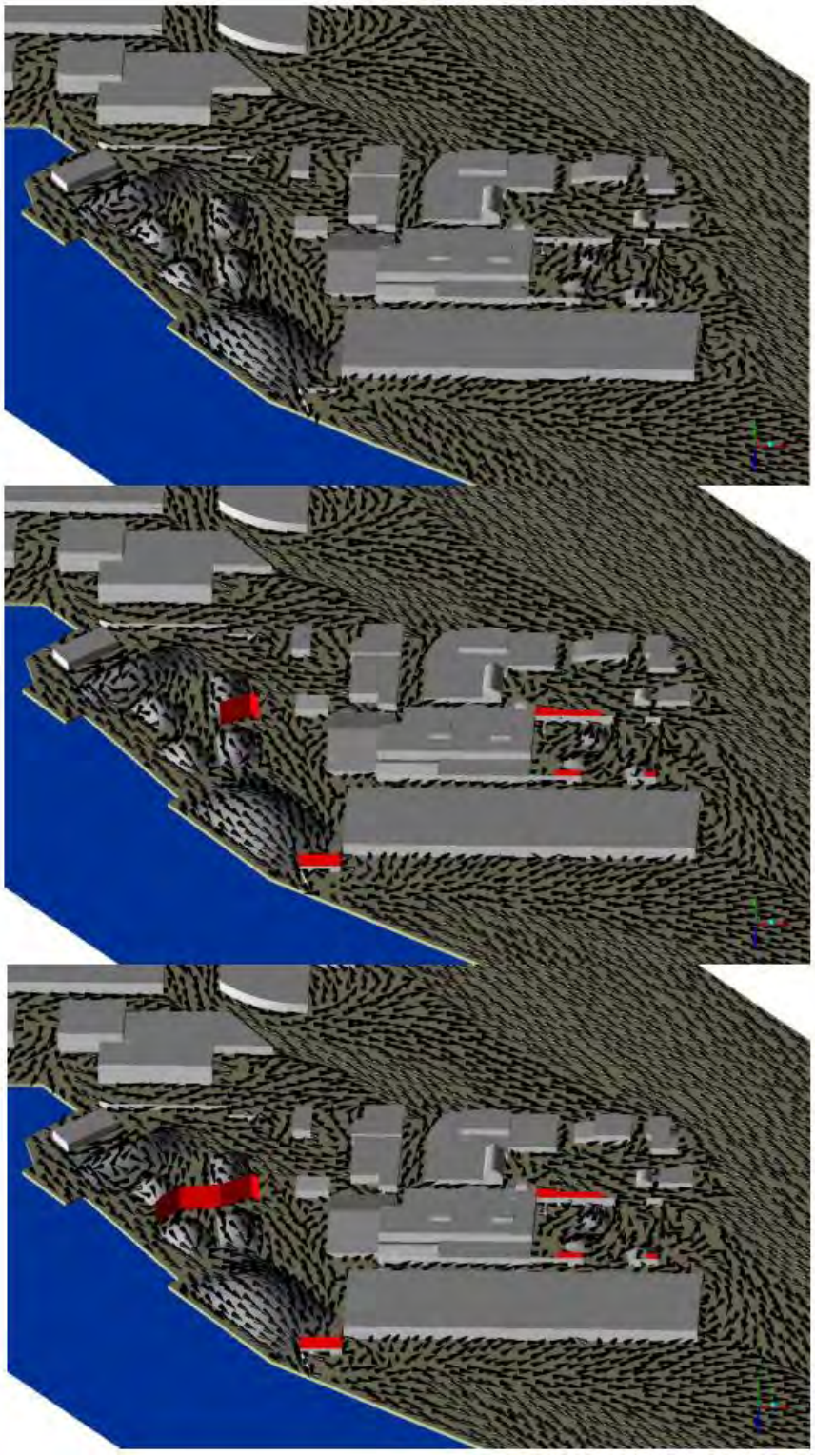
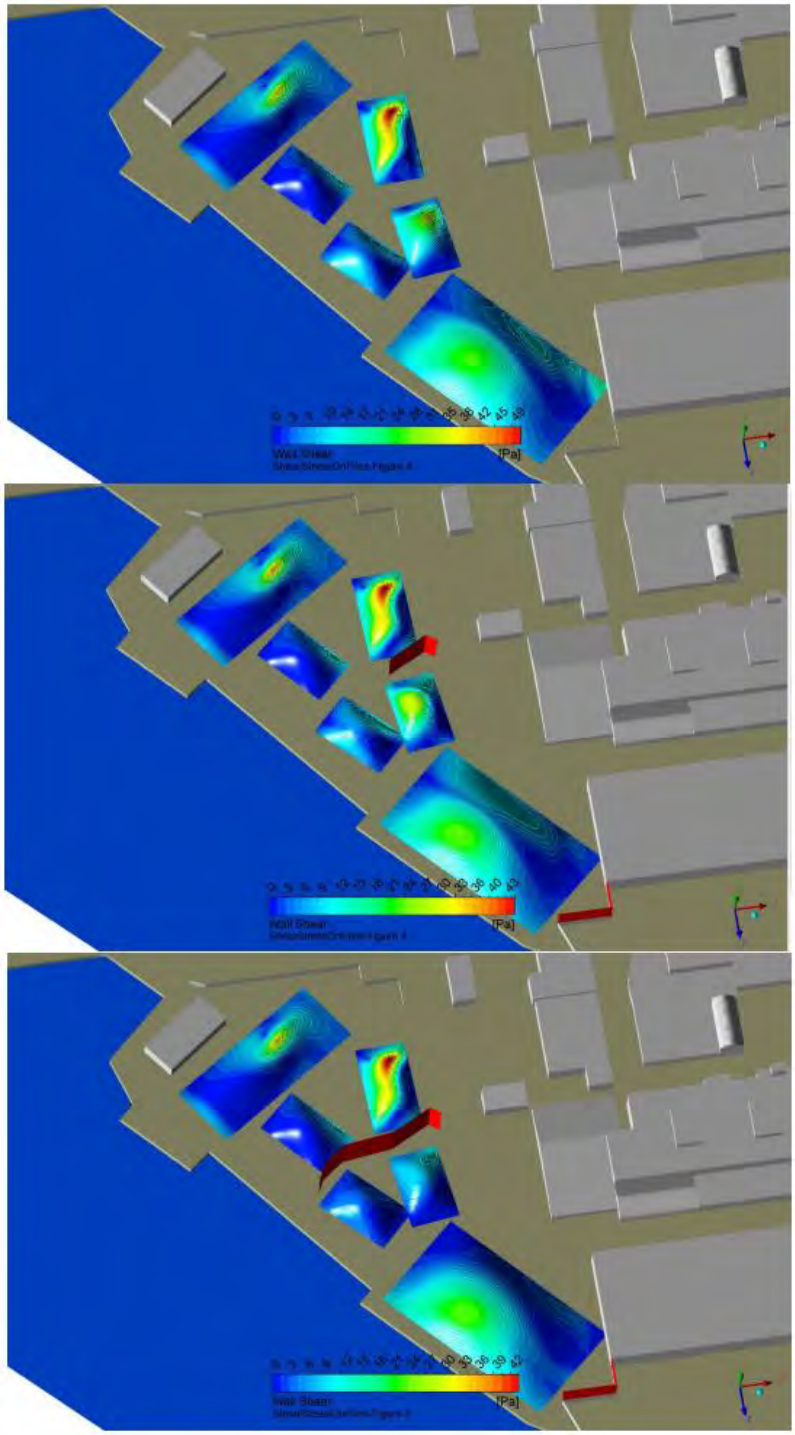
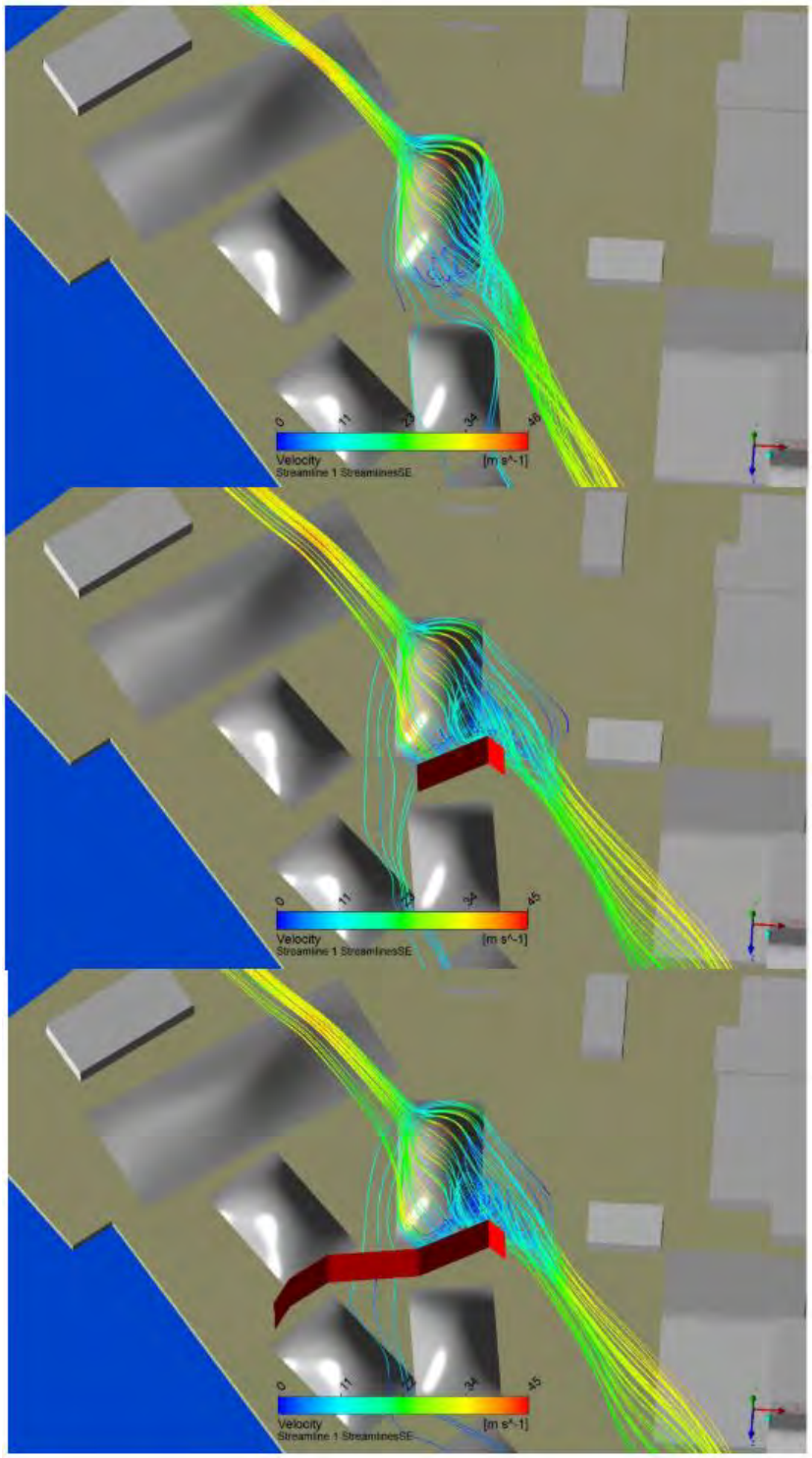


Velocity Vector Maps at 1 meter above Surface Level (NW wind at 38 meters~~iles~~ per second). Top panel: As-Is Case; Center Panel: Partial Wind Fence Case; Lower Panel: Full Wind Fence Case.



Contours of Surface Shear Stresses on Yard Pile Surfaces (NW wind at 38 meters per second). Top panel: As-Is Case; Center Panel: Partial Wind Fence Case; Lower Panel: Full Wind Fence Case.



Airflow Streamlines over the piles (NW wind at 38 meters per second). Top panel: As-Is Case; Center Panel: Partial Wind fence Case; Lower Panel: Full Wind Fence Case.

E. VOC Emissions from the Terminal

In this section, I provide an estimate of the VOC emissions from the terminal on an annual basis. As an initial matter, I state that coal likely emits VOC after leaving the mine for the same reasons that it continues to emit methane. In fact, coal is more likely to continue to emit VOCs after leaving the mine than methane because of the higher molecular weights (and lower diffusivity) of VOCs.

To estimate VOC emissions from the terminal, I first examine the methane emissions that are reported by the terminal, and then scale those with a reasonable estimate of the VOC emissions (i.e., excluding methane and ethane) that are also present in the coal.

The terminal has reported emissions of methane at around 5,100 tons per year in 2022 and 2023. In 2022, the value reported was 5,112 tons. The basis of the calculations is shown below.

Methane Emissions[a]

Parameter	Value	Units	Comments/Notes
In-situ methane content[a]	147	ft^3/ton	Central Appalachian Underground Mining
Average gas remaining[a]	58%	%	Assumed for when coal leaves the mine
Gas content of coal leaving mine	85.26	ft^3/ton	In-situ content * average gas remaining
Time for 67% of gas to be released[a]	21	days	
% Gas Released after 3 days of transport	9.57%	%	For delivery from mine, estimated as 3 days to Curtis Bay
Gas content of coal after 3 days transport (material arriving at CBP)	77.10	ft^3/ton	Content leaving mine * (1-% Gas Released after 3 days transport)

Parameter	Value	Units	Comments/Notes
Total gas released during 3 days of transit from coal mine to site[b]	8.16	ft^3/ton	Gas content of coal leaving mine * 9.57%
Gas emission rate, per day	2.72	ft^3/ton/day	

Directly Transferred[c]

Parameter	Value	Units	Comments/Notes
Tons coal per year	837,937	tons/year	Based on data from Ore Docks
Gas emission rate	2.72	ft^3/ton/day	
Days on site	0.5	day	Based on site understanding of loads
Methane emissions	1,139,678	ft^3/year	
Methane density (77°F, 1 atm)	0.0410	lb/ft^3	https://www.engineeringtoolbox.com/methane-d_1420.html
Methane emissions	46,727	lb/year	
Engineering conversion factor	2,000	lbs/ton	Engineering conversion factor
Methane emissions	23	tons/year	

Stored on Site

Parameter	Value	Units	Comments/Notes
Gas emission rate	2.72	ft^3/ton/day	
Average Stored Onsite (daily)	250,000	tons	Engineering estimate
Days on site	365	days	
Methane emissions	248,218,250	ft^3/year	
Methane density (77°F, 1 atm)	0.0410	lb/ft^3	https://www.engineeringtoolbox.com/methane-d_1420.html
Methane emissions	10,176,948	lb/year	
Engineering conversion factor	2,000	lbs/ton	Engineering conversion factor
Methane emissions	5,088	tons/year	

Methane Emissions Summary

Process	*Methane Emissions (tons/year)*
Directly transferred (on-site 1/2 day)	23
Material with interim storage	5,088
Total	**5,112**

References/Notes

[a] This approach is based on: "An Improved Inventory of Methane Emissions from Coal Mining in the United States" David Kirchgessner, U.S. EPA, Stephen D. Piccot and Sushma S. Masemore, Southern Research Institute (1 November 2000). Provides data for CY 1995. Data from Table 6, Post-mining Emissions Inventory Estimation Method

[b] Another 67% will be released over 21 days. Assume this value is linear to get a daily emission rate for coal on-site.

[c] Assume coal has a residence time on site of 0.5 day.

In 2023, a similar value of 5,110 tons was reports with the supporting calculations shown below.

Methane Emissions[a]

Parameter	Value	Units	Comments/Notes
In-situ methane content[a]	147	ft^3/ton	Central Appalachian Underground Mining
Average gas remaining[a]	58%	%	Assumed for when coal leaves the mine
Gas content of coal leaving mine	85.26	ft^3/ton	In-situ content * average gas remaining
Time for 67% of gas to be released[a]	21	days	
% Gas Released after 3 days of transport	9.57%	%	For delivery from mine, estimated as 3 days to Curtis Bay
Gas content of coal after 3 days transport (material arriving at CBP)	77.10	ft^3/ton	Content leaving mine * (1-% Gas Released after 3 days transport)

Parameter	Value	Units	Comments/Notes
Total gas released during 3 days of transit from coal mine to site[b]	8.16	ft^3/ton	Gas content of coal leaving mine * 9.57%
Gas emission rate, per day	2.72	ft^3/ton/day	

Directly Transferred[c]

Parameter	Value	Units	Comments/Notes
Tons coal per year	759,326	tons/year	Based on data from Ore Docks
Gas emission rate	2.72	ft^3/ton/day	
Days on site	0.5	day	Based on site understanding of loads
Methane emissions	1,032,759	ft^3/year	
Methane density (77°F, 1 atm)	0.0410	lb/ft^3	https://www.engineeringtoolbox.com/methane-d_1420.html
Methane emissions	42,343	lb/year	
Engineering conversion factor	2,000	lbs/ton	Engineering conversion factor
Methane emissions	21	tons/year	

Stored on Site

Parameter	Value	Units	Comments/Notes
Gas emission rate	2.72	ft^3/ton/day	
Average Stored Onsite (daily)	250,000	tons	Engineering estimate
Days on site	365	days	
Methane emissions	248,218,250	ft^3/year	
Methane density (77°F, 1 atm)	0.0410	lb/ft^3	https://www.engineeringtoolbox.com/methane-d_1420.html
Methane emissions	10,176,948	lb/year	
Engineering conversion factor	2,000	lbs/ton	Engineering conversion factor
Methane emissions	5,088	tons/year	

Methane Emissions Summary

Process	*Methane Emissions (tons/year)*
Directly transferred (on-site 1/2 day)	21
Material with interim storage	5,088
Total	**5,110**

References/Notes

[a] This approach is based on: "An Improved Inventory of Methane Emissions from Coal Mining in the United States" David Kirchgessner, U.S. EPA, Stephen D. Piccot and Sushma S. Masemore, Southern Research Institute (1 November 2000). Provides data for CY 1995. Data from Table 6, Post-mining Emissions Inventory Estimation Method

[b] Another 67% will be released over 21 days. Assume this value is linear to get a daily emission rate for coal on-site.

[c] Assume coal has a residence time on site of 0.5 day.

In both instances, the starting value was an in-situ methane content of 147 cubic feet per ton, for Central Appalachian Underground mining since coal at the terminal, arrives, presumably, from Central Appalachian mines. The cited reference is from 1995.

I note that there are no measurements of the in-situ methane content of specific coals being handled at the terminal. Nonetheless, and even not questioning any of the subsequent assumptions made in the calculations above, I believe that the 147 cubic feet per ton is unlikely to be a reasonable estimate of the methane emissions from the terminal.

For example, a US Geological Survey of coal methane contents provides a much broader range of the methane contents in Central Appalachian coals, however.[14] This report notes, for example, that the gas content of coals in the Anthracite region of eastern Pennsylvania is at a maximum of 687 cubic feet (cf)/ton. It notes that in Virginia, test wells showed average methane contents of 220 cf/ton. The report, citing to other references confirms that "[M]ethane is usually the major component, but carbon dioxide, ethane, and higher hydrocarbon gases are important components of some coals (Rice, 1993)." As an example, the report notes that coal bed methane (i.e., the in-situ methane in the coal) is "…composed of 97.0% methane, 2.5% ethane and heavier gases, and 0.5% CO2…" in one area while a different well showed a methane content of 94% while "…the remaining 6% consists of ethane, propane, butane, and pentane, carbon dioxide, and nitrogen."

Specifically discussion the Central Appalachian Basin, the report notes that "[T]he Pocahontas No. 3 coal bed was previously reported to be one of the gassiest coals in the United States. In 1985, The Pocahontas No. 3 mines of Virginia ranked in the top 15 for having the highest methane liberations in the United States. …. For desorption tests for 109 samples from 12 coal beds in the central Appalachian basin, a range of 6-573 cf/ton was determined. In their study area in the central Appalachian basin, Kelafant and Boyer (1988) reported a minimum of 86 cf/ton. The highest desorption values reported were for the Pocahontas No. 3 coal bed, which ranged from 285-573 cf/ton at depths of 778-2143 ft; Hunt and Steele (1991a) reported a high value of 660 cf/ton for this coal bed. In Virginia, the gas content of the target beds for CBM development range from 249 to 408 cf/ton. The Sewell coal bed in Raleigh County, West Virginia, had total gas contents of 130-296 cf/ton at depths of 680-981 ft, as compared to considerably lower values of 6-143 cf/ton at depths of 684-1,037 ft and an average total gas content of 51 cf/ton for the L. Cedar Grove coal bed (high volatile A bituminous coal) in Mingo County, West Virginia. Desorption tests for three coal samples from Clay County, Kentucky, indicated 25 and 45 cf/ton (after 3-4 months) from depths from 643 to 869 ft, which indicates poor potential for CBM development in that area. For the Jawbone coal bed, approximately 280 cf/ton was reported by Adams et al. The Pond Creek coal bed in Pike and Martin Counties in eastern Kentucky, at depths of 125-500 ft, showed very low total gas contents of 38 to 67 cf/ton). Such low gas contents would be expected at depths less than 500 ft unless there were enhanced structural conditions for CBM retention." (emphasis added, citations omitted in some instances)

The report states that "[T]he gas contents of coal beds in the central and northern Appalachian basin, as given in the section on desorption data, range from 6-660 cf/ton. In general, the central Appalachian basin has higher values (as much as 660 cf/ton), as compared with as much as 252 cf/ton for the bituminous coals in the northern Appalachian basin.

Based on the above, it is more likely than not that the 146 cf/ton value used by the terminal to estimate its annual methane emissions is too low. While using the highest values like 660 cf/ton noted in the literature may not be appropriate, there are many reported values far greater than 147 cf/ton.

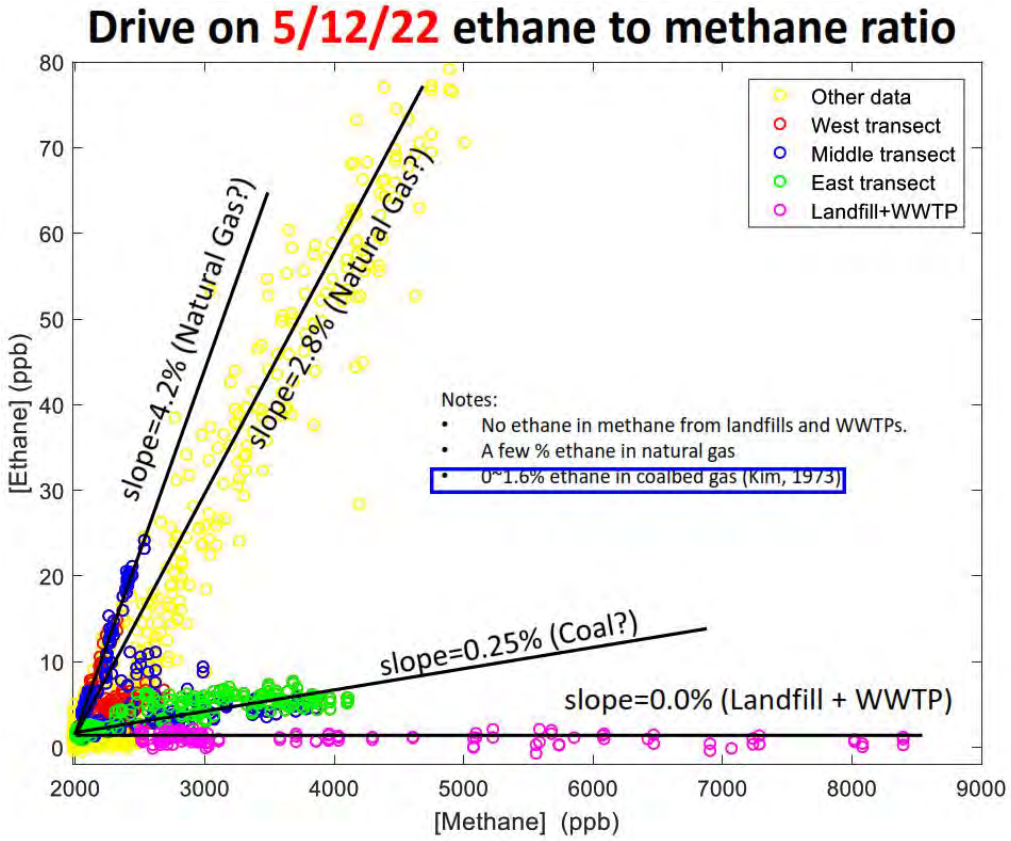
[14] Lyons, Paul C., Coalbed Methane Potential in the Appalachian States of Pennsylvania, West Virginia, Maryland, Ohio, Virginia, Kentucky, and Tennessee – An Overview, US Dept. of Interior, US Geological Survey, Report 96-735.

Of course, the higher the starting value, i.e., in place of 147 cf/ton, the greater the final methane estimate, assuming that the other assumptions used by the terminal are not questioned.

For example, using even 200 cf/ton, would result in annual methane emissions of around 5,100*(200/147) or over 6,900 tons for each year.

Next, with regards to the VOC contents, I noted above, methane is expected to be in the range of 94 to 97 percent of the gas in the coal with the rest being ethane, VOCs, CO2, and nitrogen, etc. In one instance the study noted that 2.5% of the gas was ethane and higher hydrocarbons, which can reasonably be assumed to be VOCs. I am aware that some mobile measurements of methane and ethane have been reported in the Curtis Bay area.[15] An excerpt from those results is shown in the Figure O below and cites to an ethane content of 0-1.6% in coalbed gas.

Figure O – Methane and Ethane Measurements in the Curtis Bay Area



Even using the highest ethane value of 1.6% and the previous 2.5% value for ethane and other hydrocarbons, it is reasonable to conclude than hydrocarbons or VOCs can be around 0.9% of the coal gas.

[15] Stratton, P., et; al., UMD-MDE Quarterly Meeting, September 16, 2022.

If I use this value of 0.9%, and a methane reported value of even 5,110 (arising from 97% of the coal as being methane), I estimate the annual VOC emissions to be around (0.9/97)*5110 = 47 tons. Of course correcting for the higher molecular weights of the VOCs would results in a greater mass for VOCs. And, going beyond that, if the methane estimate is itself underreported, as I have discussed, and I use a value of around 6,900 tons and the same 0.9%, I arrive at a VOC emission level of at least 64 tons, prior to any molecular weight corrections, which would result in even more mass of VOC emissions.

Attachment A – Resume

RANAJIT (RON) SAHU, PH.D, CEM (NEVADA)

CONSULTANT, ENVIRONMENTAL AND ENERGY ISSUES

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Alhambra, CA 91801
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e-mail (preferred): ronsahu@gmail.com; sahuron@earthlink.net

EXPERIENCE SUMMARY

Dr. Sahu has over thirty two years of experience in the fields of environmental, mechanical, and chemical engineering including: program and project management services; design and specification of pollution control equipment for a wide range of emissions sources including stationary and mobile sources; soils and groundwater remediation including landfills as remedy; combustion engineering evaluations; energy studies; multimedia environmental regulatory compliance (involving statutes and regulations such as the Federal CAA and its Amendments, Clean Water Act, TSCA, RCRA, CERCLA, SARA, OSHA, NEPA as well as various related state statutes); transportation air quality impact analysis; multimedia compliance audits; multimedia permitting (including air quality NSR/PSD permitting, Title V permitting, NPDES permitting for industrial and storm water discharges, RCRA permitting, etc.), multimedia/multi-pathway human health risk assessments for toxics; air dispersion modeling; and regulatory strategy development and support including negotiation of consent agreements and orders.

He has over thirty years of project management experience and has successfully managed and executed hundreds of projects in this time period. This includes basic and applied research projects, design projects, regulatory compliance projects, permitting projects, energy studies, risk assessment projects, and projects involving the communication of environmental data and information to the public.

He has provided consulting services to numerous private sector, public sector and public interest group clients. His major clients over the past three decades include various trade associations as well as individual companies such as steel mills, petroleum refineries, chemical plants, cement manufacturers, aerospace companies, power generation facilities, lawn and garden equipment manufacturers, spa manufacturers, chemical distribution facilities, land development companies, and various entities in the public sector including EPA, the US Dept. of Justice, several states (including New York, New Jersey, Connecticut, Kansas, Oregon, New Mexico, Pennsylvania, and others), various agencies such as the California DTSC, and various cities and municipalities. Dr. Sahu has executed projects in all 50 US states, numerous local jurisdictions and internationally.

In addition to consulting, for approximately two decades, Dr. Sahu taught numerous courses in several Southern California universities as adjunct faculty, including UCLA (air pollution), UC Riverside (air pollution, process hazard analysis), and Loyola Marymount University (air pollution, risk assessment, hazardous waste management). He also taught at Caltech, his alma mater (various engineering courses), at the University of Southern California (air pollution controls) and at California State University, Fullerton (transportation and air quality).

Dr. Sahu has and continues to provide expert witness services in a number of environmental and engineering areas discussed above in both state and Federal courts as well as before administrative bodies (please see Annex A).

EXPERIENCE RECORD

2000-present **Independent Consultant.** Providing a variety of private sector (industrial companies, land development companies, law firms, etc.), public sector (such as the US Department of Justice), and public interest group clients with project management, environmental

consulting, project management, as well as regulatory and engineering support consulting services.

1995-2000 Parsons ES, **Associate, Senior Project Manager and Department Manager for** Air Quality/Geosciences/Hazardous Waste Groups, Pasadena, CA.

Parsons ES, **Manager for Air Source Testing Services**. Responsible for the management of 8 individuals in the area of air source testing and air regulatory permitting projects located in Bakersfield, California.

1992-1995 Engineering-Science, Inc. **Principal Engineer and Senior Project Manager** in the air quality department.

1990-1992 Engineering-Science, Inc. **Principal Engineer and Project Manager** in the air quality department.

1989-1990 Kinetics Technology International, Corp. **Development Engineer.** Involved in thermal engineering R&D and project work related to low-NOx ceramic radiant burners, fired heater NOx reduction, SCR design, and fired heater retrofitting.

1988-1989 Heat Transfer Research, Inc. **Research Engineer**. Involved in the design of fired heaters, heat exchangers, air coolers, and other non-fired equipment. Also did research in the area of heat exchanger tube vibrations.

EDUCATION

1984-1988 Ph.D., Mechanical Engineering, California Institute of Technology (Caltech), Pasadena, CA.

1984 M. S., Mechanical Engineering, California Institute of Technology (Caltech), Pasadena, CA.

1978-1983 B. Tech (Honors), Mechanical Engineering, Indian Institute of Technology (IIT) Kharagpur, India

TEACHING EXPERIENCE

Caltech

"Thermodynamics," Teaching Assistant, California Institute of Technology, 1983, 1987.

"Air Pollution Control," Teaching Assistant, California Institute of Technology, 1985.

"Caltech Secondary and High School Saturday Program," - taught various mathematics (algebra through calculus) and science (physics and chemistry) courses to high school students, 1983-1989.

"Heat Transfer," - taught this course in the Fall and Winter terms of 1994-1995 in the Division of Engineering and Applied Science.

“Thermodynamics and Heat Transfer,” Fall and Winter Terms of 1996-1997.

U.C. Riverside, Extension

"Toxic and Hazardous Air Contaminants," University of California Extension Program, Riverside, California. Various years since 1992.

"Prevention and Management of Accidental Air Emissions," University of California Extension Program, Riverside, California. Various years since 1992.

"Air Pollution Control Systems and Strategies," University of California Extension Program, Riverside, California, Summer 1992-93, Summer 1993-1994.

"Air Pollution Calculations," University of California Extension Program, Riverside, California, Fall 1993-94, Winter 1993-94, Fall 1994-95.

"Process Safety Management," University of California Extension Program, Riverside, California. Various years since 1992-2010.

"Process Safety Management," University of California Extension Program, Riverside, California, at SCAQMD, Spring 1993-94.

"Advanced Hazard Analysis - A Special Course for LEPCs," University of California Extension Program, Riverside, California, taught at San Diego, California, Spring 1993-1994.

"Advanced Hazardous Waste Management" University of California Extension Program, Riverside, California. 2005.

Loyola Marymount University

"Fundamentals of Air Pollution - Regulations, Controls and Engineering," Loyola Marymount University, Dept. of Civil Engineering. Various years beginning 1993.

"Air Pollution Control," Loyola Marymount University, Dept. of Civil Engineering, Fall 1994.

"Environmental Risk Assessment," Loyola Marymount University, Dept. of Civil Engineering. Various years beginning 1998.

"Hazardous Waste Remediation" Loyola Marymount University, Dept. of Civil Engineering. Various years beginning 2006.

University of Southern California

"Air Pollution Controls," University of Southern California, Dept. of Civil Engineering, Fall 1993, Fall 1994.

"Air Pollution Fundamentals," University of Southern California, Dept. of Civil Engineering, Winter 1994.

University of California, Los Angeles

"Air Pollution Fundamentals," University of California, Los Angeles, Dept. of Civil and Environmental Engineering, Spring 1994, Spring 1999, Spring 2000, Spring 2003, Spring 2006, Spring 2007, Spring 2008, Spring 2009.

International Programs

"Environmental Planning and Management," 5 week program for visiting Chinese delegation, 1994.

"Environmental Planning and Management," 1 day program for visiting Russian delegation, 1995.

"Air Pollution Planning and Management," IEP, UCR, Spring 1996.

"Environmental Issues and Air Pollution," IEP, UCR, October 1996.

PROFESSIONAL AFFILIATIONS AND HONORS

President of India Gold Medal, IIT Kharagpur, India, 1983.

Member of the Alternatives Assessment Committee of the Grand Canyon Visibility Transport Commission, established by the Clean Air Act Amendments of 1990, 1992.

American Society of Mechanical Engineers: Los Angeles Section Executive Committee, Heat Transfer Division, and Fuels and Combustion Technology Division, 1987-mid-1990s.

Air and Waste Management Association, West Coast Section, 1989-mid-2000s.

PROFESSIONAL CERTIFICATIONS

EIT, California (#XE088305), 1993.

REA I, California (#07438), 2000.

Certified Permitting Professional, South Coast AQMD (#C8320), since 1993.

QEP, Institute of Professional Environmental Practice, 2000 - 2021.

CEM, State of Nevada (#EM-1699).

PUBLICATIONS (PARTIAL LIST)

"Physical Properties and Oxidation Rates of Chars from Bituminous Coals," with Y.A. Levendis, R.C. Flagan and G.R. Gavalas, *Fuel*, **67**, 275-283 (1988).

"Char Combustion: Measurement and Analysis of Particle Temperature Histories," with R.C. Flagan, G.R. Gavalas and P.S. Northrop, *Comb. Sci. Tech.* **60**, 215-230 (1988).

"On the Combustion of Bituminous Coal Chars," PhD Thesis, California Institute of Technology (1988).

"Optical Pyrometry: A Powerful Tool for Coal Combustion Diagnostics," *J. Coal Quality*, **8**, 17-22 (1989).

"Post-Ignition Transients in the Combustion of Single Char Particles," with Y.A. Levendis, R.C. Flagan and G.R. Gavalas, *Fuel*, **68**, 849-855 (1989).

"A Model for Single Particle Combustion of Bituminous Coal Char." Proc. ASME National Heat Transfer Conference, Philadelphia, **HTD-Vol. 106**, 505-513 (1989).

"Discrete Simulation of Cenospheric Coal-Char Combustion," with R.C. Flagan and G.R. Gavalas, *Combust. Flame*, **77**, 337-346 (1989).

"Particle Measurements in Coal Combustion," with R.C. Flagan, in "**Combustion Measurements**" (ed. N. Chigier), Hemisphere Publishing Corp. (1991).

"Cross Linking in Pore Structures and Its Effect on Reactivity," with G.R. Gavalas in preparation.

"Natural Frequencies and Mode Shapes of Straight Tubes," Proprietary Report for Heat Transfer Research Institute, Alhambra, CA (1990).

"Optimal Tube Layouts for Kamui SL-Series Exchangers," with K. Ishihara, Proprietary Report for Kamui Company Limited, Tokyo, Japan (1990).

"HTRI Process Heater Conceptual Design," Proprietary Report for Heat Transfer Research Institute, Alhambra, CA (1990).

"Asymptotic Theory of Transonic Wind Tunnel Wall Interference," with N.D. Malmuth and others, Arnold Engineering Development Center, Air Force Systems Command, USAF (1990).

"Gas Radiation in a Fired Heater Convection Section," Proprietary Report for Heat Transfer Research Institute, College Station, TX (1990).

"Heat Transfer and Pressure Drop in NTIW Heat Exchangers," Proprietary Report for Heat Transfer Research Institute, College Station, TX (1991).

"NOx Control and Thermal Design," Thermal Engineering Tech Briefs, (1994).

“From Purchase of Landmark Environmental Insurance to Remediation: Case Study in Henderson, Nevada,” with Robin E. Bain and Jill Quillin, presented at the AQMA Annual Meeting, Florida, 2001.

"The Jones Act Contribution to Global Warming, Acid Rain and Toxic Air Contaminants," with Charles W. Botsford, presented at the AQMA Annual Meeting, Florida, 2001.

PRESENTATIONS (PARTIAL LIST)

"Pore Structure and Combustion Kinetics - Interpretation of Single Particle Temperature-Time Histories," with P.S. Northrop, R.C. Flagan and G.R. Gavalas, presented at the AIChE Annual Meeting, New York (1987).

"Measurement of Temperature-Time Histories of Burning Single Coal Char Particles," with R.C. Flagan, presented at the American Flame Research Committee Fall International Symposium, Pittsburgh, (1988).

"Physical Characterization of a Cenospheric Coal Char Burned at High Temperatures," with R.C. Flagan and G.R. Gavalas, presented at the Fall Meeting of the Western States Section of the Combustion Institute, Laguna Beach, California (1988).

"Control of Nitrogen Oxide Emissions in Gas Fired Heaters - The Retrofit Experience," with G. P. Croce and R. Patel, presented at the International Conference on Environmental Control of Combustion Processes (Jointly sponsored by the American Flame Research Committee and the Japan Flame Research Committee), Honolulu, Hawaii (1991).

"Air Toxics - Past, Present and the Future," presented at the Joint AIChE/AAEE Breakfast Meeting at the AIChE 1991 Annual Meeting, Los Angeles, California, November 17-22 (1991).

"Air Toxics Emissions and Risk Impacts from Automobiles Using Reformulated Gasolines," presented at the Third Annual Current Issues in Air Toxics Conference, Sacramento, California, November 9-10 (1992).

"Air Toxics from Mobile Sources," presented at the Environmental Health Sciences (ESE) Seminar Series, UCLA, Los Angeles, California, November 12, (1992).

"Kilns, Ovens, and Dryers - Present and Future," presented at the Gas Company Air Quality Permit Assistance Seminar, Industry Hills Sheraton, California, November 20, (1992).

"The Design and Implementation of Vehicle Scrapping Programs," presented at the 86th Annual Meeting of the Air and Waste Management Association, Denver, Colorado, June 12, 1993.

"Air Quality Planning and Control in Beijing, China," presented at the 87th Annual Meeting of the Air and Waste Management Association, Cincinnati, Ohio, June 19-24, 1994.

Annex A

Expert Litigation Support

A. Occasions where Dr. Sahu has provided Written or Oral testimony before Congress:

1. In July 2012, provided expert written and oral testimony to the House Subcommittee on Energy and the Environment, Committee on Science, Space, and Technology at a Hearing entitled "Hitting the Ethanol Blend Wall – Examining the Science on E15."

B. Matters for which Dr. Sahu has provided affidavits and expert reports include:

2. Affidavit for Rocky Mountain Steel Mills, Inc. located in Pueblo Colorado – dealing with the technical uncertainties associated with night-time opacity measurements in general and at this steel mini-mill.

3. Expert reports and depositions (2/28/2002 and 3/1/2002; 12/2/2003 and 12/3/2003; 5/24/2004) on behalf of the United States in connection with the Ohio Edison NSR Cases. *United States, et al. v. Ohio Edison Co., et al.*, C2-99-1181 (Southern District of Ohio).

4. Expert reports and depositions (5/23/2002 and 5/24/2002) on behalf of the United States in connection with the Illinois Power NSR Case. *United States v. Illinois Power Co., et al.*, 99-833-MJR (Southern District of Illinois).

5. Expert reports and depositions (11/25/2002 and 11/26/2002) on behalf of the United States in connection with the Duke Power NSR Case. *United States, et al. v. Duke Energy Corp.*, 1:00-CV-1262 (Middle District of North Carolina).

6. Expert reports and depositions (10/6/2004 and 10/7/2004; 7/10/2006) on behalf of the United States in connection with the American Electric Power NSR Cases. *United States, et al. v. American Electric Power Service Corp., et al.*, C2-99-1182, C2-99-1250 (Southern District of Ohio).

7. Affidavit (March 2005) on behalf of the Minnesota Center for Environmental Advocacy and others in the matter of the Application of Heron Lake BioEnergy LLC to construct and operate an ethanol production facility – submitted to the Minnesota Pollution Control Agency.

8. Expert Report and Deposition (10/31/2005 and 11/1/2005) on behalf of the United States in connection with the East Kentucky Power Cooperative NSR Case. *United States v. East Kentucky Power Cooperative, Inc*., 5:04-cv-00034-KSF (Eastern District of Kentucky).

9. Affidavits and deposition on behalf of Basic Management Inc. (BMI) Companies in connection with the BMI vs. USA remediation cost recovery Case.

10. Expert Report on behalf of Penn Future and others in the Cambria Coke plant permit challenge in Pennsylvania.

11. Expert Report on behalf of the Appalachian Center for the Economy and the Environment and others in the Western Greenbrier permit challenge in West Virginia.

12. Expert Report, deposition (via telephone on January 26, 2007) on behalf of various Montana petitioners (Citizens Awareness Network (CAN), Women's Voices for the Earth (WVE) and the Clark Fork Coalition (CFC)) in the Thompson River Cogeneration LLC Permit No. 3175-04 challenge.

13. Expert Report and deposition (2/2/07) on behalf of the Texas Clean Air Cities Coalition at the Texas State Office of Administrative Hearings (SOAH) in the matter of the permit challenges to TXU Project Apollo's eight new proposed PRB-fired PC boilers located at seven TX sites.

14. Expert Testimony (July 2007) on behalf of the Izaak Walton League of America and others in connection with the acquisition of power by Xcel Energy from the proposed Gascoyne Power Plant – at the State of Minnesota, Office of Administrative Hearings for the Minnesota PUC (MPUC No. E002/CN-06-1518; OAH No. 12-2500-17857-2).

15. Affidavit (July 2007) Comments on the Big Cajun I Draft Permit on behalf of the Sierra Club – submitted to the Louisiana DEQ.

16. Expert Report and Deposition (12/13/2007) on behalf of Commonwealth of Pennsylvania – Dept. of Environmental Protection, State of Connecticut, State of New York, and State of New Jersey (Plaintiffs) in connection with the Allegheny Energy NSR Case. *Plaintiffs v. Allegheny Energy Inc., et al.,* 2:05cv0885 (Western District of Pennsylvania).

17. Expert Reports and Pre-filed Testimony before the Utah Air Quality Board on behalf of Sierra Club in the Sevier Power Plant permit challenge.

18. Expert Report and Deposition (October 2007) on behalf of MTD Products Inc., in connection with *General Power Products, LLC v MTD Products Inc*., 1:06 CVA 0143 (Southern District of Ohio, Western Division) .

19. Expert Report and Deposition (June 2008) on behalf of Sierra Club and others in the matter of permit challenges (Title V: 28.0801-29 and PSD: 28.0803-PSD) for the Big Stone II unit, proposed to be located near Milbank, South Dakota.

20. Expert Reports, Affidavit, and Deposition (August 15, 2008) on behalf of Earthjustice in the matter of air permit challenge (CT-4631) for the Basin Electric Dry Fork station, under construction near Gillette, Wyoming before the Environmental Quality Council of the State of Wyoming.

21. Affidavits (May 2010/June 2010 in the Office of Administrative Hearings))/Declaration and Expert Report (November 2009 in the Office of Administrative Hearings) on behalf of NRDC and the Southern Environmental Law Center in the matter of the air permit challenge for Duke Cliffside Unit 6. Office of Administrative Hearing Matters 08 EHR 0771, 0835 and 0836 and 09 HER 3102, 3174, and 3176 (consolidated).

22. Declaration (August 2008), Expert Report (January 2009), and Declaration (May 2009) on behalf of Southern Alliance for Clean Energy in the matter of the air permit challenge for Duke Cliffside Unit 6. *Southern Alliance for Clean Energy et al., v. Duke Energy Carolinas, LLC*, Case No. 1:08-cv-00318-LHT-DLH (Western District of North Carolina, Asheville Division).

23. Declaration (August 2008) on behalf of the Sierra Club in the matter of Dominion Wise County plant MACT.us

24. Expert Report (June 2008) on behalf of Sierra Club for the Green Energy Resource Recovery Project, MACT Analysis.

25. Expert Report (February 2009) on behalf of Sierra Club and the Environmental Integrity Project in the matter of the air permit challenge for NRG Limestone's proposed Unit 3 in Texas.

26. Expert Report (June 2009) on behalf of MTD Products, Inc., in the matter of *Alice Holmes and Vernon Holmes v. Home Depot USA, Inc., et al.*

27. Expert Report (August 2009) on behalf of Sierra Club and the Southern Environmental Law Center in the matter of the air permit challenge for Santee Cooper's proposed Pee Dee plant in South Carolina).

28. Statements (May 2008 and September 2009) on behalf of the Minnesota Center for Environmental Advocacy to the Minnesota Pollution Control Agency in the matter of the Minnesota Haze State Implementation Plans.

29. Expert Report (August 2009) on behalf of Environmental Defense, in the matter of permit challenges to the proposed Las Brisas coal fired power plant project at the Texas State Office of Administrative Hearings (SOAH).

30. Expert Report and Rebuttal Report (September 2009) on behalf of the Sierra Club, in the matter of challenges to the proposed Medicine Bow Fuel and Power IGL plant in Cheyenne, Wyoming.

31. Expert Report (December 2009) and Rebuttal reports (May 2010 and June 2010) on behalf of the United States in connection with the Alabama Power Company NSR Case. *United States v. Alabama Power Company*, CV-01-HS-152-S (Northern District of Alabama, Southern Division).

32. Pre-filed Testimony (October 2009) on behalf of Environmental Defense and others, in the matter of challenges to the proposed White Stallion Energy Center coal fired power plant project at the Texas State Office of Administrative Hearings (SOAH).

33. Pre-filed Testimony (July 2010) and Written Rebuttal Testimony (August 2010) on behalf of the State of New Mexico Environment Department in the matter of Proposed Regulation 20.2.350 NMAC – *Greenhouse Gas Cap and Trade Provisions,* No. EIB 10-04 (R), to the State of New Mexico, Environmental Improvement Board.

34. Expert Report (August 2010) and Rebuttal Expert Report (October 2010) on behalf of the United States in connection with the Louisiana Generating NSR Case. *United States v. Louisiana Generating, LLC*, 09-CV100-RET-CN (Middle District of Louisiana) – Liability Phase.

35. Declaration (August 2010), Reply Declaration (November 2010), Expert Report (April 2011), Supplemental and Rebuttal Expert Report (July 2011) on behalf of the United States in the matter of DTE Energy Company and Detroit Edison Company (Monroe Unit 2). *United States of America v. DTE Energy Company and Detroit Edison Company*, Civil Action No. 2:10-cv-13101-BAF-RSW (Eastern District of Michigan).

36. Expert Report and Deposition (August 2010) as well as Affidavit (September 2010) on behalf of Kentucky Waterways Alliance, Sierra Club, and Valley Watch in the matter of challenges to the NPDES permit issued for the Trimble County power plant by the Kentucky Energy and Environment Cabinet to Louisville Gas and Electric, File No. DOW-41106-047.

37. Expert Report (August 2010), Rebuttal Expert Report (September 2010), Supplemental Expert Report (September 2011), and Declaration (November 2011) on behalf of Wild Earth Guardians in the matter of opacity exceedances and monitor downtime at the Public Service Company of Colorado (Xcel)'s Cherokee power plant. No. 09-cv-1862 (District of Colorado).

38. Written Direct Expert Testimony (August 2010) and Affidavit (February 2012) on behalf of Fall-Line Alliance for a Clean Environment and others in the matter of the PSD Air Permit for Plant Washington issued by Georgia DNR at the Office of State Administrative Hearing, State of Georgia (OSAH-BNR-AQ-1031707-98-WALKER).

39. Deposition (August 2010) on behalf of Environmental Defense, in the matter of the remanded permit challenge to the proposed Las Brisas coal fired power plant project at the Texas State Office of Administrative Hearings (SOAH).

40. Expert Report, Supplemental/Rebuttal Expert Report, and Declarations (October 2010, November 2010, September 2012) on behalf of New Mexico Environment Department (Plaintiff-Intervenor), Grand Canyon Trust and Sierra Club (Plaintiffs) in the matter of *Plaintiffs v. Public Service Company of New Mexico* (PNM), Civil No. 1:02-CV-0552 BB/ATC (ACE) (District of New Mexico).

41. Expert Report (October 2010) and Rebuttal Expert Report (November 2010) (BART Determinations for PSCo Hayden and CSU Martin Drake units) to the Colorado Air Quality Commission on behalf of Coalition of Environmental Organizations.

42. Expert Report (November 2010) (BART Determinations for TriState Craig Units, CSU Nixon Unit, and PRPA Rawhide Unit) to the Colorado Air Quality Commission on behalf of Coalition of Environmental Organizations.

43. Declaration (November 2010) on behalf of the Sierra Club in connection with the Martin Lake Station Units 1, 2, and 3. *Sierra Club v. Energy Future Holdings Corporation and Luminant*

Generation Company LLC, Case No. 5:10-cv-00156-DF-CMC (Eastern District of Texas, Texarkana Division).

44. Pre-Filed Testimony (January 2011) and Declaration (February 2011) to the Georgia Office of State Administrative Hearings (OSAH) in the matter of Minor Source HAPs status for the proposed Longleaf Energy Associates power plant (OSAH-BNR-AQ-1115157-60-HOWELLS) on behalf of the Friends of the Chattahoochee and the Sierra Club).

45. Declaration (February 2011) in the matter of the Draft Title V Permit for RRI Energy MidAtlantic Power Holdings LLC Shawville Generating Station (Pennsylvania), ID No. 17-00001 on behalf of the Sierra Club.

46. Expert Report (March 2011), Rebuttal Expert Report (June 2011) on behalf of the United States in *United States of America v. Cemex, Inc.*, Civil Action No. 09-cv-00019-MSK-MEH (District of Colorado).

47. Declaration (April 2011) and Expert Report (July 16, 2012) in the matter of the Lower Colorado River Authority (LCRA)'s Fayette (Sam Seymour) Power Plant on behalf of the Texas Campaign for the Environment. *Texas Campaign for the Environment v. Lower Colorado River Authority,* Civil Action No. 4:11-cv-00791 (Southern District of Texas, Houston Division).

48. Declaration (June 2011) on behalf of the Plaintiffs MYTAPN in the matter of Microsoft-Yes, Toxic Air Pollution-No (MYTAPN) v. State of Washington, Department of Ecology and Microsoft Corporation Columbia Data Center to the Pollution Control Hearings Board, State of Washington, Matter No. PCHB No. 10-162.

49. Expert Report (June 2011) on behalf of the New Hampshire Sierra Club at the State of New Hampshire Public Utilities Commission, Docket No. 10-261 – the 2010 Least Cost Integrated Resource Plan (LCIRP) submitted by the Public Service Company of New Hampshire (re. Merrimack Station Units 1 and 2).

50. Declaration (August 2011) in the matter of the Sandy Creek Energy Associates L.P. Sandy Creek Power Plant on behalf of Sierra Club and Public Citizen. *Sierra Club, Inc. and Public Citizen, Inc. v. Sandy Creek Energy Associates, L.P.,* Civil Action No. A-08-CA-648-LY (Western District of Texas, Austin Division).

51. Expert Report (October 2011) on behalf of the Defendants in the matter of *John Quiles and Jeanette Quiles et al. v. Bradford-White Corporation, MTD Products, Inc., Kohler Co., et al.,* Case No. 3:10-cv-747 (TJM/DEP) (Northern District of New York).

52. Declaration (October 2011) on behalf of the Plaintiffs in the matter of *American Nurses Association et. al. (Plaintiffs), v. US EPA (Defendant)*, Case No. 1:08-cv-02198-RMC (US District Court for the District of Columbia).

53. Declaration (February 2012) and Second Declaration (February 2012) in the matter of *Washington Environmental Council and Sierra Club Washington State Chapter v. Washington State Department of Ecology and Western States Petroleum Association,* Case No. 11-417-MJP (Western District of Washington).

54. Expert Report (March 2012) and Supplemental Expert Report (November 2013) in the matter of *Environment Texas Citizen Lobby, Inc and Sierra Club v. ExxonMobil Corporation et al.,* Civil Action No. 4:10-cv-4969 (Southern District of Texas, Houston Division).

55. Declaration (March 2012) in the matter of *Center for Biological Diversity, et al. v. United States Environmental Protection Agency,* Case No. 11-1101 (consolidated with 11-1285, 11-1328 and 11-1336) (US Court of Appeals for the District of Columbia Circuit).

56. Declaration (March 2012) in the matter of *Sierra Club v. The Kansas Department of Health and Environment*, Case No. 11-105,493-AS (Holcomb power plant) (Supreme Court of the State of Kansas).

57. Declaration (March 2012) in the matter of the Las Brisas Energy Center *Environmental Defense Fund et al., v. Texas Commission on Environmental Quality,* Cause No. D-1-GN-11-001364 (District Court of Travis County, Texas, 261st Judicial District).

58. Expert Report (April 2012), Supplemental and Rebuttal Expert Report (July 2012), and Supplemental Rebuttal Expert Report (August 2012) on behalf of the states of New Jersey and Connecticut in the matter of the Portland Power plant *State of New Jersey and State of Connecticut (Intervenor-Plaintiff) v. RRI Energy Mid-Atlantic Power Holdings et al.,* Civil Action No. 07-CV-5298 (JKG) (Eastern District of Pennsylvania).

59. Declaration (April 2012) in the matter of the EPA's EGU MATS Rule, on behalf of the Environmental Integrity Project.

60. Expert Report (August 2012) on behalf of the United States in connection with the Louisiana Generating NSR Case. *United States v. Louisiana Generating, LLC*, 09-CV100-RET-CN (Middle District of Louisiana) – Harm Phase.

61. Declaration (September 2012) in the Matter of the Application of *Energy Answers Incinerator, Inc.* for a Certificate of Public Convenience and Necessity to Construct a 120 MW Generating Facility in Baltimore City, Maryland, before the Public Service Commission of Maryland, Case No. 9199.

62. Expert Report (October 2012) on behalf of the Appellants (Robert Concilus and Leah Humes) in the matter of Robert Concilus and Leah Humes v. Commonwealth of Pennsylvania Department of Environmental Protection and Crawford Renewable Energy, before the Commonwealth of Pennsylvania Environmental Hearing Board, Docket No. 2011-167-R.

63. Expert Report (October 2012), Supplemental Expert Report (January 2013), and Affidavit (June 2013) in the matter of various Environmental Petitioners v. North Carolina DENR/DAQ and Carolinas Cement Company, before the Office of Administrative Hearings, State of North Carolina.

64. Pre-filed Testimony (October 2012) on behalf of No-Sag in the matter of the North Springfield Sustainable Energy Project before the State of Vermont, Public Service Board.

65. Pre-filed Testimony (November 2012) on behalf of Clean Wisconsin in the matter of Application of Wisconsin Public Service Corporation for Authority to Construct and Place in Operation a New Multi-Pollutant Control Technology System (ReACT) for Unit 3 of the Weston Generating Station, before the Public Service Commission of Wisconsin, Docket No. 6690-CE-197.

66. Expert Report (February 2013) on behalf of Petitioners in the matter of Credence Crematory, Cause No. 12-A-J-4538 before the Indiana Office of Environmental Adjudication.

67. Expert Report (April 2013), Rebuttal report (July 2013), and Declarations (October 2013, November 2013) on behalf of the Sierra Club in connection with the Luminant Big Brown Case. *Sierra Club v. Energy Future Holdings Corporation and Luminant Generation Company LLC*, Civil Action No. 6:12-cv-00108-WSS (Western District of Texas, Waco Division).

68. Declaration (April 2013) on behalf of Petitioners in the matter of *Sierra Club, et al., (Petitioners) v Environmental Protection Agency et al. (Respondents),* Case No., 13-1112, (Court of Appeals, District of Columbia Circuit).

69. Expert Report (May 2013) and Rebuttal Expert Report (July 2013) on behalf of the Sierra Club in connection with the Luminant Martin Lake Case. *Sierra Club v. Energy Future Holdings Corporation and Luminant Generation Company LLC*, Civil Action No. 5:10-cv-0156-MHS-CMC (Eastern District of Texas, Texarkana Division).

70. Declaration (August 2013) on behalf of A. J. Acosta Company, Inc., in the matter of *A. J. Acosta Company, Inc., v. County of San Bernardino*, Case No. CIVSS803651.

71. Comments (October 2013) on behalf of the Washington Environmental Council and the Sierra Club in the matter of the Washington State Oil Refinery RACT (for Greenhouse Gases), submitted to the Washington State Department of Ecology, the Northwest Clean Air Agency, and the Puget Sound Clean Air Agency.

72. Statement (November 2013) on behalf of various Environmental Organizations in the matter of the Boswell Energy Center (BEC) Unit 4 Environmental Retrofit Project, to the Minnesota Public Utilities Commission, Docket No. E-015/M-12-920.

73. Expert Report (December 2013) on behalf of the United States in *United States of America v. Ameren Missouri*, Civil Action No. 4:11-cv-00077-RWS (Eastern District of Missouri, Eastern Division).

74. Expert Testimony (December 2013) on behalf of the Sierra Club in the matter of Public Service Company of New Hampshire Merrimack Station Scrubber Project and Cost Recovery, Docket No. DE 11-250, to the State of New Hampshire Public Utilities Commission.

75. Expert Report (January 2014) on behalf of Baja, Inc., in *Baja, Inc., v. Automotive Testing and Development Services, Inc. et. al*, Civil Action No. 8:13-CV-02057-GRA (District of South Carolina, Anderson/Greenwood Division).

76. Declaration (March 2014) on behalf of the Center for International Environmental Law, Chesapeake Climate Action Network, Friends of the Earth, Pacific Environment, and the Sierra Club (Plaintiffs) in the matter of *Plaintiffs v. the Export-Import Bank (Ex-Im Bank) of the United States*, Civil Action No. 13-1820 RC (District Court for the District of Columbia).

77. Declaration (April 2014) on behalf of Respondent-Intervenors in the matter of *Mexichem Specialty Resins Inc., et al., (Petitioners) v Environmental Protection Agency et al.,* Case No., 12-1260 (and Consolidated Case Nos. 12-1263, 12-1265, 12-1266, and 12-1267), (Court of Appeals, District of Columbia Circuit).

78. Direct Prefiled Testimony (June 2014) on behalf of the Michigan Environmental Council and the Sierra Club in the matter of the Application of DTE Electric Company for Authority to Implement a Power Supply Cost Recovery (PSCR) Plan in its Rate Schedules for 2014 Metered Jurisdictional Sales of Electricity, Case No. U-17319 (Michigan Public Service Commission).

79. Expert Report (June 2014) on behalf of ECM Biofilms in the matter of the US Federal Trade Commission (FTC) v. ECM Biofilms (FTC Docket #9358).

80. Direct Prefiled Testimony (August 2014) on behalf of the Michigan Environmental Council and the Sierra Club in the matter of the Application of Consumers Energy Company for Authority to Implement a Power Supply Cost Recovery (PSCR) Plan in its Rate Schedules for 2014 Metered Jurisdictional Sales of Electricity, Case No. U-17317 (Michigan Public Service Commission).

81. Declaration (July 2014) on behalf of Public Health Intervenors in the matter of *EME Homer City Generation v. US EPA* (Case No. 11-1302 and consolidated cases) relating to the lifting of the stay entered by the Court on December 30, 2011 (US Court of Appeals for the District of Columbia).

82. Expert Report (September 2014), Rebuttal Expert Report (December 2014) and Supplemental Expert Report (March 2015) on behalf of Plaintiffs in the matter of *Sierra Club and Montana Environmental Information Center (Plaintiffs) v. PPL Montana LLC, Avista Corporation, Puget Sound Energy, Portland General Electric Company, Northwestern Corporation, and Pacificorp (Defendants)*, Civil Action No. CV 13-32-BLG-DLC-JCL (US District Court for the District of Montana, Billings Division).

83. Expert Report (November 2014) on behalf of Niagara County, the Town of Lewiston, and the Villages of Lewiston and Youngstown in the matter of CWM Chemical Services, LLC New York State Department of Environmental Conservation (NYSDEC) Permit Application Nos.: 9-2934-00022/00225, 9-2934-00022/00231, 9-2934-00022/00232, and 9-2934-00022/00249 (pending).

84. *Declaration (January 2015) relating to Startup/Shutdown in the MATS Rule (EPA Docket ID No. EPA-HQ-OAR-2009-0234) on behalf of the Environmental Integrity Project.*

85. Pre-filed Direct Testimony (March 2015), Supplemental Testimony (May 2015), and Surrebuttal Testimony (December 2015) on behalf of Friends of the Columbia Gorge in the matter of the Application for a Site Certificate for the Troutdale Energy Center before the Oregon Energy Facility Siting Council.

86. Brief of Amici Curiae Experts in Air Pollution Control and Air Quality Regulation in Support of the Respondents, On Writs of Certiorari to the US Court of Appeals for the District of Columbia, No. 14-46, 47, 48. *Michigan et. al., (Petitioners) v. EPA et. al., Utility Air Regulatory Group (Petitioners) v. EPA et. al., National Mining Association et. al., (Petitioner) v. EPA et. al.,* (Supreme Court of the United States).

87. Expert Report (March 2015) and Rebuttal Expert Report (January 2016) on behalf of Plaintiffs in the matter of *Conservation Law Foundation v. Broadrock Gas Services LLC, Rhode Island LFG GENCO LLC, and Rhode Island Resource Recovery Corporation (Defendants)*, Civil Action No. 1:13-cv-00777-M-PAS (US District Court for the District of Rhode Island).

88. Declaration (April 2015) relating to various Technical Corrections for the MATS Rule (EPA Docket ID No. EPA-HQ-OAR-2009-0234) on behalf of the Environmental Integrity Project.

89. Direct Prefiled Testimony (May 2015) on behalf of the Michigan Environmental Council, the Natural Resources Defense Council, and the Sierra Club in the matter of the Application of DTE Electric Company for Authority to Increase its Rates, Amend its Rate Schedules and Rules Governing the Distribution and Supply of Electric Energy and for Miscellaneous Accounting Authority, Case No. U-17767 (Michigan Public Service Commission).

90. Expert Report (July 2015) and Rebuttal Expert Report (July 2015) on behalf of Plaintiffs in the matter of *Northwest Environmental Defense Center et. al., v. Cascade Kelly Holdings LLC, d/b/a Columbia Pacific Bio-Refinery, and Global Partners LP (Defendants)*, Civil Action No. 3:14-cv-01059-SI (US District Court for the District of Oregon, Portland Division).

91. Declaration (August 2015, Docket No. 1570376) in support of "Opposition of Respondent-Intervenors American Lung Association, et. al., to Tri-State Generation's Emergency Motion;" Declaration (September 2015, Docket No. 1574820) in support of "Joint Motion of the State, Local Government, and Public Health Respondent-Intervenors for Remand Without Vacatur;" Declaration (October 2015) in support of "Joint Motion of the State, Local Government, and Public Health Respondent-Intervenors to State and Certain Industry Petitioners' Motion to Govern, *White Stallion Energy Center, LLC v. US EPA*, Case No. 12-1100 (US Court of Appeals for the District of Columbia).

92. Declaration (September 2015) in support of the Draft Title V Permit for Dickerson Generating Station (Proposed Permit No 24-031-0019) on behalf of the Environmental Integrity Project.

93. Expert Report (Liability Phase) (December 2015) and Rebuttal Expert Report (February 2016) on behalf of Plaintiffs in the matter of *Natural Resources Defense Council, Inc., Sierra Club, Inc., Environmental Law and Policy Center, and Respiratory Health Association v. Illinois Power Resources LLC, and Illinois Power Resources Generating LLC (Defendants)*, Civil Action No. 1:13-cv-01181 (US District Court for the Central District of Illinois, Peoria Division).

94. Declaration (December 2015) in support of the Petition to Object to the Title V Permit for Morgantown Generating Station (Proposed Permit No 24-017-0014) on behalf of the Environmental Integrity Project.

95. Expert Report (November 2015) on behalf of Appellants in the matter of *Sierra Club, et al. v. Craig W. Butler, Director of Ohio Environmental Protection Agency et al.,* ERAC Case No. 14-256814.

96. Affidavit (January 2016) on behalf of Bridgewatch Detroit in the matter of *Bridgewatch Detroit v. Waterfront Petroleum Terminal Co., and Waterfront Terminal Holdings, LLC.*, in the Circuit Court for the County of Wayne, State of Michigan.

97. Expert Report (February 2016) and Rebuttal Expert Report (July 2016) on behalf of the challengers in the matter of the Delaware Riverkeeper Network, Clean Air Council, et. al., vs. Commonwealth of Pennsylvania Department of Environmental Protection and R. E. Gas Development LLC regarding the Geyer well site before the Pennsylvania Environmental Hearing Board.

98. Direct Testimony (May 2016) in the matter of Tesoro Savage LLC Vancouver Energy Distribution Terminal, Case No. 15-001 before the State of Washington Energy Facility Site Evaluation Council.

99. Declaration (June 2016) relating to deficiencies in air quality analysis for the proposed Millenium Bulk Terminal, Port of Longview, Washington.

100. Declaration (December 2016) relating to EPA's refusal to set limits on PM emissions from coal-fired power plants that reflect pollution reductions achievable with fabric filters on behalf of Environmental Integrity Project, Clean Air Council, Chesapeake Climate Action Network, Downwinders at Risk represented by Earthjustice in the matter of *ARIPPA v EPA, Case No. 15-1180.* (D.C. Circuit Court of Appeals).

101. Expert Report (January 2017) on the Environmental Impacts Analysis associated with the Huntley and Huntley Poseidon Well Pad on behalf citizens in the matter of the special exception use Zoning Hearing Board of Penn Township, Westmoreland County, Pennsylvania.

102. Expert Report (January 2017) on the Environmental Impacts Analysis associated with the Apex Energy Backus Well Pad on behalf citizens in the matter of the special exception use Zoning Hearing Board of Penn Township, Westmoreland County, Pennsylvania.

103. Expert Report (January 2017) on the Environmental Impacts Analysis associated with the Apex Energy Drakulic Well Pad on behalf citizens in the matter of the special exception use Zoning Hearing Board of Penn Township, Westmoreland County, Pennsylvania.

104. Expert Report (January 2017) on the Environmental Impacts Analysis associated with the Apex Energy Deutsch Well Pad on behalf citizens in the matter of the special exception use Zoning Hearing Board of Penn Township, Westmoreland County, Pennsylvania.

105. Affidavit (February 2017) pertaining to deficiencies water discharge compliance issues at the Wood River Refinery in the matter of *People of the State of Illinois (Plaintiff) v. Phillips 66 Company, ConocoPhillips Company, WRB Refining LP (Defendants)*, Case No. 16-CH-656, (Circuit Court for the Third Judicial Circuit, Madison County, Illinois).

106. Expert Report (March 2017) on behalf of the Plaintiff pertaining to non-degradation analysis for waste water discharges from a power plant in the matter of *Sierra Club (Plaintiff) v. Pennsylvania Department of Environmental Protection (PADEP) and Lackawanna Energy Center*, Docket No. 2016-047-L (consolidated), (Pennsylvania Environmental Hearing Board).

107. Expert Report (March 2017) on behalf of the Plaintiff pertaining to air emissions from the Heritage incinerator in East Liverpool, Ohio in the matter of *Save our County (Plaintiff) v. Heritage Thermal Services, Inc. (Defendant), Case No. 4:16-CV-1544-BYP*, (US District Court for the Northern District of Ohio, Eastern Division).

108. Rebuttal Expert Report (June 2017) on behalf of Plaintiffs in the matter of *Casey Voight and Julie Voight (Plaintiffs) v Coyote Creek Mining Company LLC (Defendant),* Civil Action No. 1:15-CV-00109 (US District Court for the District of North Dakota, Western Division).

109. Expert Affidavit (August 2017) and Penalty/Remedy Expert Affidavit (October 2017) on behalf of Plaintiff in the matter of *Wildearth Guardians (Plaintiff) v Colorado Springs Utility Board (Defendant,)* Civil Action No. 1:15-cv-00357-CMA-CBS (US District Court for the District of Colorado).

110. Expert Report (August 2017) on behalf of Appellant in the matter of *Patricia Ann Troiano (Appellant) v. Upper Burrell Township Zoning Hearing Board (Appellee)*, Court of Common Pleas of Westmoreland County, Pennsylvania, Civil Division.

111. Expert Report (October 2017), Supplemental Expert Report (October 2017), and Rebuttal Expert Report (November 2017) on behalf of Defendant in the matter of *Oakland Bulk and Oversized Terminal (Plaintiff) v City of Oakland (Defendant,)* Civil Action No. 3:16-cv-07014-VC (US District Court for the Northern District of California, San Francisco Division).

112. Declaration (December 2017) on behalf of the Environmental Integrity Project in the matter of permit issuance for ATI Flat Rolled Products Holdings, Breckenridge, PA to the Allegheny County Health Department.

113. Expert Report (Harm Phase) (January 2018), Rebuttal Expert Report (Harm Phase) (May 2018) and Supplemental Expert Report (Harm Phase) (April 2019) on behalf of Plaintiffs in the matter of *Natural Resources Defense Council, Inc., Sierra Club, Inc., and Respiratory Health Association v. Illinois Power Resources LLC, and Illinois Power Resources Generating LLC (Defendants)*, Civil Action No. 1:13-cv-01181 (US District Court for the Central District of Illinois, Peoria Division).

114. Declaration (February 2018) on behalf of the Chesapeake Bay Foundation, et. al., in the matter of the Section 126 Petition filed by the state of Maryland in *State of Maryland v. Pruitt (Defendant)*, Civil Action No. JKB-17-2939 (Consolidated with No. JKB-17-2873) (US District Court for the District of Maryland).

115. Direct Pre-filed Testimony (March 2018) on behalf of the National Parks Conservation Association (NPCA) in the matter of *NPCA v State of Washington, Department of Ecology and BP West Coast Products, LLC*, PCHB No. 17-055 (Pollution Control Hearings Board for the State of Washington.

116. Expert Affidavit (April 2018) and Second Expert Affidavit (May 2018) on behalf of Petitioners in the matter of *Coosa River Basin Initiative and Sierra Club (Petitioners) v State of Georgia Environmental Protection Division, Georgia Department of Natural Resources (Respondent) and Georgia Power Company (Intervenor/Respondent)*, Docket Nos: 1825406-BNR-WW-57-Howells and 1826761-BNR-WW-57-Howells, Office of State Administrative Hearings, State of Georgia.

117. Direct Pre-filed Testimony and Affidavit (December 2018) on behalf of Sierra Club and Texas Campaign for the Environment (Appellants) in the contested case hearing before the Texas State Office of Administrative Hearings in Docket Nos. 582-18-4846, 582-18-4847 (Application of GCGV Asset Holding, LLC for Air Quality Permit Nos. 146425/PSDTX1518 and 146459/PSDTX1520 in San Patricio County, Texas).

118. Expert Report (February 2019) on behalf of Sierra Club in the State of Florida, Division of Administrative Hearings, Case No. 18-2124EPP, Tampa Electric Company Big Bend Unit 1 Modernization Project Power Plant Siting Application No. PA79-12-A2.

119. Declaration (March 2019) on behalf of Earthjustice in the matter of comments on the renewal of the Title V Federal Operating Permit for Valero Houston refinery.

120. Expert Report (March 2019) on behalf of Plaintiffs for Class Certification in the matter of *Resendez et al v Precision Castparts Corporation* in the Circuit Court for the State of Oregon, County of Multnomah, Case No. 16cv16164.

121. Expert Report (June 2019), Affidavit (July 2019) and Rebuttal Expert Report (September 2019) on behalf of Appellants relating to the NPDES permit for the Cheswick power plant in the matter of *Three Rivers Waterkeeper and Sierra Club (Appellants) v. State of Pennsylvania Department of Environmental Protection (Appellee) and NRG Power Midwest (Permittee)*, before the Commonwealth of Pennsylvania Environmental Hearing Board, EHB Docket No. 2018-088-R.

122. Affidavit/Expert Report (August 2019) relating to the appeal of air permits issued to PTTGCA on behalf of Appellants in the matter of *Sierra Club (Appellants) v. Craig Butler, Director, et. al., Ohio EPA (Appellees)* before the State of Ohio Environmental Review Appeals Commission (ERAC), Case Nos. ERAC-19-6988 through -6991.

123. Expert Report (October 2019) relating to the appeal of air permit (Plan Approval) on behalf of Appellants in the matter of *Clean Air Council and Environmental Integrity Project (Appellants) v. Commonwealth of Pennsylvania Department of Environmental Protection and Sunoco Partners Marketing and Terminals L.P.*, before the Commonwealth of Pennsylvania Environmental Hearing Board, EHB Docket No. 2018-057-L.

124. Expert Report (December 2019), Affidavit (March 2020), Supplemental Expert Report (July 2020), and Declaration (February 2021) on behalf of Earthjustice in the matter of *Objection to the*

Issuance of PSD/NSR and Title V permits for Riverview Energy Corporation, Dale, Indiana, before the Indiana Office of Environmental Adjudication, Cause No. 19-A-J-5073.

125. Affidavit (December 2019) on behalf of Plaintiff-Intervenor (Surfrider Foundation) in the matter of *United States and the State of Indiana (Plaintiffs), Surfrider Foundation (Plaintiff-Intervenor), and City of Chicago (Plaintiff-Intervenor) v. United States Steel Corporation (Defendant),* Civil Action No. 2:18-cv-00127 (US District Court for the Northern District of Indiana, Hammond Division).

126. Declarations (January 2020, February 2020, May 2020, July 2020, and August 2020) and Pre-filed Testimony (April 2021) in support of Petitioner's Motion for Stay of PSCAA NOC Order of Approval No. 11386 in the matter of the *Puyallup Tribe of Indians v. Puget Sound Clean Air Agency (PSCAA) and Puget Sound Energy (PSE),* before the State of Washington Pollution Control Hearings Board, PCHB No. P19-088.

127. Expert Report (April 2020) on behalf of the plaintiff in the matter of Orion Engineered Carbons, GmbH (Plaintiff) vs. Evonik Operations, GmbH (formerly Evonik Degussa GmbH) (Respondent), before the German Arbitration Institute, Case No. DIS-SV-2019-00216.

128. Expert Independent Evaluation Report (June 2020) for *PacifiCorp's Decommissioning Costs Study Reports dated January 15, 2020 and March 13, 2020 relating to the closures of the Hunter, Huntington, Dave Johnston, Jim Bridger, Naughton, Wyodak, Hayden, and Colstrip (Units 3&4) plants*, prepared for the Oregon Public Utility Commission (Oregon PUC).

129. Direct Pre-filed Testimony (July 2020) on behalf of the Sierra Club in the matter of *the Application of the Ohio State University for a certificate of Environmental Compatibility and Public Need to Construct a Combined Heat and Power Facility in Franklin County, Ohio*, before the Ohio Power Siting Board, Case No. 19-1641-EL-BGN.

130. Expert Report (August 2020) and Rebuttal Expert Report (September 2020) on behalf of WildEarth Guardians (petitioners) in the matter of *the Appeals of the Air Quality Permit No. 7482-M1 Issued to 3 Bear Delaware Operating – NM LLC (EIB No. 20-21(A) and Registrations Nos. 8729, 8730, and 8733 under General Construction Permit for Oil and Gas Facilities (EIB No. 20-33 (A)*, before the State of New Mexico, Environmental Improvement Board.

131. Expert Report (July 2020) on the *Initial Economic Impact Analysis (EIA) for A Proposal To* Regulate *NOx Emissions from Natural Gas Fired Rich-Burn Natural Gas Reciprocating Internal Combustion Engines (RICE) Greater Than 100 Horsepower* prepared on behalf of Earthjustice and the National Parks Conservation Association in the matter of Regulation Number 7, Alternate Rules before the Colorado Air Quality Control Commission.

132. Expert Report (August 2020) and Supplemental Expert Report (February 2021) on the Potential Remedies to Avoid Adverse Thermal Impacts from the Merrimack Station on behalf of Plaintiffs in the matter of *Sierra Club Inc. and the* Conservation *Law Foundation (Plaintiffs) v. Granite Shore Power, LLC et. al., (Defendants)*, Civil Action No. 19-cv-216-JL (US District Court for the District of New Hampshire.)

133. Expert Report (August 2020) and Supplemental Expert Report (December 2020) on behalf of Plaintiffs in the matter of *PennEnvironment Inc., and Clean Air Council (Plaintiffs) and Allegheny County Health Department (Plaintiff-Intervenor) v. United States Steel Corporation (Defendant)*, Civil Action No. 2-19-cv-00484-MJH (US District Court for the Western District of Pennsylvania.)

134. Pre-filed Direct Testimony (October 2020) and Sur-rebuttal Testimony (November 2020) on behalf of petitioners (Ten Persons Group, including citizens, the Town of Braintree, the Town of Hingham, and the City of Quincy) in the matter of Algonquin Gas Transmission LLC, Weymouth MA, No. X266786 Air Quality Plan Approval, before the Commonwealth of Massachusetts, Department of Environmental Protection, the Office of Appeals and Dispute Resolution, OADR Docket Nos. 2019-008, 2019-009, 2019010, 2019-011, 2019-012 and 2019-013.

135. Expert Report (November 2020) on behalf of Protect PT in the matter of *Protect PT v. Commonwealth of Pennsylvania Department of Environmental Protection and Apex Energy (PA) LLC*, before the Commonwealth of Pennsylvania Environmental Hearing Board, Docket No. 2018-080-R (consolidated with 2019-101-R)(the "Drakulic Appeal").

136. Expert Report (December 2020) on behalf of Plaintiffs in the matter of *Sierra Club Inc. (Plaintiff) v. GenOn Power Midwest LP (Defendants)*, Civil Action No. 2-19-cv-01284-WSS (US District Court for the Western District of Pennsylvania.)

137. Pre-filed Testimony (January 2021) on behalf of the Plaintiffs (Shrimpers and Fishermen of the Rio Grande Valley represented by Texas RioGrande Legal Aid, Inc.) in the matter of the Appeal of Texas Commission on Environmental Quality (TCEQ) Permit Nos. 147681, PSDTX1522, GHGPSDTX172 for the Jupiter Brownsville Heavy Condensate Upgrader Facility, Cameron County, before the Texas State Office of Administrative Hearings, SOAH Docket No. 582-21-0111, TCEQ Docket No. 2020-1080-AIR.

138. Expert Reports (March 2021 and May 2021) regarding the Aries Newark LLC Sludge Processing Facility, Application No. CPB 20-74, Central Planning Board, City of Newark, New Jersey.

139. Expert Report (April 2021) for *Charles Johnson Jr. (Plaintiff) v. BP Exploration and Production Inc., et. al. (Defendant),* Civil Action No. 2:20-CV-01329 (Related to 12-968 BELO in MDL No. 2179). (US District Court for the Eastern District of Louisiana, New Orleans Division).

140. Affidavit (April 2021) for *Clayton Faerber et.al., (Plaintiff), v. BP Exploration and Production Inc., et. al. (Defendant)*, Civil Action No. 20-CV-00328 01329 (Related to 12-968 BELO in MDL No. 2179). (US District Court for the Southern District of Mississippi).

141. Expert Report (April 2021, June 2023) for *Floyd Ruffin (Plaintiff), v. BP Exploration and Production Inc., et. al. (Defendant)*, Civil Action No. 2:20-cv-00334-CJB-JCW (US District Court for the Eastern District of Louisiana, New Orleans Division).

142. Expert Report (April 2021) and Sur-Rebuttal Report (June 2021) on behalf of the Plaintiffs in the matter of *Modern Holdings, LLC, et al. (Plaintiffs) v. Corning Inc., et al. (Defendants)*, Civil Action No. 5:13-cv-00405-GFVT, (US District Court for the Eastern District of Kentucky, Central Division at Lexington).

143. Expert Report (May 2021) for *Clifford Osmer (Plaintiff) v. BP Exploration and Production Inc., et. al., (Defendants)* related to No. 18-CV-12557 (US District Court for the Eastern District of Louisiana).

144. Expert Report (May 2021) and Rebuttal Expert Report (January 2022) for *James Noel (Plaintiff) v. BP Exploration and Production Inc., et. al. (Defendant),* Civil Action No. 1:19-CV-00694-JB-MU-C (US District Court for the Southern District of Alabama, Southern Division).

145. Expert Report (June 2021) and Declarations (May 2021 and June 2021) on behalf of Plaintiffs in the matter of *Sierra Club (Plaintiff) v. Woodville Pellets, LLC (Defendant)*, Civil Action No. 9:20-cv-00178-MJT (US District Court for the Eastern District of Texas, Lufkin Division.)

146. Expert Witness Disclosure (June 2021) on behalf of the Plaintiffs in the matter of *Jay Burdick, et. al., (Plaintiffs) v. Tanoga Inc. (d/b/a Taconic) (Defendant)*, Index No. 253835, (State of New York Supreme Court, County of Rensselaer).

147. Expert Report (June 2021) on behalf of Appellants in the matter of *PennEnvironment and Earthworks (Appellants) v. Commonwealth of Pennsylvania Department of Environmental Protection (Appellee) and MarkWest Liberty Midstream and resource, LLC (Permittee)*, before the Commonwealth of Pennsylvania Environmental Hearing Board, EHB Docket No. 2020-002-R.

148. Expert Report (June 2021) for *Antonia Saavedra-Vargas (Plaintiff) v. BP Exploration and Production Inc., et. al. (Defendant)*, Civil Action No. 2:18-CV-11461 (US District Court for the Eastern District of Louisiana, New Orleans Division).

149. Affidavit (June 2021) for Lourdes Rubi in the matter of *Lourdes Rubi (Plaintiff) v. BP Exploration and Production Inc., et. al., (Defendants)*, related to 12-968 BELO in MDL No. 2179 (US District Court for the Eastern District of Louisiana, New Orleans Division).

150. Expert Report (June 2021) for *Wallace Smith (Plaintiff) v. BP Exploration and Production Inc., et. al. (Defendant)*, Civil Action No. 2:19-CV-12880 (US District Court for the Eastern District of Louisiana, New Orleans Division).

151. Declaration (July 2021) on behalf of Plaintiffs in the matter of *Stephanie Mackey and Nick Migliore, on behalf* of *themselves and all others similarly situated (Plaintiffs) v. Chemtool Inc. and Lubrizol Corporation (Defendants)*, Case No. 2021-L-0000165, State of Illinois, Circuit Court of the 17th Judicial Circuit, Winnebago County.

152. Declaration (July 2021, August 2021) on behalf of Petitioners in the matter of the Petition for a Hearing on the Merits Regarding Air Quality Permit No. 3340-RMD issued to New Mexico Terminal Services, LLC by *Mountain View Neighborhood Association et. al., (Petitioners) v. City of Albuquerque Environmental Health Department*, AQCB Petition No. 2020-1 before the Albuquerque-Bernalillo County Air Quality Control Board.

153. Expert Disclosure (September 2021) and Affidavit (May 2023) on behalf of the Plaintiffs in the matter of *State of New York, Town of Hempstead, Town of Brookhaven, Incorporated Village of Garden City and Long Island Power Authority et. al., (Plaintiffs) v. Covanta Hempstead Company et. al., (Defendants)*, Index No. 7549/2013 before the Supreme Court of the State of New York, County of Nassau.

154. Expert Report (October 2021) for *John A. Battiste (Plaintiff) v. BP Exploration and Production Inc., et. al. (Defendant),* Civil Action No. 1:21-CV-00118 (US District Court for the Southern District of Alabama, Mobile Division)

155. Declaration/Expert Report (October 2021) for *Charles K. Grasley et. al., (Plaintiffs) v. Chemtool Incorporated (Defendant)*, Case No. 2021-L-0000162 (State of Illinois, In the Circuit Court of the 17th Judicial Circuit, Winnebago County).

156. Declaration (October 2021) and Expert Report (November 2021) on behalf of the Plaintiffs in the matter of Toll Brothers, Inc., and Porter Ranch Development Company (Plaintiffs) v. Sempra Energy, Southern California Gas Company et. al., (Defendants), Southern California [Aliso Canyon] Gas Leak Cases, JCCP No.: 4861, Lead Case No.: BC674622, Superior Court of the State of California for the County of Los Angeles.

157. Expert Report (November 2021) and Declaration (September 2022) on behalf of Plaintiffs in Re: Deepwater Horizon BELO Cases, Case No. 3:19cv963-MCR-GRJ (US District Court for the Northern District of Florida, Pensacola Division).

158. Declaration (November 2021) for the *United States of America and the State of Kansas, Department of Health and Environment (Plaintiffs) v. Coffeyville Resources Refining & Marketing, LLC (Defendant)*, Civ. No. 6:04-cv-01064-JAR-KGG (US District Court for the District of Kansas).

159. Expert Report/Affidavit (December 2021) on behalf of the City of Detroit in the matter of Marathon Petroleum Company (Claimant) v. City of Detroit Building Safety Engineering and Environmental Department, BSEED Case No. MCR 2018-2525, DAH Appeal No. 21-SWA-01, before the State of Michigan, City of Detroit Department of Appeals and Hearings.

160. Expert Report (December 2021) for *John Pabst (Plaintiff) v. BP Exploration and Production Inc., et. al. (Defendant)*, Civil Action No. 21-CV-00290 (US District Court for the Eastern District of Louisiana).

161. Expert Report (December 2021) for *Audrey Annette Tillery-Perdue individually and as person representative of the estate of Eddie Lewis Perdue (Plaintiff) v. BP Exploration and Production Inc., et. al., (Defendant)*, Civil Action No. 5:19-cv-00052-MCR-GRJ (US District Court for the Northern District of Florida, Pensacola Division).

162. Expert Report (February 2022) for *Richard Dufour (Plaintiff) v. BP Exploration and Production Inc., et. al. (Defendant)*, Civil Action No. 19-cv-00591 (US District Court for the Southern District of Mississippi).

163. Expert Report (February 2022) and Rebuttal Expert Report (June 2022, in preparation) for *Kamuda (Plaintiff) v. Sterigenics U.S., LLC, et. al., (Defendant)*, Case No. 2018-L-010475 (Circuit Court of Cook County, Illinois).

164. Expert Report (February 2022) in the matter of the *Appeal Petition for Hearing on Air Quality Permit No. 8585 on behalf of Earth Care New Mexico et. al., (Petitioners) v. New Mexico Environment Department and Associated Asphalt and Materials, LLC (Applicant),* No. EIB 21-48 before the State of New Mexico Environmental Improvement Board.

165. Expert Report (March 2022), Affidavit (June 2022), Supplemental Expert Report (April 2023) in the matter of *Clean Air Council et. al., (Appellants) v. Commonwealth of Pennsylvania, Department of Environmental Protection (Appellee) and Renovo Energy Center (Permittee)* EHB Docket No. 2021-055-R before the Commonwealth of Pennsylvania Environmental Hearing Board.

166. Declaration (March 2022) in the matter of Max Midstream Texas LLC Air Quality Permit No. 162941 for the Seahawk Crude Condensate Terminal in Calhoun County Texas, TCEQ Docket No. 2022-0157-AIR, before the Texas Commission on Environmental Quality.

167. Expert Pre-filed Testimony (April 2022) in the matter of Application of TPC Group LLC for New State and PSD Air Quality Permits (various), TCEQ Docket No. 2021-1422-AIR, SOAH Docket No. 582-22-0799, Before the Texas State Office of Administrative Hearings.

168. Expert Report (April 2022) and Rebuttal Report (August 2022) for *Teresa Fornek (Plaintiff) v. Sterigenics U.S., LLC, et. al., (Defendant)*, Case No. 2018-L-010744 (Circuit Court of Cook County, Illinois.)

169. Rule 26 Disclosure (May 2022) in the matter of the *Water Works and Sewer Board of the City of Gadsden (*Plaintiff*) v. 3M Company, et. al., (Defendants)*, Civil Action No.: 31 CV-2016-900676.00 (Circuit County of Etowah County, Alabama)

170. Expert Report (June 2022) for *Heather Schumacher (Plaintiff) v. Sterigenics U.S., LLC, et. al., (Defendant)*, Case No. 2018-L-011939 (Circuit Court of Cook County, Illinois.)

171. Expert Report (June 2022), Rebuttal Reports (August 2022, September 2022) for Plaintiffs in *Phylliss Grayson et. al. (Plaintiffs), v Lockheed Martin Corporation (Defendant),* Case No. 6:20-cv-01770. (US District Court for the Middle District of Florida – Orlando Division.)

172. Expert Affidavit (July 2022) for Center for Environmental Rights in connection with the 2019 South Africa Integrated Resource Plan in *African Climate Alliance et. al. v. The Minister of Mineral Resources and Energy et. al.*, in the High Court of South Africa, Gauteng Division, Pretoria.

173. Expert Affidavit (July 2022) for Center for Environmental Rights in connection with the Limpopo Mine (Lephalale Coal Mines Ltd.) in *Earthlife Africa v. The Minister of Forestry, Fisheries and Environment et. al.*, in the High Court of South Africa, Gauteng Division, Pretoria, Case No. 9149/2022.

174. Pre-filed Testimony (July 2022) and Rebuttal Testimony (September 2020) on behalf of the Puyallup Tribe of Indians in the matter of *Washington Utilities and Transportation Commission (Complainant) v. Puget Sound Energy (Respondent)* before the Washington Utilities and Transportation Commission, Docket UE-220066 and UG-220067 (Consolidated).

175. Expert Report (September 2022) *Clean Air Council, Citizens for Pennsylvania's Future, Mountain Watershed Association (Appellants) v. Allegheny County Health Department (Appellee) and Allegheny Energy Center (*Intervenor*, Permittee),* Case No. 21-043 before the Hearing Officer of the Allegheny County Health Department.

176. Expert Affidavit (October 2022) for *Concerned Citizens of Cook County GA (Petitioner) v. Georgia Department of Natural Resources (Respondent) and Spectrum Energy Georgia, LLC (Respondent Intervenor)* before the Office of State Administrative Hearings, State of Georgia, Docket No: 2303405-OSAH-BNR-AQ-37-Barnes.

177. Expert Rebuttal Report (January 2023), Supplemental Rebuttal Expert Report (March 2023, May 2023, November 2023) for *Ann Jordan et. al., and Blake Darnell (Plaintiffs) v. Terumo BCT et. al., (Defendants)* before District Court, Jefferson County, Colorado Case Numbers: 2020CV031457, 2021CV030474 (consolidated with 2020CV031457) and 2020CV03148.

178. Expert Report (January 2023) and Rebuttal Expert Report (April 2023) for *Potomac Riverkeeper and Sierra Club (Plaintiffs) v. Virginia Electric and Power Company (Defendant)*, Civil Action No. 2:21-CV-23 (Kleeh) (US District Court for the Northern District of West Virginia, Elkins Division).

179. Affidavit (January 2023) for *Richard Dufour (Plaintiff), v. BP Exploration and Production Inc., et. al. (Defendant)*, Civil Action No. 1:19-cv-00591-HSO-BWR (Related to 12-968 BELO in MDL No. 2179). (US District Court for the Southern District of Mississippi).

180. Expert Report (January 2023) and Supplemental Expert Report (July 2023) on behalf of Plaintiffs in the matter of *Stephanie* Mackey *et. al., (Plaintiffs) v. Chemtool Inc. et. al., (Defendants) and Holian Insulation Company Inc. (Third-party Defendant)*, Case No.: 3:21-cv-50283, U.S. District Court, Northern District of Ilinois, Western Division.

181. Expert Report (February 2023) for *Vervicia Henderson, et al. (Plaintiff) v. Lockheed Martin Corporation (Defendant)*, Case No. 6:21-cv-01363, U.S. District Court, Middle District of Florida, Orlando Division.

182. Expert Report (February 2023) for *Carol Davis (Plaintiff) v. Lockheed Martin Corporation (*Defendant*)*, Case No. 6:22-cv-81-RBD-EJK, U.S. District Court, Middle District of Florida, Orlando Division.

183. Expert Report (February 2023) for Mark Letart (Plaintiff), et al. v. Union Carbide Corporation, et al. (Defendants), Case No. 2:19-cv-877, U.S. District Court, Southern District of West Virginia, Charleston Division.

184. Affidavit (March 2023) on behalf of plaintiffs in the matter of the *State of New Mexico, ex rel. Raul Torrez, Attorney General (Plaintiffs) v. Sterigenics US LLC, Sotera Health Holdings, LLC, Sotera Health LLC and Sotera Health Company (Defendants)*, Case No.: D-307-CV-2020-02629, State of New Mexico, Third Judicial District Court, County of Dona Ana

185. Pre-filed Direct Testimony (March 2023) in the matter of *Algonquin Gas Transmission LLC., on behalf of Community Residents (*Petitioners*)*, Commonwealth of Massachusetts Department of Environmental Protection, Office of Appeals and Dispute Resolution, OADR Docket Nos. 2017-011 and 012, Waterways Application License No. W16-4600, Weymouth Mass.

186. Declaration (April 2023) in the matter of Sierra Club (Plaintiff) v. Tennessee Valley Authority in the matter of the Johnsonville Aeroderivative Combustion Turbines Project, Case No.: 3:22-cv-1054, U.S>, District Court, Middle District of Tennessee, Nashville Division.

187. Expert Report (May 2023/June 2023), Affidavit (April 2023) and Declaration (July 2023) for *Ezequiel Caraballo-Pache (Plaintiff) v. BP Exploration and Production Inc., et. al. (Defendant)*, Civil Action No. 8:20-cv-00263-SCB-JSS (US District Court for the Middle District of Florida, Tampa Division).

188. Affidavit (May 2023) for *Lawrence Tucei (Plaintiff), v. BP Exploration and Production Inc., et. al. (Defendant)*, Civil Action No. 1:22-cv-00078-HSO-BWR (US District Court for the Southern District of Mississippi).

189. Expert Report (May 2023/June 2023) for *Vincent Culliver (Plaintiff), v. BP Exploration and Production Inc., et. al. (Defendant)*, Civil Action No. 3:21-cv-4942-MCR/HTC (US District Court for the Northern District of Florida).

190. Expert Report (June 2023) for *Matthew Williams (Plaintiff), v. BP Exploration and Production Inc., et. al. (Defendant)*, Civil Action No. 1:22-cv-00278-LG-BWR (US District Court for the Southern District of Mississippi).

191. Declaration (June 2023) in support of public commenters relating to the Michigan Department of Environment Great Lakes and Energy (EGLE)'s Annual Network Monitoring Plan 2024.

192. Expert Report (July 2023) and Rebuttal Expert Report (September 2023) relating to Greenhouse Gas and Energy Management (GEMM2) for Manufacturing in Colorado (September 2023) on behalf of Environmental Defense Fund.

193. Pre-filed Direct Testimony (July 2023) on behalf of Citizens for Environmental Justice in the matter of the permit Application of Valero Refining-Texas, LP for Modification to State and Prevention of Significant Deterioration Air Quality Permits No. 38754 and PSDTX324M15 before the Texas State Office of Administrative Hearings, SOAH Docket No. 582-23-14975, TCEQ Docket No. 2023-0203-AIR.

194. Declaration (August 2023) in support of comments by Environmental Defense Fund in connection with the "Good Neighbor Plan" for the 2015 Ozone National Ambient Air Quality Standards, published at 88 Fed. Reg. 36,654 (June 5, 2023) ("Final Rule"), Docket ID No. EPA-HQ-OAR-2021-0668.

195. Expert Report (August 2023) on behalf of Appellants in the matter of *PennEnvironment and Sierra Club (Appellants) v. Commonwealth of Pennsylvania, Department of Environmental Protection, (Appellee), and PPG Industries, Inc. (Permittee)*, EHB Docket No. 2022-032-B. Environmental Hearing Board, Department of Environmental Protection, State of Pennsylvania.

196. Pre-filed Testimony (September 2023) and Cross Answering Testimony (October 2023) on behalf of the Puyallup Tribe of Indians in the matter of *Washington Utilities and Transportation Commission (Complainant) v. Puget Sound Energy (Respondent)*, Docket: UG-230393. Before the Washington Utilities and Transportation Commission.

197. Expert Report (December 2023) on behalf of plaintiffs in the matter of *PennEnvironment and Sierra Club (Plaintiffs) v. PPG Industries, Inc. (Defendant).* Case No.: Civil Action Nos. 2:12-cv-00342, 2:12-cv-00527, 2:13-cv-01395, 1:13-cv-01396, 2:14cv-00229 (consolidated). U.S. District Court Western District of Pennsylvania.

C. Occasions where Dr. Sahu has provided oral testimony <u>in depositions, at trial or in similar proceedings</u> include the following:

198. Deposition on behalf of Rocky Mountain Steel Mills, Inc. located in Pueblo, Colorado – dealing with the manufacture of steel in mini-mills including methods of air pollution control and BACT in steel mini-mills and opacity issues at this steel mini-mill.

199. Trial Testimony (February 2002) on behalf of Rocky Mountain Steel Mills, Inc. in Denver District Court.

200. Trial Testimony (February 2003) on behalf of the United States in the Ohio Edison NSR Cases, *United States, et al. v. Ohio Edison Co., et al.*, C2-99-1181 (Southern District of Ohio).

201. Trial Testimony (June 2003) on behalf of the United States in the Illinois Power NSR Case, *United States v. Illinois Power Co., et al.*, 99-833-MJR (Southern District of Illinois).

202. Deposition (10/20/2005) on behalf of the United States in connection with the Cinergy NSR Case. *United States, et* al*. v. Cinergy Corp., et al.*, IP 99-1693-C-M/S (Southern District of Indiana).

203. Oral Testimony (August 2006) on behalf of the Appalachian Center for the Economy and the Environment re. the Western Greenbrier plant, WV before the West Virginia DEP.

204. Oral Testimony (May 2007) on behalf of various Montana petitioners (Citizens Awareness Network (CAN), Women's Voices for the Earth (WVE) and the Clark Fork Coalition (CFC)) re. the Thompson River Cogeneration plant before the Montana Board of Environmental Review.

205. Oral Testimony (October 2007) on behalf of the Sierra Club re. the Sevier Power Plant before the Utah Air Quality Board.

206. Oral Testimony (August 2008) on behalf of the Sierra Club and Clean Water re. Big Stone Unit II before the South Dakota Board of Minerals and the Environment.

207. Oral Testimony (February 2009) on behalf of the Sierra Club and the Southern Environmental Law Center re. Santee Cooper Pee Dee units before the South Carolina Board of Health and Environmental Control.

208. Oral Testimony (February 2009) on behalf of the Sierra Club and the Environmental Integrity Project re. NRG Limestone Unit 3 before the Texas State Office of Administrative Hearings (SOAH) Administrative Law Judges.

209. Deposition (July 2009) on behalf of MTD Products, Inc., in the matter of *Alice Holmes and Vernon Holmes v. Home Depot USA, Inc., et al*.

210. Deposition (October 2009) on behalf of Environmental Defense and others, in the matter of challenges to the proposed Coleto Creek coal fired power plant project at the Texas State Office of Administrative Hearings (SOAH).

211. Deposition (October 2009) on behalf of Environmental Defense, in the matter of permit challenges to the proposed Las Brisas coal fired power plant project at the Texas State Office of Administrative Hearings (SOAH).

212. Deposition (October 2009) on behalf of the Sierra Club, in the matter of challenges to the proposed Medicine Bow Fuel and Power IGL plant in Cheyenne, Wyoming.

213. Deposition (October 2009) on behalf of Environmental Defense and others, in the matter of challenges to the proposed Tenaska coal fired power plant project at the Texas State Office of Administrative Hearings (SOAH). (April 2010).

214. Oral Testimony (November 2009) on behalf of the Environmental Defense Fund re. the Las Brisas Energy Center before the Texas State Office of Administrative Hearings (SOAH) Administrative Law Judges.

215. Deposition (December 2009) on behalf of Environmental Defense and others, in the matter of challenges to the proposed White Stallion Energy Center coal fired power plant project at the Texas State Office of Administrative Hearings (SOAH).

216. Oral Testimony (February 2010) on behalf of the Environmental Defense Fund re. the White Stallion Energy Center before the Texas State Office of Administrative Hearings (SOAH) Administrative Law Judges.

217. Deposition (June 2010) on behalf of the United States in connection with the Alabama Power Company NSR Case. *United States v. Alabama Power Company*, CV-01-HS-152-S (Northern District of Alabama, Southern Division).

218. Trial Testimony (September 2010) on behalf of Commonwealth of Pennsylvania – Dept. of Environmental Protection, State of Connecticut, State of New York, State of Maryland, and State of New Jersey (Plaintiffs) in connection with the Allegheny Energy NSR Case in US District Court in the Western District of Pennsylvania. *Plaintiffs v. Allegheny Energy Inc., et al.,* 2:05cv0885 (Western District of Pennsylvania).

219. Oral Direct and Rebuttal Testimony (September 2010) on behalf of Fall-Line Alliance for a Clean Environment and others in the matter of the PSD Air Permit for Plant Washington issued by Georgia DNR at the Office of State Administrative Hearing, State of Georgia (OSAH-BNR-AQ-1031707-98-WALKER).

220. Oral Testimony (September 2010) on behalf of the State of New Mexico Environment Department in the matter of Proposed Regulation 20.2.350 NMAC – *Greenhouse Gas Cap and Trade Provisions,* No. EIB 10-04 (R), to the State of New Mexico, Environmental Improvement Board.

221. Oral Testimony (October 2010) on behalf of the Environmental Defense Fund re. the Las Brisas Energy Center before the Texas State Office of Administrative Hearings (SOAH) Administrative Law Judges.

222. Oral Testimony (November 2010) regarding BART for PSCo Hayden, CSU Martin Drake units before the Colorado Air Quality Commission on behalf of the Coalition of Environmental Organizations.

223. Oral Testimony (December 2010) regarding BART for TriState Craig Units, CSU Nixon Unit, and PRPA Rawhide Unit) before the Colorado Air Quality Commission on behalf of the Coalition of Environmental Organizations.

224. Deposition (December 2010) on behalf of the United States in connection with the Louisiana Generating NSR Case. *United States v. Louisiana Generating, LLC*, 09-CV100-RET-CN (Middle District of Louisiana).

225. Deposition (February 2011 and January 2012) on behalf of Wild Earth Guardians in the matter of opacity exceedances and monitor downtime at the Public Service Company of Colorado (Xcel)'s Cherokee power plant. No. 09-cv-1862 (D. Colo.).

226. Oral Testimony (February 2011) to the Georgia Office of State Administrative Hearings (OSAH) in the matter of Minor Source HAPs status for the proposed Longleaf Energy Associates power plant (OSAH-BNR-AQ-1115157-60-HOWELLS) on behalf of the Friends of the Chattahoochee and the Sierra Club).

227. Deposition (August 2011) on behalf of the United States in *United States of America v. Cemex, Inc.*, Civil Action No. 09-cv-00019-MSK-MEH (District of Colorado).

228. Deposition (July 2011) and Oral Testimony at Hearing (February 2012) on behalf of the Plaintiffs MYTAPN in the matter of Microsoft-Yes, Toxic Air Pollution-No (MYTAPN) v. State of Washington, Department of Ecology and Microsoft Corporation Columbia Data Center to the Pollution Control Hearings Board, State of Washington, Matter No. PCHB No. 10-162.

229. Oral Testimony at Hearing (March 2012) on behalf of the United States in connection with the Louisiana Generating NSR Case. *United States v. Louisiana Generating, LLC*, 09-CV100-RET-CN (Middle District of Louisiana).

230. Oral Testimony at Hearing (April 2012) on behalf of the New Hampshire Sierra Club at the State of New Hampshire Public Utilities Commission, Docket No. 10-261 – the 2010 Least Cost Integrated Resource Plan (LCIRP) submitted by the Public Service Company of New Hampshire (re. Merrimack Station Units 1 and 2).

231. Oral Testimony at Hearing (November 2012) on behalf of Clean Wisconsin in the matter of Application of Wisconsin Public Service Corporation for Authority to Construct and Place in Operation a New Multi-Pollutant Control Technology System (ReACT) for Unit 3 of the Weston Generating Station, before the Public Service Commission of Wisconsin, Docket No. 6690-CE-197.

232. Deposition (March 2013) in the matter of various Environmental Petitioners v. North Carolina DENR/DAQ and Carolinas Cement Company, before the Office of Administrative Hearings, State of North Carolina.

233. Deposition (August 2013) on behalf of the Sierra Club in connection with the Luminant Big Brown Case. *Sierra Club v. Energy Future Holdings Corporation and Luminant Generation Company LLC*, Civil Action No. 6:12-cv-00108-WSS (Western District of Texas, Waco Division).

234. Deposition (August 2013) on behalf of the Sierra Club in connection with the Luminant Martin Lake Case. *Sierra Club v. Energy Future Holdings Corporation and Luminant Generation*

Company LLC, Civil Action No. 5:10-cv-0156-MHS-CMC (Eastern District of Texas, Texarkana Division).

235. Deposition (February 2014) on behalf of the United States in *United States of America v. Ameren Missouri*, Civil Action No. 4:11-cv-00077-RWS (Eastern District of Missouri, Eastern Division).

236. Trial Testimony (February 2014) in the matter of *Environment Texas Citizen Lobby, Inc and Sierra Club v. ExxonMobil Corporation et al.,* Civil Action No. 4:10-cv-4969 (Southern District of Texas, Houston Division).

237. Trial Testimony (February 2014) on behalf of the Sierra Club in connection with the Luminant Big Brown Case. *Sierra Club v. Energy Future Holdings Corporation and Luminant Generation Company LLC*, Civil Action No. 6:12-cv-00108-WSS (Western District of Texas, Waco Division).

238. Deposition (June 2014) and Trial (August 2014) on behalf of ECM Biofilms in the matter of the *US Federal Trade Commission (FTC) v. ECM Biofilms* (FTC Docket #9358).

239. Deposition (February 2015) on behalf of Plaintiffs in the matter of *Sierra Club and Montana Environmental Information Center (Plaintiffs) v. PPL Montana LLC, Avista Corporation, Puget Sound Energy, Portland General Electric Company, Northwestern Corporation, and Pacificorp (Defendants)*, Civil Action No. CV 13-32-BLG-DLC-JCL (US District Court for the District of Montana, Billings Division).

240. Oral Testimony at Hearing (April 2015) on behalf of Niagara County, the Town of Lewiston, and the Villages of Lewiston and Youngstown in the matter of CWM Chemical Services, LLC New York State Department of Environmental Conservation (NYSDEC) Permit Application Nos.: 9-2934-00022/00225, 9-2934-00022/00231, 9-2934-00022/00232, and 9-2934-00022/00249 (pending).

241. Deposition (August 2015) on behalf of Plaintiff in the matter of *Conservation Law Foundation (Plaintiff) v. Broadrock Gas Services LLC, Rhode Island LFG GENCO LLC, and Rhode Island Resource Recovery Corporation (Defendants)*, Civil Action No. 1:13-cv-00777-M-PAS (US District Court for the District of Rhode Island).

242. Testimony at Hearing (August 2015) on behalf of the Sierra Club in the matter of *Amendments to 35 Illinois Administrative Code Parts 214, 217, and 225* before the Illinois Pollution Control Board, R15-21.

243. Deposition (May 2015) on behalf of Plaintiffs in the matter of *Northwest Environmental Defense Center et. al., (Plaintiffs) v. Cascade Kelly Holdings LLC, d/b/a Columbia Pacific Bio-Refinery, and Global Partners LP (Defendants)*, Civil Action No. 3:14-cv-01059-SI (US District Court for the District of Oregon, Portland Division).

244. Trial Testimony (October 2015) on behalf of Plaintiffs in the matter of *Northwest Environmental Defense Center et. al., (Plaintiffs) v. Cascade Kelly Holdings LLC, d/b/a Columbia Pacific Bio-Refinery, and Global Partners LP (Defendants)*, Civil Action No. 3:14-cv-01059-SI (US District Court for the District of Oregon, Portland Division).

245. Deposition (April 2016) on behalf of the Plaintiffs in *Natural Resources Defense Council, Respiratory Health Association, and Sierra Club (Plaintiffs) v. Illinois Power Resources LLC and Illinois Power Resources Generation LLC (Defendants)*, Civil Action No. 1:13-cv-01181 (Central District of Illinois, Peoria Division).

246. Trial Testimony at Hearing (July 2016) in the matter of Tesoro Savage LLC Vancouver Energy Distribution Terminal, Case No. 15-001 before the State of Washington Energy Facility Site Evaluation Council.

247. Trial Testimony (December 2016) on behalf of the challengers in the matter of the Delaware Riverkeeper Network, Clean Air Council, et. al., vs. Commonwealth of Pennsylvania Department of Environmental Protection and R. E. Gas Development LLC regarding the Geyer well site before the Pennsylvania Environmental Hearing Board.

248. Trial Testimony (July-August 2016) on behalf of the United States in *United States of America v. Ameren Missouri*, Civil Action No. 4:11-cv-00077-RWS (Eastern District of Missouri, Eastern Division).

249. Trial Testimony (January 2017) on the Environmental Impacts Analysis associated with the Huntley and Huntley Poseidon Well Pad Hearing on behalf citizens in the matter of the special exception use Zoning Hearing Board of Penn Township, Westmoreland County, Pennsylvania.

250. Trial Testimony (January 2017) on the Environmental Impacts Analysis associated with the Apex energy Backus Well Pad Hearing on behalf citizens in the matter of the special exception use Zoning Hearing Board of Penn Township, Westmoreland County, Pennsylvania.

251. Trial Testimony (January 2017) on the Environmental Impacts Analysis associated with the Apex energy Drakulic Well Pad Hearing on behalf citizens in the matter of the special exception use Zoning Hearing Board of Penn Township, Westmoreland County, Pennsylvania.

252. Trial Testimony (January 2017) on the Environmental Impacts Analysis associated with the Apex energy Deutsch Well Pad Hearing on behalf citizens in the matter of the special exception use Zoning Hearing Board of Penn Township, Westmoreland County, Pennsylvania.

253. Deposition Testimony (July 2017) on behalf of Plaintiffs in the matter of *Casey Voight and Julie Voight v Coyote Creek Mining Company LLC (Defendant)* Civil Action No. 1:15-CV-00109 (US District Court for the District of North Dakota, Western Division).

254. Deposition Testimony (November 2017) on behalf of Defendant in the matter of *Oakland Bulk and Oversized Terminal (Plaintiff) v City of Oakland (Defendant,)* Civil Action No. 3:16-cv-07014-VC (US District Court for the Northern District of California, San Francisco Division).

255. Deposition Testimony (December 2017) on behalf of Plaintiff in the matter of *Wildearth Guardians (Plaintiff) v Colorado Springs Utility Board (Defendant)* Civil Action No. 1:15-cv-00357-CMA-CBS (US District Court for the District of Colorado).

256. Deposition Testimony (January 2018) in the matter of National Parks Conservation Association (NPCA) v. State of Washington Department of Ecology and British Petroleum (BP) before the Washington Pollution Control Hearing Board, Case No. 17-055.

257. Trial Testimony (January 2018) on behalf of Defendant in the matter of *Oakland Bulk and Oversized Terminal (Plaintiff) v City of Oakland (Defendant,)* Civil Action No. 3:16-cv-07014-VC (US District Court for the Northern District of California, San Francisco Division).

258. Trial Testimony (April 2018) on behalf of the National Parks Conservation Association (NPCA) in the matter of NPCA v State of Washington, Department of Ecology and BP West Coast Products, LLC, PCHB No. 17-055 (Pollution Control Hearings Board for the State of Washington.

259. Deposition (June 2018) (harm Phase) on behalf of Plaintiffs in the matter of *Natural Resources Defense Council, Inc., Sierra Club, Inc., and Respiratory Health Association v. Illinois Power Resources LLC, and Illinois Power Resources Generating LLC (Defendants)*, Civil Action No. 1:13-cv-01181 (US District Court for the Central District of Illinois, Peoria Division).

260. Trial Testimony (July 2018) on behalf of Petitioners in the matter of *Coosa River Basin Initiative and Sierra Club (Petitioners) v State of Georgia Environmental Protection Division, Georgia Department of Natural Resources (Respondent) and Georgia Power Company (Intervenor/Respondent)*, Docket Nos: 1825406-BNR-WW-57-Howells and 1826761-BNR-WW-57-Howells, Office of State Administrative Hearings, State of Georgia.

261. Deposition (January 2019) and Trial Testimony (January 2019) on behalf of Sierra Club and Texas Campaign for the Environment (Appellants) in the contested case hearing before the Texas State Office of Administrative Hearings in Docket Nos. 582-18-4846, 582-18-4847 (Application of GCGV Asset Holding, LLC for Air Quality Permit Nos. 146425/PSDTX1518 and 146459/PSDTX1520 in San Patricio County, Texas).

262. Deposition (February 2019) and Trial Testimony (March 2019) on behalf of Sierra Club in the State of Florida, Division of Administrative Hearings, Case No. 18-2124EPP, Tampa Electric

Company Big Bend Unit 1 Modernization Project Power Plant Siting Application No. PA79-12-A2.

263. Deposition (June 2019) relating to the appeal of air permits issued to PTTGCA on behalf of Appellants in the matter of *Sierra Club (Appellants) v. Craig Butler, Director, et. al., Ohio EPA (Appellees)* before the State of Ohio Environmental Review Appeals Commission (ERAC), Case Nos. ERAC-19-6988 through -6991.

264. Deposition (September 2019) on behalf of Appellants relating to the NPDES permit for the Cheswick power plant in the matter of *Three Rivers Waterkeeper and Sierra Club (Appellants) v. State of Pennsylvania Department of Environmental Protection (Appellee) and NRG Power Midwest (Permittee)*, before the Commonwealth of Pennsylvania Environmental Hearing Board, EHB Docket No. 2018-088-R.

265. Deposition (December 2019) on behalf of the Plaintiffs in the matter of David Kovac, individually and on behalf of wrongful death class of Irene Kovac v. BP Corporation North America Inc., Circuit Court of Jackson County, Missouri (Independence), Case No. 1816-CV12417.

266. Deposition (February 2020, virtual) and testimony at Hearing (August 2020, virtual) on behalf of Earthjustice in the matter of *Objection to the Issuance of PSD/NSR and Title V permits for Riverview Energy Corporation*, Dale, Indiana, before the Indiana Office of Environmental Adjudication, Cause No. 19-A-J-5073.

267. Hearing (July 14-15, 2020, virtual) on behalf of the Sierra Club in the matter of *the Application of the Ohio State University for a certificate of Environmental Compatibility and Public Need to Construct a Combined Heat and Power Facility in Franklin County, Ohio*, before the Ohio Power Siting Board, Case No. 19-1641-EL-BGN.

268. Hearing (September 2020, virtual) on behalf of WildEarth Guardians (petitioners) in the matter of *the Appeals of the Air Quality Permit No. 7482-M1 Issued to 3 Bear Delaware* Operating *– NM LLC (EIB No. 20-21(A) and Registrations Nos. 8729, 8730, and 8733 under General Construction Permit for Oil and Gas Facilities (EIB No. 20-33 (A)*, before the State of New Mexico, Environmental Improvement Board.

269. Deposition (December 2020, March 4-5, 2021, all virtual) and Hearing (April 2021, virtual) in support of Petitioner's Motion for Stay of PSCAA NOC Order of Approval No. 11386 in the matter of the *Puyallup Tribe of Indians v. Puget Sound Clean Air Agency (PSCAA) and Puget Sound Energy (PSE),* before the State of Washington Pollution Control Hearings Board, PCHB No. P19-088.

270. Hearing (September 2020, virtual) on the *Initial Economic Impact Analysis (EIA) for A Proposal To* Regulate *NOx Emissions from Natural Gas Fired Rich-Burn Natural Gas Reciprocating Internal Combustion Engines (RICE) Greater Than 100 Horsepower* prepared on behalf of Earthjustice and the National Parks Conservation Association in the matter of Regulation Number 7, Alternate Rules before the Colorado Air Quality Control Commission.

271. Deposition (December 2020, virtual and Hearing February 2021, virtual) on behalf of the Plaintiffs (Shrimpers and Fishermen of the Rio Grande Valley represented by Texas RioGrande Legal Aid, Inc.) in the matter of the Appeal of Texas Commission on Environmental Quality (TCEQ) Permit Nos. 147681, PSDTX1522, GHGPSDTX172 for the Jupiter Brownsville Heavy Condensate Upgrader Facility, Cameron County, before the Texas State Office of Administrative Hearings, SOAH Docket No. 582-21-0111, TCEQ Docket No. 2020-1080-AIR.

272. Deposition (January 2021, virtual) on behalf of Plaintiffs in the matter of *PennEnvironment Inc., and Clean Air Council (Plaintiffs) and Allegheny County Health Department (Plaintiff-Intervenor) v. United States Steel Corporation (Defendant)*, Civil Action No. 2-19-cv-00484-MJH (US District Court for the Western District of Pennsylvania.)

273. Deposition (February 2021, virtual) on behalf of Plaintiffs in the matter of *Sierra Club Inc. (Plaintiff) v. GenOn Power Midwest LP (*Defendants*)*, Civil Action No. 2-19-cv-01284-WSS (US District Court for the Western District of Pennsylvania.)

274. Deposition (April 2021, virtual) on the Potential Remedies to Avoid Adverse Thermal Impacts from the Merrimack Station on behalf of Plaintiffs in the matter of *Sierra Club Inc. and the* Conservation *Law Foundation (Plaintiffs) v. Granite Shore Power, LLC et. al., (Defendants)*, Civil Action No. 19-cv-216-JL (US District Court for the District of New Hampshire.)

275. Deposition (June 2021, virtual) on behalf of Plaintiffs in the matter of *Sierra Club (Plaintiff) v. Woodville Pellets, LLC (Defendant)*, Civil Action No. 9:20-cv-00178-MJT (US District Court for the Eastern District of Texas, Lufkin Division).

276. Deposition (June 2021, virtual) on behalf of the Plaintiffs in the matter of *Modern Holdings, LLC, et al. (Plaintiffs) v. Corning Inc., et al. (Defendants)*, Civil Action No. 5:13-cv-00405-GFVT, (US District Court for the Eastern District of Kentucky, Central Division at Lexington).

277. Testimony (June 2021, virtual) regarding the Aries Newark LLC Sludge Processing Facility, Application No. CPB 20-74, (Central Planning Board, City of Newark, New Jersey).

278. Testimony at Hearing (October 2021) on behalf of Evraz Rocky Mountain Steel in the matter of Colorado's Proposed Revisions to Regulation 22, the Greenhouse Gas Emissions and Energy Management for the Manufacturing Sector in Colorado (GEMM Rule), before the Colorado Air Quality Control Commission.

279. Deposition (November 2021) for *Charles Johnson Jr. (Plaintiff) v. BP Exploration and Production Inc., et. al. (Defendant),* Civil Action No. 2:20-CV-01329 (Related to 12-968 BELO in MDL No. 2179). (US District Court for the Eastern District of Louisiana).

280. Testimony at Hearing (November 2021) on behalf of *National Parks Conservation Association, et. al*., in the matter of the Proposed Revisions to Colorado's Regional Haze State Implementation Plan (SIP) and Colorado Regulation 23, before the Colorado Air Quality Control Commission.

281. Deposition (December 2021) on behalf of Plaintiffs in Re: Deepwater Horizon BELO Cases, Case No. 3:19cv963-MCR-GRJ (US District Court for the Northern District of Florida, Pensacola Division).

282. Deposition (December 2021) for *James Noel (Plaintiff) v. BP Exploration and Production Inc., et. al. (Defendant),* Civil Action No. 1:19-CV-00694-JB-MU-C (US District Court for the Southern District of Alabama, Southern Division).

283. Testimony at Hearing (February 2022, virtual) in the matter of the *Appeal Petition for Hearing on Air Quality Permit No. 8585 on behalf of Earth Care New Mexico et. al., (Petitioners) v. New Mexico Environment Department and Associated Asphalt and Materials, LLC (Applicant),* No. EIB 21-48 before the State of New Mexico Environmental Improvement Board.

284. Deposition (March 2022) and Rebuttal Deposition (July 2022) for *Kamuda (Plaintiff) v. Sterigenics U.S., LLC, et. al., (Defendant)*, Case No. 2018-L-010475 (Circuit Court of Cook County, Illinois.)

285. Deposition (April 2022, virtual) in the matter of Application of TPC Group LLC for New State and PSD Air Quality Permits (various), TCEQ Docket No. 2021-1422-AIR, SOAH Docket No. 582-22-0799, Before the Texas State Office of Administrative Hearings.

286. Deposition (May 2022, virtual) in the matter of the *Water Works and Sewer Board of the City of Gadsden (Plaintiff) v. 3M Company, et. al., (*Defendants*)*, Civil Action No.: 31 CV-2016-900676.00 (Circuit County of Etowah County, Alabama)

287. Deposition (June 2022 and September 2022, both virtual) for *Teresa* Fornek *(Plaintiff) v. Sterigenics U.S., LLC, et. al., (Defendant)*, Case No. 2018-L-010744 (Circuit Court of Cook County, Illinois.)

288. Deposition (June 2022, virtual) on behalf of the Plaintiffs in the matter of Toll Brothers, Inc., and Porter Ranch Development Company (Plaintiffs) v. Sempra Energy, Southern California Gas Company et. al., (Defendants), Southern California [Aliso Canyon] Gas Leak Cases, JCCP No.: 4861, Lead Case No.: BC674622, Superior Court of the State of California for the County of Los Angeles.

289. Deposition (July 2022) for *Richard Dufour (Plaintiff) v. BP Exploration and Production Inc., et. al. (Defendant)*, Civil Action No. 19-cv-00591 (US District Court for the Southern District of Mississippi).

290. Trial (August 2022) on behalf of the Plaintiffs in the matter of Modern *Holdings, LLC, et al. (Plaintiffs) v. Phillips (Defendants)*, Civil Action No. 5:13-cv-00405-GFVT, (US District Court for the Eastern District of Kentucky, Central Division at Lexington).

291. Trial (August 2022, in person) for *Susan Kamuda (Plaintiff) v. Sterigenics U.S., LLC, et. al., (Defendant)*, Case No. 2018-L-010475 (Circuit Court of Cook County, Illinois).

292. Deposition (September 2022, virtual) for *Heather Schumacher (Plaintiff) v. Sterigenics U.S., LLC, et. al., (Defendant)*, Case No. 2018-L-010744 (Circuit Court of Cook County, Illinois.)

293. Deposition (September 2022) on behalf of Plaintiffs in *Phylliss Grayson et. al. (Plaintiffs), v Lockheed Martin Corporation (Defendant),* Case No. 6:20-cv-01770. (US District Court for the Middle District of Florida – Orlando Division.)

294. Deposition (September 2022) for *Teresa Fornek (Plaintiff) v. Sterigenics U.S., LLC, et. al., (Defendant)*, Case No. 2018-L-010475 (Circuit Court of Cook County, Illinois).

295. Hearing (October 2022) on behalf of the Puyallup Tribe of Indians in the matter of *Washington Utilities and Transportation Commission (Complainant) v. Puget Sound Energy (Respondent)* before the Washington Utilities and Transportation Commission, Docket UE-220066 and UG-220067 (Consolidated).

296. Trial (October 2022, in person) for *Teresa Fornek (Plaintiff) v. Sterigenics U.S., LLC, et. al., (Defendant)*, Case No. 2018-L-010475 (Circuit Court of Cook County, Illinois).

297. Depositions (March 2023, June 2023) for *Ann Jordan et. al., and Blake Darnell (Plaintiffs) v. Terumo BCT et. al., (Defendants)* before District Court, Jefferson County, Colorado Case Numbers: 2020CV031457, 2021CV030474 (consolidated with 2020CV031457) and 2020CV03148.

298. Depositions (March 2023, April 2023, May 2023) for Quinn Buczek (Plaintiff) v. Sterigenics US, LLC, Sotera Health, LLC, Prologis First US Properties, LP, et. al., (Defendants) before State Court of Gwinnett County, State of Georgia, Case No. Civil Action File No. 20-C-05918-S1.

299. Deposition (May 2023) for *Potomac Riverkeeper and Sierra Club (Plaintiffs) v. Virginia Electric and Power Company (Defendant)*, Civil Action No. 2:21-CV-23 (Kleeh) (US District Court for the Northern District of West Virginia, Elkins Division).

300. Deposition (May 2023) for Mark Letart (Plaintiff), et al. v. Union Carbide Corporation, et al. (Defendants), Case No. 2:19-cv-877, U.S. District Court, Southern District of West Virginia, Charleston Division.

301. Testimony at Hearing on behalf of Evraz North America In the Matter of Colorado Air Quality Regulation Proposed Revisions to Regulation Number 3 to establish enhanced Modeling, monitoring and permitting requirements for Stationary sources in disproportionately impacted communities 5 CCR 1001-5, before the Air Quality Control Commission, State of Colorado.

302. Deposition (2023) for *Vervicia Henderson, et al. (Plaintiff) v. Lockheed Martin Corporation (Defendant)*, Case No. 6:21-cv-01363, U.S. District Court, Middle District of Florida, Orlando Division.

303. Testimony at Hearing (July 2023) *Clean Air Council, Citizens for Pennsylvania's Future, Mountain* Watershed *Association (Appellants) v. Allegheny County Health Department (Appellee) and Allegheny Energy Center (*Intervenor*, Permittee),* Case No. 21-043 before the Hearing Officer of the Allegheny County Health Department.

304. Deposition (July 2023) for *Ezequiel Caraballo-Pache (Plaintiff) v. BP Exploration and Production Inc., et. al. (Defendant)*, Civil Action No. 8:20-cv-00263-SCB-JSS (US District Court for the Middle District of Florida, Tampa Division).

305. Deposition (August 2023) for *Floyd Ruffin (Plaintiff), v. BP Exploration and Production Inc., et. al. (Defendant)*, Civil Action No. 2:20-cv-00334-CJB-JCW (US District Court for the Eastern District of Louisiana, New Orleans Division).

306. Deposition (August 2023) on behalf of petitioners in *Doreen Carey et; al., (Petitioners) v. Fulcrum Centerpoint LLC. (Permittee/Respondent) and Indiana Department of Environmental Management (Respondent)*, Permit Number 089-44042-00660, before the Indiana Office of Environmental Adjudication.

307. Deposition (August 2023) on behalf of the Plaintiff in the *Water Works and Sewer Board of the Town of Centre, Alabama v. 3M Company, et. al.*, Civil Action No.: CV-2017-900049. Circuit Court of Cherokee County, State of Georgia.

308. Deposition (August 2023) for *Matthew Williams (Plaintiff), v. BP Exploration and Production Inc., et. al. (Defendant)*, Civil Action No. 1:22-cv-00278-LG-BWR (US District Court for the Southern District of Mississippi).

309. Deposition (September 2023) for *Vincent Culliver (Plaintiff), v. BP Exploration and Production Inc., et. al. (Defendant)*, Civil Action No. 3:21-cv-4942-MCR/HTC (US District Court for the Northern District of Florida).

310. Testimony at Hearing for Greenhouse Gas and Energy Management (GEMM2) for Manufacturing in Colorado (September 2023) on behalf of Environmental Defense Fund.

311. Testimony at Hearing (October 2023) in the matter of *Algonquin Gas Transmission LLC., on behalf of Community Residents (*Petitioners*)*, Commonwealth of Massachusetts Department of Environmental Protection, Office of Appeals and Dispute Resolution, OADR Docket Nos. 2017-011 and 012, Waterways Application License No. W16-4600, Weymouth Mass.

312. Testimony at Hearing (August 2023) on behalf of Citizens for Environmental Justice in the matter of the permit Application of Valero Refining-Texas, LP for Modification to State and Prevention of Significant Deterioration Air Quality Permits No. 38754 and PSDTX324M15 before the Texas State Office of Administrative Hearings, SOAH Docket No. 582-23-14975, TCEQ Docket No. 2023-0203-AIR.

313. Testimony at Hearing (September 2023) on behalf of Appellants in the matter of *PennEnvironment and Sierra Club (Appellants) v. Commonwealth of Pennsylvania, Department of Environmental Protection, (Appellee), and PPG Industries, Inc. (Permittee)*, EHB Docket No. 2022-032-B. Environmental Hearing Board, Department of Environmental Protection, State of Pennsylvania.

314. Testimony at Hearing (November 2023) on behalf of the Puyallup Tribe of Indians in the matter of *Washington Utilities and Transportation Commission (Complainant) v. Puget Sound Energy (Respondent)*, Docket: UG-230393. Before the Washington Utilities and Transportation Commission.

Attachment F

Montana Department of
ENVIRONMENTAL QUALITY
Steve Bullock, Governor
Tracy Stone-Manning, Director
P. O. Box 200901 Helena, MT 59620-0901 (406) 444-2544 Website: www.deq.mt.gov

October 16, 2014

Eric Detmer
Spring Creek Coal, LLC
P.O. Box 67
Decker, MT 59025

Dear Mr. Detmer:

Montana Air Quality Permit #1120-012 is deemed final as of October 16, 2014, by the Department of Environmental Quality (Department). This permit is for a surface coal mine operation and associated equipment. All conditions of the Department's Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For the Department,

Julie Merkel
Air Permitting Program Supervisor
Air Resources Management Bureau
(406) 444-3626

Doug Kuenzli
Environmental Science Specialist
Air Resources Management Bureau
(406) 444-4267

JM:DCK
Enclosure

Montana Department of Environmental Quality
Permitting and Compliance Division

Montana Air Quality Permit #1120-12

Spring Creek Coal, LLC
P.O. Box 67
Decker, MT 59025

October 16, 2014

EXHIBIT I - 106

MONTANA AIR QUALITY PERMIT

Issued to: Spring Creek Coal, LLC
P.O. Box 67
Decker, MT 59025

MAQP #1120-12
Application Complete: 08/01/2014
Preliminary Determination Issued: 09/10/2014
Department's Decision Issued: 09/30/2014
Permit Final: 10/16/2014
AFS#: 003-0003

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to Spring Creek Coal, LLC (Spring Creek), pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.740, *et seq*., as amended, for the following:

Section I: Permitted Facilities

A. Plant Location

Spring Creek operates a surface coal mine located approximately 11 miles north of Decker, Montana. The mine covers portions of Sections 13, 14, 15, 21, 22, 23, 24, 25, 26, 27, 35, and 36 of Township 8 South, Range 39 East, and Sections 18, 19, 20, 27, 28, 29, 30, 31, 32, and 34 of Township 8 South, Range 40 East, and Sections 1 and 12 of Township 9 South, Range 39 East, and Sections 3, 6, 7, 10, 11, and 15 of Township 9 South, Range 40 East, in Big Horn County, Montana.

B. Current Permit Action

On September 11, 2013, Spring Creek submitted an initial application for modification of MAQP 1120-11 proposing an expansion of mining operations to increase maximum allowable coal production from the current level of 24 million tons per year to 30 million tons. The current permit action provides for the increase in coal production and incorporates a single de minimis change.

Section II: Conditions and Limitations

A. Emission Limitations

1. Maximum coal production shall be limited to 30 million tons per rolling 12-month time period (ARM 17.8.749).

2. Spring Creek shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any sources installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304, and ARM 17.8.308).

3. Spring Creek shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal an opacity in excess of the following (ARM 17.8.340 and 40 Code of Federal Regulations (CFR) 60, Subpart Y):

f. Rail Load-Outs

An ADS system shall be used to control dust during the loading of the 200-ton load-out bin. A baghouse shall be used to control dust during the loading of the 400-ton load-out bin. A combination of an ADS system and a Passive Enclosure Containment (PEC) system shall be used to control emissions from the transfer of coal onto belt conveyor #5. Telescoping chutes shall be used during railcar loading.

g. Coal Storage Barn

The 40,000-ton coal storage pile shall be completely enclosed in a storage barn. The coal storage barn stacker shall be designed to minimize the free fall distance of the coal in order to minimize the creation of coal dust.

h. Open Coal Storage Pile

An open coal stockpile not exceeding 1 acre in size may be maintained adjacent to each of the truck dumps for blending purposes.

i. Overburden and Coal Removal

Minimize fall/drop distance on all coal and overburden handling activities.

j. Coal and Overburden Blasting

Blasting shall be conducted in such a manner as to prevent overshooting and to minimize the area to be blasted.

k. Topsoil Stockpiles

Wind erosion shall be controlled by the use of temporary vegetative covers.

l. Coal and Overburden Haul Roads

Haul roads shall be graded and maintained as necessary to minimize fugitive dust emission; including the removal of loose debris and the application of chemical dust suppressants and water.

m. Access Road

The paved access road shall be maintained as necessary to minimize fugitive dust emissions; including washing, sweeping or vacuuming to remove loose material and prevention of material being tracked out from unpaved areas.

n. Wind Erosion From Disturbed Areas

Upon completion of mine activities reclamation of disturbed areas shall begin within one growing season.

Attachment G

Final
Environmental Impact Statement
For The
Spring Creek Mine TR1 Project
Big Horn County, Montana



Prepared by:

Montana Department of Environmental Quality
Coal and Opencut Mining Bureau
Helena, Montana

March 2020

Final Environmental Impact Statement
Spring Creek Mine TR1 Project

PREPARED BY

MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY

COAL AND OPENCUT MINING BUREAU

MARCH 2020

mine with the air monitoring stations. Annual PM_{10} concentrations in micrograms per cubic centimeter of air ($\mu g/m^3$) at two locations for 2011 through 2018 are shown in **Table 3.4-2**.

Table 3.4-2
PM10 Emissions Monitoring 2011 through 2018 (annual mean µg/cubic meter)

Site	2011	2012	2013	2014	2015	2016	2017	2018
A	22.6	26.2	20.7	26.9	26.6	14.1	24.2	25.1
B	23.3	26.4	19.7	26.9	27.3	13.6	24.2	26.2

The airshed around SCM is classified as Class II Prevention of Significant Deterioration area. The Northern Cheyenne Reservation is a non-federal Class I airshed (DEQ, 2018a). The reservation is located approximately 20 miles north of the SCM. Based on prevailing wind from the north-northwest, the reservation is upwind of the SCM.

Montana has 14 official nonattainment areas or areas not meeting the MAAQS (DEQ, 2018b). Of those areas, the nearest is Lame Deer, which is located 40 miles north of the SCM and is a federal nonattainment area for PM_{10}. The SCM area is located outside of the nonattainment boundary. Based on prevailing wind from the north-northwest, the SCM is downwind of the nonattainment area. Two other nonattainment areas are more than 90 miles to the northwest in Billings (carbon monoxide) and Laurel (sulfur dioxide). Each area is located upwind of the SCM and neither of the pollutants are associated with particulate matter or NO_x.

3.4.4 Direct and Secondary Impacts

3.4.4.1 No Action Alternative

Fugitive dust is controlled per SCM's MAQP #1120-12 (DEQ, 2014) and would continue to be controlled the same way under the No Action Alternative and as per ARM 17.8.308. Measures used to control fugitive dust according to the Air Pollution Control Plan (SCM, 2002) and the best available control capability that is technology practicable and economically feasible (ARM 17.8.752) requirements in MAQP #1120-12 (DEQ, 2014)) include:

- Enclosed conveyors;
- Enclosed dump pit with a dust suppression system;
- Dust suppression at the crusher operation;
- Dust suppression and collection system with a chute at the railcar loadout;
- Completely enclosed storage barn for the coal storage pile;
- Minimization of fall distances of coal and overburden when loading trucks and stockpiles;
- Prevention of overshooting when blasting;
- Vegetation to prevent wind erosion;
- Chemical dust suppression and water on haul roads along with removal of loose debris from haul roads;

Attachment H

96150 - APPENDIX A - TECHNICAL SPECIFICATIONS
INDEPENDENT QUARTERLY SURVEY OF STORAGE DOMES AND LIMESTONE COVERED STORAGE BUILDING AT JEA - NORTHSIDE GENERATING STATION

The two (2) storage domes at the JEA – Northside Station require survey work to determine quantities of petroleum coke and coal inside of the storage domes. In addition, the covered building for the storage of limestone requires survey work to determine quantity in inventory. The service for the work inside of the domes and the covered storage building can only be performed by an independent surveying company that specializes in laser scanning or similar methodlogy that can accurately quantify the volume of product stored inside of each dome and the covered storage building.

JEA will require the petroleum coke and coal stored in both domes and the limestone in the covered storage building to be surveyed once per quarter starting in December 2018 and running until September 2021 to determine quantity in storage.

The survey work should be scheduled for the following dates in order to guarantee that JEA will receive the quantity determinations prior to the month ending each quarter as follows:

- Week of December 17, 2018
- Week of March 18, 2019
- Week of June 17, 2019
- Week of September 16, 2019
- Week of December 16, 2019
- Week of March 16, 2020
- Week of June15, 2020
- Week of September 14, 2020
- Week of December 14, 2020
- Week of March 15, 2021
- Week of June 14, 2021
- Week of September 13, 2021

Geometrica

Power Generation

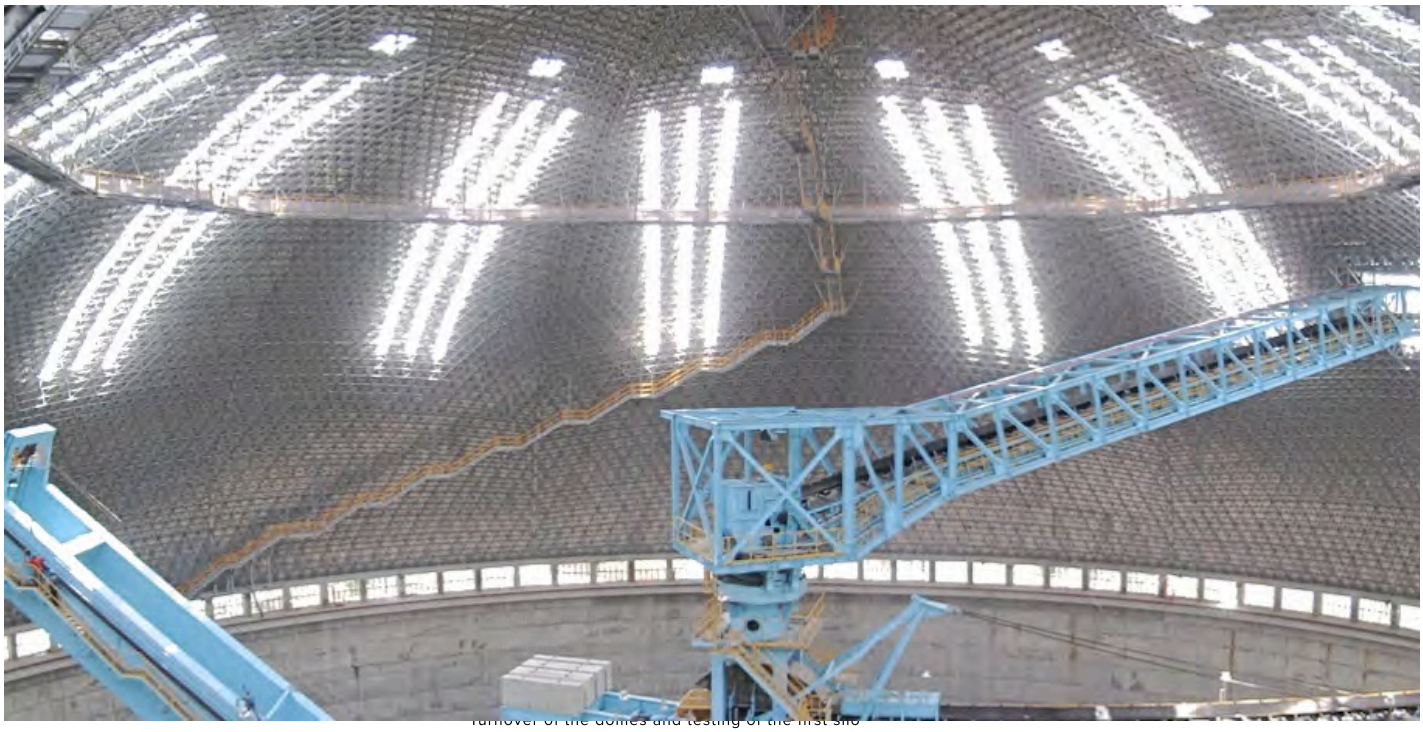
Electric power, solid fuel, waste management, sustainable energy... Geometrica is a global expert in long span applications for energy generation and power plants. In a "look back" at power generation projects, we recall storage structures in Taiwan, the UK, Qatar and Jacksonville, Florida. These applications help make the storage of coal, petcoke, biomass, compost and recyclable products a reality.

Tai Power's Four Massive Silos

Tai Power, Taiwan's state-owned Energy Company, needed a fuel storage solution at the Hsin-Ta Fossil Power Station in Kaohsiung Hsien. As a part of their expansion plans, they wanted to store fuel material under cover. The challenge was to design silos that could resist corrosive saltwater spray and typhoon winds. Gibsin Engineers LTD, a specialist company hired by TaiPower, determined that four long span concrete silos with metal dome covers would be required. Gibsin Engineers specified galvanized steel for the structure and aluminum for the cladding.

Several proponents from around the world bid for the turnkey installation of the dome covers. The team consisting of Geometrica, Inc., Triumstar International Co. Ltd. and Chien Yang Construction and Engineering Co. Ltd. (both from Taipei), were awarded the job. The long span solution consisted of four 126m diameter concrete silos with internal automated stacker/ reclaimer system. Each unit would store 180,000 t of coal in a live pile for a total of 720,000 t. Geometrica handled engineering, manufacturing and technical assistance during installation, and construction on site, which began in July, 2006.

EXHIBIT I - 115



Turnover of the domes and testing of the first silo started in October 2007, approximately 16 months after start of construction. Today the Taiwan Power Company produces electric power in a clean and safe environment for surrounding communities.

Best Designed Project in the United Kingdom

o longer a dirty word, “waste” is processed as a renewable and clean energy source in municipalities worldwide. Nearly everyone is on-board with recycling, re-using, re-purposing and reclaiming disposable items previously doomed to landfills. Communities are making a shift to sustainable energy sources through the processing of plant and animal matter, as well.

Biomass has become more manageable — and more useful — through biopower technology. The delivery, processing and storage of biomass has certainly evolved according to Francisco Castaño, president of Geometrica. He notes that aesthetics and sustainability are a double-edged positive that has entire nations looking at power sources through a new lens. Biomass can be processed, stored and distributed beneath long spans of thoughtfully designed waste management infrastructure. These types of efficient domes are exemplified in the Marchwood facility, a prime example of biomass processing and storage in the UK.

Biomass is a natural material which is broken down in the facility much like it is broken down in nature. Beneath the Marchwood “Silver Dome,” a host of biochemical conversions take place as a key to energy complete power plant that spans 110m and supplies electricity to more than 22,600 homes.

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The energy recovery project proves that social value and careful design can elevate even a waste treatment facility into a thing of beauty. The dome, designed by renowned French architect Jeanrobert Mazaud, now conceals and beautifies an incinerator facility, with only the twin chimneys stretching upward through the elegantly curved roof. The original concept, if built with conventional hot-rolled steel, called for more than 1,000 tons of superstructure. The Geometrica dome, using galvanized structural tubing joined with high-strength aluminum hubs, weighs less than 300 tons.

The Marchwood Silver Dome has become a stunning shoreside icon in the United Kingdom community of Southampton, Hampshire, which also plays host to the two great ocean liners, the Queen Elizabeth 2 and the Queen Mary. The facility is a leading example of environmental practice and quality handling of biomass, and won the 2009 Best Designed Project Award by Partnerships Bulletin (formerly Public:Private Awards). But the real prize is that nearby families are now warmed by newly generated power as an industrial jewel graces Southampton Water.



The First of its Kind in the Middle East

Word of mouth brought Geometrica into another waste-to-energy challenge. Marchwood Silver Dome contractors who had worked side by side with Geometrica shared news of a project in the Middle East — the Al Ain Municipal Solid Waste

EXHIBIT 117

Management Center (DSWMC). It was proving difficult to find a firm that could match the developer's vision of a distinctively designed facility. Because Geometrica designs some of the world's largest free span domes, this technology became a solution for a challenging architectural feat.

The plans included installation of state-of-the-art systems for separation and recovery of resources and energy from waste, including sorting, mechanical and organic recycling, and waste-to-energy composting. The goal? To have these processes work together synergistically, complementing and feeding off one another to support increased energy and material recovery from households, commercial establishments and the construction industry. The side benefit included a surplus of multiple dozens of megawatts to the national grid.

Early in the construction process, Keppels Seghers, a Singaporean engineering firm, was contracted to design, build and operate the DSWMC's Green Waste Storage Composting Plant. They sought a roof structure which processes yard and garden waste, tree cuttings, as well as food and kitchen products such as expired vegetables or peels. The material is subsequently shredded, screened and stored inside the Green Waste Storage facility. Grab-cranes then feed the material into anaerobic digesters which further break down the waste and produce biogas, which is eventually translated into a form of power generation.

To house the green waste breakdown process, Keppels Seghers required a structure that could span the large, open space of the building without internal support columns to interrupt the flow of materials and waste. Initially, Keppels Seghers designed the structure as a large steel framed roof with trusses. However, after considering the advantages of the Geometrica system, Keppels Segher opted for Freedome. "We were already aware of Geometrica's systems," said Geoffrey Piggott, the Keppels Seghers director of the Qatar facility. "But they visited us, and gave us an impressive proposal that was aesthetically attractive, cost competitive and had schedule advantages to us, as well."

The Qatar Freedome is rectangular in shape and sits on a concrete perimeter that varies in elevation. The dome is almost 20 meters tall above its support wall, is clad in with 3,384 panels of painted steel, and covers 1,923 square meters of area required to house the Green Waste storage and its various sorting and shredding machinery. According to the Qatar Green Building Council Solid Waste Interest Group, the DSWMC is the largest composting plant in the world, and Geometrica's unique structural system of offered the ideal cover for it.

The DSWMC first began operation near Mesaieed, Qatar, in October 2011. The facility treats and processes domestic solid waste for the whole of Qatar, recycling select materials and using organic waste and biomass to generate various forms of energy. More than 95% of the waste is reclaimed or converted into energy, with less than 5% of the

EXHIBIT I - 118

materials entering the facility diverted to a landfill. The facility is capable of treating up to 2,300 tons of domestic solid waste per day, and incinerates approximately 1,000 tons of other waste.



Powering Up in Florida

In a noontime ceremony that brought new meaning to the term "power lunch," government leaders, U.S. DOE officials, industry professionals, and the editors of POWER magazine declared the nation's newest clean-coal powerplant fully operational. Bob Schweiger, POWER's consulting editor, was on hand in Jacksonville, FL to present the magazine's 2002 Powerplant Award to JEA's Northside generating station.

Geometrica provided two dome structures each measuring 122m for the JEA project, which received the prestigious award for outstanding achievement in the development of a successful repowering strategy. The challenge was to convert two aging, underutilized oil/gas-fired steam plants to solid fuels by utilizing circulating fluidized-bed technology. This effort increased efficiency while reducing both emissions and the cost of electricity (see POWER, September 2002, p. 20).

Safety features were an inherent part of the award winning design and mitigation strategy. "Domes can be manufactured from steel or aluminum," says Castano. "Steel is less expensive, but aluminum is better for locations where there is high corrosivity, such as near oceans." Aluminum helps minimize the opportunity for coal dust to settle on parts of the structures, which reduces the combustible atmosphere and potential for explosions and fires related to coal and coal dust. The barrier-free interiors of both domes has minimal surfaces for dust to accumulate, and its ventilation system reduces the chance for methane build up. "Ventilation should be provided at the apex to take advantage of the chimney effect," says Castano.

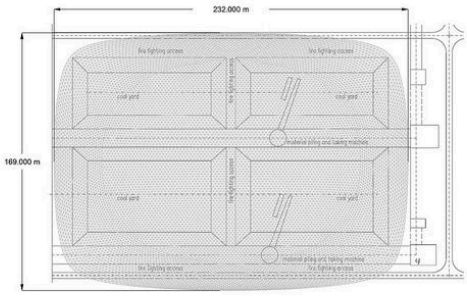
The structure should also be vented at the perimeter to reduce damage to the structure due to blast overpressures.

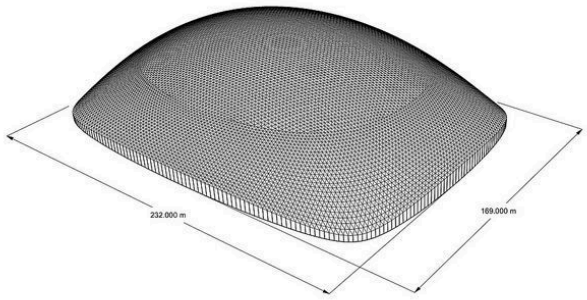


Into the Future

Existing power plants around the world store fuel in open-air stockpiles. As communities become more environmentally conscious, they are demanding that these stockpiles be covered. Up to now, such covers were beyond the practical reach of most structural systems. But not anymore. Geometrica's Freedome® technology allows coverage of free-form areas of 200 to 300m of clear span.

Often parallel coal stockpiles share stacking or reclaiming equipment, making it impossible to add supports at the middle of the stockyard. Geometrica can design domes that cover a near-rectangular plan area very efficiently, and achieve spans of well over 100m.





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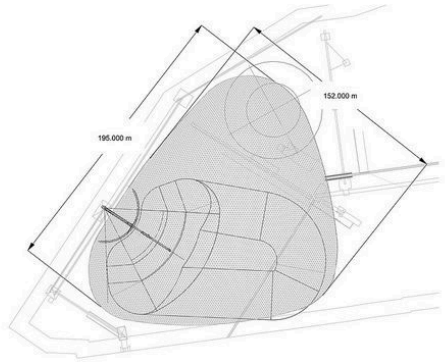
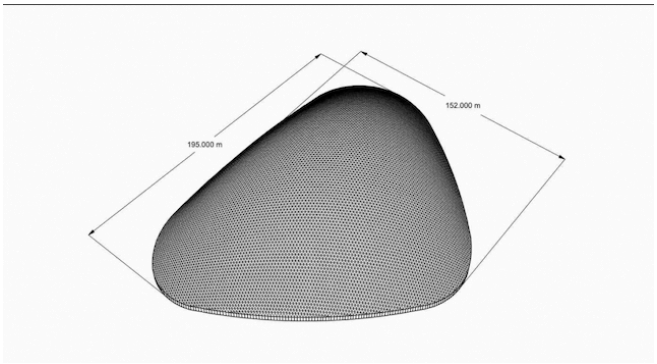
Plan View: Freedome® for twin stockpiles

Perspective View: Freedome® for twin stockpiles

In other cases, the stockpiles are formed with slewing conveyors and front-end loaders, resulting in stockyards of odd-shape and very large areas. These can also be covered with Freedome®.





Plan View: Freedome® for irregular stockpile

Perspective View: Freedome® for irregular stockpile

Freedomes are a reality. Geometrica has built dozens of large, column-free domes over free-form areas. As a recognized leader in the field, Geometrica's dome installations serve cement plants, mines, power plants, fertilizer plants, ports and other bulk handling industries in over 30 countries.

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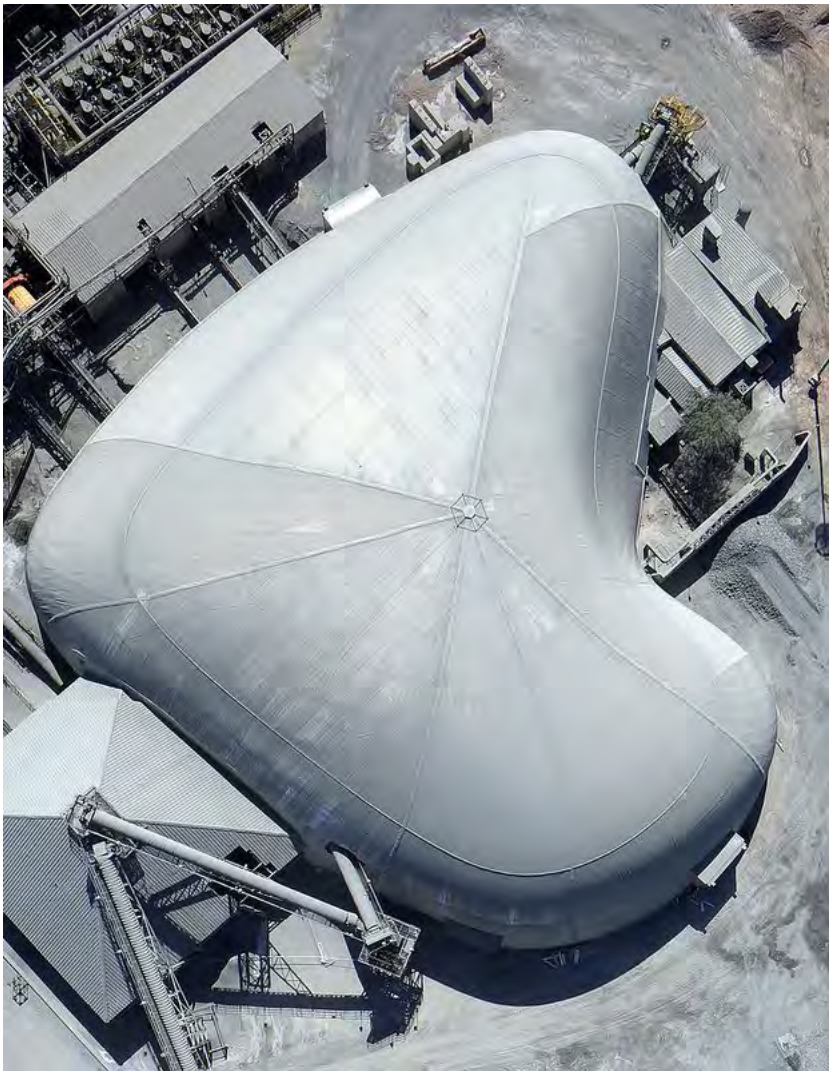

The question is, "*What can Geometrica do for you?*" Contact us for industrial and bulk storage solutions suitable for any terrain or climate by filling our inquiry form.

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On the Go... with Space Frames, Vaults and Domes

Next
Official Opening of Caserones Copper Mine in Chile

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Dome’s seamless construction yields ultimate control for coal storage

Dome’s seamless construction yields ultimate control for coal storage

Posted on March 25, 2022 by Rebecca Pyper

Product protection is a top priority for coal producers, and it’s the reason many companies embrace the dome model for their coal storage.

Better product protection was the main reason agricultural

Posted in Industrial Storage, Mining Products
Tagged bulk storage, coal reclaim, Coal Storage, dust protection, monolithic

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maintaining coal quality. The dome's seamless construction protects coal since "you don't get rain, (and) you don't pick up the other moisture from weather events," Duffy said.



The dome's capacity was also advantageous in supplying a way to achieve desired throughput from a single storage structure rather than requiring multiple silos, he said.

Dome Technology competed for the project against a company providing aluminum or steel domes. In the end ADM chose a steel-reinforced concrete dome from Dome Technology because "we were quite a bit less expensive," said Dome Technology sales manager Lane Roberts.

Managing dust inside and out was another selling point. ADM liked the dome option because it didn't have any beams for dust to collect on, Roberts said. Not only does this ensure safer operations within the dome, but it allows ADM to be a better neighbor to nearby communities. Domes contain dust and help businesses meet local regulations while fostering good relationships with the community.

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The dome was fixed with a circular stacker reclaimer that provides even filling for coal, and the greatest advantage is the ability to inventory stored product by age. Companies can better control where they're stacking and reclaiming from the pile, making it easier to draw oldest product first.

The project's success led to Dome Technology securing another ADM project in Columbus, Nebraska, USA, for a dome of similar size storing the same type of coal.

For more information about our coal solutions, visit our coal page.

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EXHIBIT I - 134

ADM Coal Storage – Clinton, Iowa

Coal Storage

Scope of Work feet

Domes	Height	Diameter	Capacity
#1200	164ft	298ft	54,600t

~6 months

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Better product protection was the main reason ADM chose a dome for its coal cogeneration plant in Clinton, Iowa.

According to ADM Clinton Cogeneration plant manager Kevin Duffy, ADM has always stored coal inside some sort of structure to manage dust, but selecting a dome from Dome Technology was an improved means of maintaining coal quality. The dome's seamless construction protects coal since "you don't get rain, (and) you don't pick up the other moisture from weather events," Duffy said.

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Dome Technology competed for the project against a company providing aluminum or steel domes. In the end ADM chose a steel-reinforced concrete dome from Dome Technology because “we were quite a bit less expensive,” said Dome Technology sales manager Lane Roberts.

Managing dust inside and out was another selling point. ADM liked the dome option because it didn’t have any beams for dust to collect on, Roberts said. Not only does this ensure safer operations within the dome, but it allows ADM to be a better neighbor to nearby communities. Domes effectively contain dust and help businesses meet local regulations while fostering good relationships with the community, said Dome Technology Vice President of Marketing Jason Miller.

The dome was fixed with a circular stacker reclaimer that provides even filling for coal. According to engineer for Dome Technology Adam Aagard, the advantage with a stacker reclaimer like this is the ability to inventory stored product by age. “You can start reclaiming the oldest product first, and you get almost first-in, first-out because you can control your inventory and where you’re stacking and reclaiming from,” he said.

The project’s success led to Dome Technology securing another ADM project in Columbus, Nebraska, for a dome of similar size storing the same type of coal.

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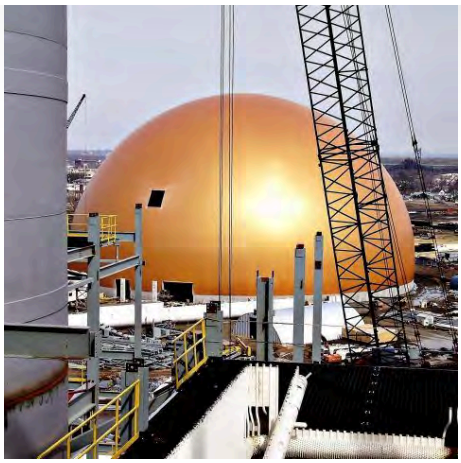



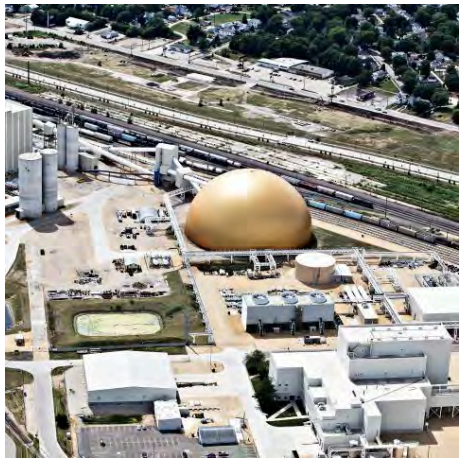

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ADM Columbus cogeneration plant – Coal bulk storage – United States

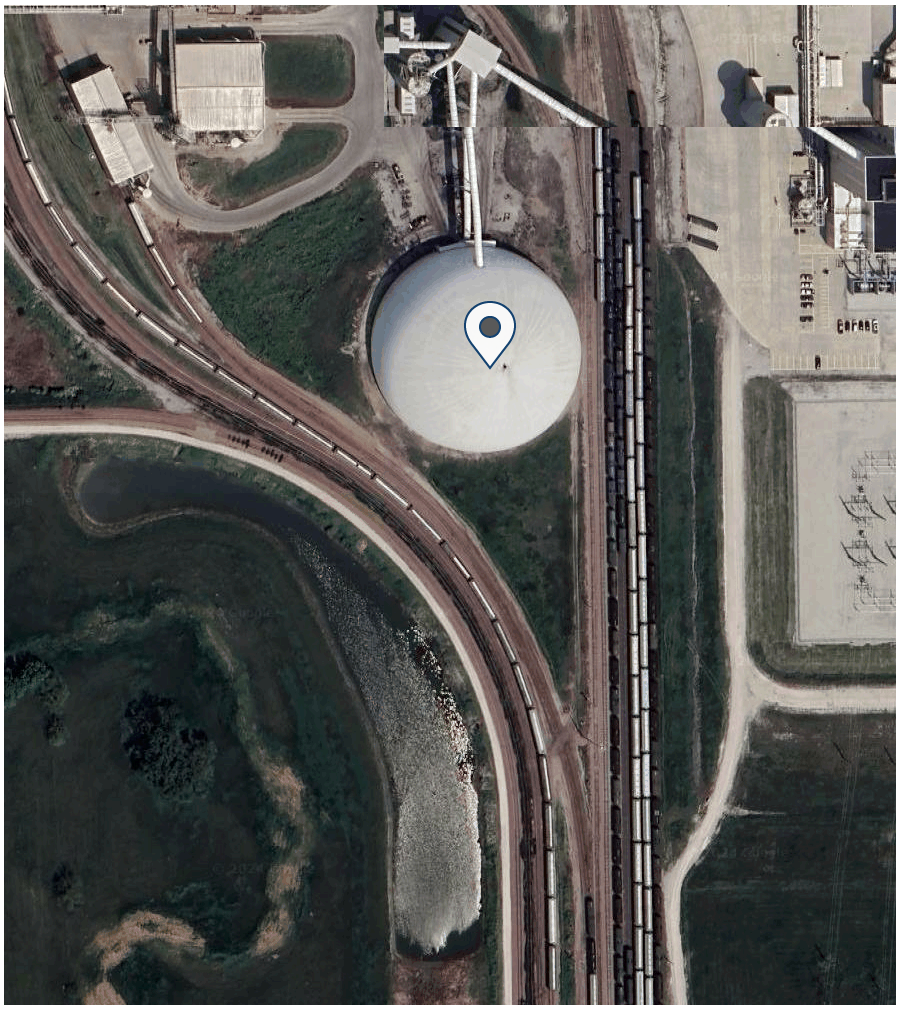
Coal Storage

Scope of Work

feet

Domes	Height	Diameter
#470	165ft	300ft





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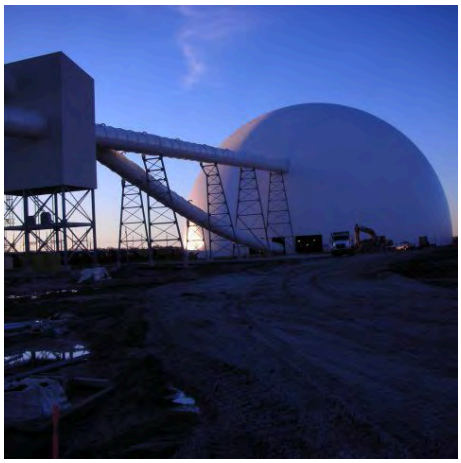

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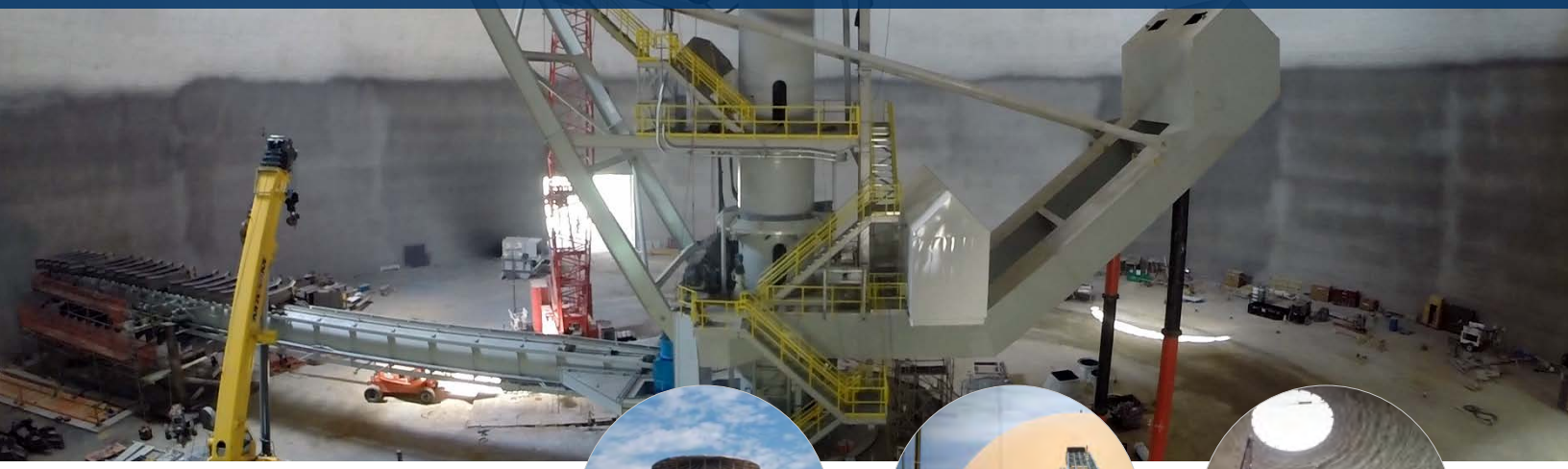
DOME TECHNOLOGY®

Coal Storage

Kemper | Kemper Country, USA



Scope of Work:

- ○ FEED Study
- ◒ Value Engineering
- ◒ Geotechnical Analysis
- ○ Material-Handling Systems Engineering
- ● Structural Engineering
- ○ Mechanical Engineering
- ○ Electrical Engineering
- ○ Procurement & Subcontract Management
- ● Dome Construction
- ○ Tunnels Construction
- ○ Material-Handling Systems Installation
- ○ Explosion Relief Installation
- ◒ Additional Steel & Concrete Construction

○ None ◒ Some ● All

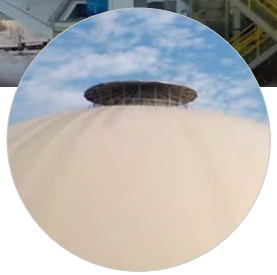
Storage & Reclaim:

1 Dome: 96m (315ft) Wide x 53m (174ft) Tall

100,000 Metric Tons, Coal

Circular Stacker Reclaim





Efficiency and operating costs decrease from an innovate opening in the top that utilizes natural ventilation.



Maximize limited land by storing more product in a single structure.



Large equipment such as a stacker reclaimer can easily be housed in the large dome.

Overview:

Dome Technology's team was contracted to build a coal-storage dome in Kemper County, Mississippi, USA, for a customer requesting natural ventilation.

To accommodate this ventilation, engineers designed a unique top for the structure. The dome was built with a large opening at the apex, and a second "roof" was built atop multiple columns covering the opening, allowing airflow in and out while protecting coal from moisture. This roofing was built with translucent panels so the dome is lit naturally as well—another customer request since employees are often inside to manage product.

By installing the open-air structure, ventilation happens naturally, reducing operation costs. "With natural ventilation, you don't have to have electrical or mechanical components to move the air—it happens naturally, so it's free," said Dome Technology CEO Bradley Bateman, who acted as the engineering project manager.

Having heard from colleagues about Dome Technology's expertise with foundations, stacker reclaimers, and construction, the customer sought Dome Technology's team for the project. Today, reclaim is made possible via a stacker reclaimer, and the dome can contain 100,000 metric tons of lignite coal. "A project of this magnitude always has its challenges, but we were able to work through them and complete the project for this customer," Bateman said.

With unique features and systems that meet customer requests, the Kemper dome is a significant Dome Technology achievement. "To deliver such an ambitious project has required a truly collaborative approach, working closely with our engineers and construction team to offer an innovative and extensive bulk-storage solution," said Brent Hardy, who acted as project manager.

Bradley Bateman, CEO at Dome Technology remarked, "For nearly four decades we've relied on a collaborative approach with companies—they're in the driver seat, and we help navigate. In every project Dome Technology incorporates innovative technology to maximize storage capacity and system performance with an economical solution."



Read more about this project at: link.dometechnology.com/6504

EXHIBIT I - 149

Attachment L

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
AIR QUALITY PROGRAM

STATE ONLY OPERATING PERMIT

Issue Date: June 18, 2019 Effective Date: June 18, 2019

Expiration Date: June 17, 2024

In accordance with the provisions of the Air Pollution Control Act, the Act of January 8, 1960, P.L. 2119, as amended, and 25 Pa. Code Chapter 127, the Owner, [and Operator if noted] (hereinafter referred to as permittee) identified below is authorized by the Department of Environmental Protection (Department) to operate the air emission source(s) more fully described in this permit. This Facility is subject to all terms and conditions specified in this permit. Nothing in this permit relieves the permittee from its obligations to comply with all applicable Federal, State and Local laws and regulations.

The regulatory or statutory authority for each permit condition is set forth in brackets. All terms and conditions in this permit are federally enforceable unless otherwise designated.

State Only Permit No: 41-00020

Federal Tax Id - Plant Code: 24-0630030-1

Owner Information

Name: KEYSTONE FILLER & MFG CO
Mailing Address: 214 RAILROAD ST
MUNCY, PA 17756-1422

Plant Information

Plant: KEYSTONE FILLER & MFG/MUNCY COAL PREP PLT
Location: 41 Lycoming County 41935 Muncy Creek Township
SIC Code: 3295 Manufacturing - Minerals, Ground Or Treated

Responsible Official

Name: DAVID W PFLEEGOR II
Title: PRES
Phone: (570) 546 - 3148

Permit Contact Person

Name: GREG OSBORNE
Title: GEN MGR
Phone: (570) 546 - 3148

[Signature] _____
MUHAMMAD Q. ZAMAN, ENVIRONMENTAL PROGRAM MANAGER, NORTHCENTRAL REGION

EXHIBIT I - 151

SECTION C. Site Level Requirements

VI. WORK PRACTICE REQUIREMENTS.

 # 021 [25 Pa. Code §123.1]

Prohibition of certain fugitive emissions

The permittee shall take all reasonable actions to prevent particulate matter from becoming airborne from any source specified in (1) through (8) in condition #001 herein. These actions shall include, but not limited to, the following:

(1) Use, where possible, of water or chemicals for control of dust in the demolition of buildings or structures, construction operations, the grading of roads or the clearing of land.
(2) Application of asphalt, oil, or suitable chemicals on dirt roads, material stockpiles and other surfaces which may give rise to airborne dusts.
(3) Paving and maintenance of roadways.
(4) Prompt removal of earth or other material from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water, or other means.

 # 022 [25 Pa. Code §127.441]

Operating permit terms and conditions.

[Additional authority for this permit condition is derived from the Consent Order & Agreement entered into on August 18, 2005, by and between the Department and Keystone Filler & Mfg. Co.]

The permittee shall take all reasonable actions to prevent carbon product dust and/or any other particulate matter from becoming airborne from the raw materials storage area identified as Area A on the plot plan contained in the Consent Order & Agreement entered into on August 18, 2005, by and between the Department and Keystone Filler & Mfg. Co. These actions shall include, but not be limited to, the use in the raw materials storage area, where possible, of asphalt, oil, water or suitable chemicals on material stockpiles and other surfaces which may give rise to airborne dusts; the paving and maintenance of the raw materials storage area; and, the prompt removal of carbon product dust and/or any other particulate matter from the raw materials storage area onto which carbon product dust and/or any other particulate matter has been transported by trucking or other transport equipment, erosion by water, or other means.

 # 023 [25 Pa. Code §127.441]

Operating permit terms and conditions.

[Additional authority for this permit condition is derived from the Consent Order & Agreement entered into on August 18, 2005, by and between the Department and Keystone Filler & Mfg. Co.]

The permittee shall immediately close the Railroad Street coal storage building overhead door after truck delivery of raw products and this door shall remain closed at all times no trucks are delivering raw products.

 # 024 [25 Pa. Code §127.441]

Operating permit terms and conditions.

[Additional authority for this permit condition is derived from the Consent Order & Agreement entered into on August 18, 2005, by and between the Department and Keystone Filler & Mfg. Co.]

The permittee shall perform in-plant carbon product dust transport using a tarped truck and/or trailer, a closed bucket loader, or other contained transport system. The trucks and/or trailers need not be tarped if the in-plant carbon product dust is sufficiently wet to prevent the emission of fugitive carbon product dust.

 # 025 [25 Pa. Code §127.441]

Operating permit terms and conditions.

[Additional authority for this permit condition is derived from the Consent Order & Agreement entered into on August 18, 2005, by and between the Department and Keystone Filler & Mfg. Co.]

In the event the air cleaning devices monitoring described in condition #010 herein reveals that the pressure differential across the air cleaning device(s) is not in compliance with good operating practices, exhaust visible emissions are present, ductwork and/or loadout visible fugitive emissions are present, or maintenance is required, both the air contamination source(s) controlled by the respective air cleaning device(s) and the air cleaning device(s) shall be immediately shutdown and appropriate corrections and/or repairs effected.

 # 026 [25 Pa. Code §127.441]

Operating permit terms and conditions.

Attachment M

APPENDIX E

NSPS Determination

Memorandum

Date: **January 14, 2022**

To: **Becky Hensley, CSX Transportation, Inc.**

From: **Chrissy Schaub, Montrose Environmental Group, Inc.**

Subject: **Curtis Bay Piers NSPS Applicability Evaluation**

A New Source Performance Standard (NSPS) applicability evaluation was performed to determine if the rebuilding and repair to a portion of the Curtis Bay Piers facility would trigger applicability to federal regulation contained within NSPS (40 CFR Part 60) and the findings of that determination are provided within this memorandum.

40 CFR Part 60 Subpart Y addresses standards of performance for coal preparation and processing plants. The Curtis Bay Piers facility does not meet the definition of a coal preparation and processing plant however, there are open storage piles and transfer and loading systems and 60.250(d) states:

The provisions in §§ 60.251, 60.252(b)(1) through (3), and (c), 60.253(b), 60.254(b) and (c), 60.255(b) through (h), 60.256(b) and (c), 60.257, and 60.258 of this subpart are applicable to any of the following affected facilities that commenced construction, reconstruction or modification after May 27, 2009: Thermal dryers, pneumatic coal-cleaning equipment (air tables), coal processing and conveying equipment (including breakers and crushers), coal storage systems, transfer and loading systems, and open storage piles.

Although the facility is not a coal preparation and processing plant it does meet the definition of transfer and loading systems and open storage piles as outlined in 60.250(d). The applicability of a coal transfer and storage facility to NSPS Subpart Y seems to be somewhat contradictory.

The applicability of a coal transfer and storage facility, such as Curtis Bay Piers, to NSPS Subpart Y has been evaluated on a similar facility. Kinder Morgan requested a determination from EPA with regards to their Hickman Bulk Terminal located in Blytheville, Arkansas. This facility receives, stores and transports coal but does not process coal. Kinder Morgan stated that this facility is merely a coal storage and transportation facility and requested a determination from EPA whether NSPS Subpart Y was applicable. In 2017, EPA determined that the Hickman Bulk Terminal facility was not an affected facility under NSPS Subpart Y since the facility did not process, i.e. break, crush, clean, dry or screen coal onsite. Therefore, based on this EPA determination, it is our opinion that Curtis Bay Piers would likewise not be considered an affected facility under NSPS Subpart Y. A copy of the EPA Applicability Determination is provided in Appendix A.

Even if Curtis Bay Piers was considered an affected facility under NSPS Subpart Y, the replacement and repair of the damaged transfer equipment, i.e. covered conveyors would have to

meet the definition of a modification or reconstruction to be subject to the NSPS Subpart Y requirements.

New Source Performance Standards (NSPS) Title 40 CFR Part 60.14 defines modification as any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies shall be considered a modification within the meaning of section 111 of the Act.

If the facility intends to do an "in-kind" replacement for the damaged transfer equipment, i.e. covered conveyors and will not increase the flow rates, belt widths, and increase potential open coal storage area, then a modification will not be triggered.

New Source Performance Standards (NSPS) Title 40 CFR Part 60.15 defines reconstruction as the replacement of components of an existing facility to such an extent that:

> (1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, and
>
> (2) It is technologically and economically feasible to meet the applicable standards set forth in this part.

The rebuilding and repairs that are anticipated at Curtis Bay Piers as a result of the incident that occurred on 12/30/2021 are anticipated to be well below 50 percent of the fixed capital cost to construct a comparable entirely new facility and thus would not meet the definition of reconstruction. The entire coal facility costs of railcar unloading and ship and barge loading operations that consists of numerous conveyors, transfer towers, feeders, and stack out tubes must be taken into account as the entire facility constitutes the emissions unit.

APPENDIX A
EPA Applicability Determination for New Source Performance Standards (NSPS) for Coal Preparation and Processing Plants (Subpart Y)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS TX 75202-2733

April 6, 2017

Arron Civera
EHS - Compliance
Kinder Morgan Terminals
2600 Thousand Oaks Boulevard
Suite 2400
Memphis, TN 38113

RE: Applicability Determination (AD) – New Source Performance Standards (NSPS) for Coal Preparation and Processing Plants (Subpart Y) – Kinder Morgan's Hickman Bulk Terminal located in Blytheville, Arkansas

Dear Mr. Civera:

This letter is in response to your request dated May 18, 2015, for our determination regarding the applicability of New Source Performance Standards (NSPS) for Coal Preparation and Processing Plants (40 CFR Part 60 Subpart Y) to Kinder Morgan's Hickman Bulk Terminal, a marine cargo handling facility located in Blytheville, Arkansas. Based upon the information provided, and as explained in this response, the United States Environmental Protection Agency (EPA) finds that NSPS Subpart Y does not apply to the Hickman Bulk Terminal.

Your letter specifies that the Hickman Bulk Terminal is a marine cargo handling facility primarily engaged in the activities of unloading scrap steel and miscellaneous alloy barges for storage and transport for its customers. The terminal also receives, stores, and transports coal and coke. All the coal received by the Hickman Bulk Terminal has already undergone processing at an off-site facility that is subject to NSPS Subpart Y. This processing most often includes crushing, drying, and screening for size. Kinder Morgan's position is that the Hickman Bulk Terminal is not a processing or preparation plant, but is merely a coal storage and transportation facility, due to the nature of the operations at the facility, specifically pertaining to whether or not the facility screens coal.

Coal is brought into the Hickman Bulk Terminal either by rail or truck and then stored inside a covered warehouse. As needed, front end loaders are used to move coal into hoppers, which feed a conveyor used to load trucks. There are three hoppers that feed a single conveyor. The grates on top of these hoppers have approximately ½ inch size openings. The maximum allowable coal size, for the two facilities the Hickman Bulk Terminal transports coal to, is ¼ inch. Therefore, the ½ inch size openings are not used as a device to actively screen the coal based on a need for a desired size, but instead serve other purposes as follows:

- There is a walkway next to the hoppers, so the grating serves a safety function in keeping any personnel from falling into the hoppers.

- There is the potential for trash and debris[1] to be present in the coal (e.g., soda cans, bolts, etc.). Debris will clog up the hopper if allowed to enter, so the grate serves the purpose of allowing removal of any debris and proper disposal in accordance with applicable regulations.

- Even though the coal has already been processed for size, there is a potential that it was not properly crushed and screened by the off-site processing facility. Therefore, oversized coal pieces greater than ½ inch, are occasionally left on top of the hopper during loading. However, these oversized coal pieces are removed and once sufficient quantity is collected, sent back to the off-site processing facility re-processing. Also, occasionally small coal pieces may clump together prior to loading for transport. These loose clumps of coal may be pushed through the grating by facility personnel. Therefore, the grate serves the purpose of helping facility personnel manage the flow of coal in loading coal product via the hoppers. However, in this case the coal is not being crushed or screened in the terms of being "processed."

The requirements of NSPS Subpart Y are applicable to the affected facilities identified in 40 CFR § 60.250 that are located in coal preparation plants that process more than 200 tons per day. A "coal preparation plant" is defined in § 60.251 as "any facility (excluding underground mining operations) which prepares coal by one or more of the following processes: breaking, crushing, screening, wet or dry cleaning, and thermal drying." The affected facilities regulated under § 60.250, are thermal dryers, pneumatic coal-cleaning equipment (air tables), coal processing and conveying equipment (including breakers and crushers), coal storage systems, and coal transfer and loading systems.

In a discussion of the 200 ton/day production threshold for coal preparation plants (i.e., the source type being regulated), the preamble to the final Subpart Y standard (41 FR 2232; January 15, 1976) states "only sources which break, crush, screen, clean, or dry large amounts of coal were intended to be covered." Therefore, affected facilities are subject to Subpart Y only if they are located in coal preparation plants which process more than 200 tons per day (TPD) by using the processes of breaking, crushing, screening, cleaning, or drying.

Based on information in the company's permit and permit application, the Hickman Bulk Terminal does store, load, and transport more than 200 TPD. However, no processing of coal that involves breaking, crushing, cleaning, or drying takes place at this facility. The question then is whether the screening that takes place at the Hickman Bulk Terminal is considered processing under this subpart.

---

[1] The "debris" described does not meet the definition of "coal refuse" at 40 CFR § 60.251.

The original Background Information Document (EPA 450/2-74-021a) for Subpart Y stated that the proposed standards would limit emissions of particulates (including visible emissions) from sources, which are the affected facilities. Included in this list is screening (classifying) equipment, which separates coal by size. In addition, EPA published a guidance document titled Inspection Manual for Enforcement of New Source Performance Standards – Coal Preparation Plants (EPA 340/1-77-022). Beginning on Page 3-12, the guidance lists five steps for coal preparation. The first step is crushing and screening, and it involves no quality improvement, merely sizing for raw shipment. Coal preparation plants generally use three types of screens—grizzly, shaker, and vibrating—that separate coal by size. The screens at the Hickman Bulk Terminal are not used for this purpose and therefore are not considered part of an affected facility. As a result, there is no affected facility as defined by Subpart Y at the Hickman Bulk Terminal.

Based on the process description provided by Kinder Morgan and after a careful review of 40 CFR §§ 60.250 and 60.251, as well as various support and guidance documents, EPA has determined that the Hickman Bulk Terminal is not an affected facility under NSPS Subpart Y at this time. There is no processing of coal that involves breaking, crushing, cleaning, or drying, and the screens used at the facility are not used to separate coal by size. Please note that this applicability determination is based on the information submitted in your request dated May 18, 2015. If new information arises, EPA reserves the right to void this determination.

EPA's Office of Quality Planning and Standards and the Office of Enforcement and Compliance Assurance were consulted in the development of this response. Should you have any further questions, please contact Raymond Magyar of my staff at (214) 665-7288 or by email at magyar.raymond@epa.gov.

Sincerely yours,

Steve Thompson
Chief, Air Enforcement Branch
Compliance Assurance and
Enforcement Division

cc: Thomas Rheume, ADEQ
Matthew Witosky, OAQPS
Patrick Yellin, OECA

Attachment N

State of Oregon
Department of
Environmental
Quality

STANDARD
AIR CONTAMINANT DISCHARGE PERMIT

Department of Environmental Quality
Eastern Region
475 NE Bellevue Dr., Suite 110
Bend, OR 97701
541-388-6146

This permit is being issued in accordance with the provisions of ORS 468A.040 and based on the land use compatibility findings included in the permit record.

ISSUED TO:

Coyote Island Terminal, LLC
170 South Main Street, Suite 700
Salt Lake City, UT 84101

PLANT SITE LOCATION:

Coyote Island Terminal
72000 Dewey West Ln.
Morrow Pacific Bulk Terminal
Boardman, OR 97818

INFORMATION RELIED UPON:

Application No.: 26945
Date Received: 07/27/2012

LAND USE COMPATIBILITY FINDING:

Approving Authority: Morrow County
Approval Date: 07/24/2012

ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY

Mark W. Bailey, Eastern Region Air Quality Manager

FEB 11 2014
Dated

Source(s) Permitted to Discharge Air Contaminants (OAR 340-216-0020):

Source Description	Activity Type	SIC	NAICS	DEQ Table 1 Permit Category Code(s)
Coal shipping terminal	Primary	4491	488320	Part B, 85

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1.0 PERMITTED ACTIVITIES

1.1. Purpose

This permit authorizes construction and operation of a coal bulk transfer facility at the Port of Morrow in Boardman, Oregon. The facility will include the following emission sources and activities:

a. An electric powered positioning system for maneuvering railcars through the Railcar Unloading Building;

b. An enclosed Railcar Unloading Building with dust fogger system and two wet scrubbers with exhaust vents;

c. Enclosed conveyors with dust fogger systems;

d. Up to three coal storage buildings, each with five wet scrubbers with exhaust vents; and

e. A retractable telescoping loading chute equipped with a resitain valve and flexible boot for loading coal into barges.

1.2. Conditions of Approval

The construction of the project must be in strict conformance with approved plans and specifications. No major changes or deviations may be made without prior written approval of DEQ.

a. With the exception of the railcars entering the facility and barge loading operations, the handling and storage of coal must be conducted within enclosures at all times.

b. Granting approval does not relieve the owner of the obligation to obtain required local, state, federal and other permits and to comply with the appropriate statutes, administrative rules, standards and, if applicable, to demonstrate compliance.

2.0 GENERAL EMISSION STANDARDS AND LIMITS

2.1. Visible Emissions

Emissions from any air contaminant source must not equal or exceed 20% opacity for a period aggregating more than 3 minutes in any one hour.

2.2. Particulate Matter Emissions

Particulate matter emissions from any air contaminant source other than fugitive emission sources must not exceed 0.1 grains per standard cubic foot.

2.3. Fugitive Emissions

The permittee must take reasonable precautions to prevent fugitive dust emissions by:

a. Treating vehicular traffic areas of the plant site under the control of the permittee.
b. Operating all air contaminant-generating processes so that fugitive type dust associated with the operation will be adequately controlled at all times.
c. Storing collected materials from air pollution control equipment in a covered container, building enclosure, or other method equally effective in preventing the material from becoming airborne during storage and transfer.
d. With the exception of the railcars entering the facility and the barge loading operations, the handling and storage of coal must be conducted within enclosures at all times.
e. In the event of a spill or upset where fugitive particulate matter has accumulated, the permittee must immediately clean up the area and prevent the material from becoming airborne.

2.4. Particulate Matter Fallout The permittee must not cause or permit the emission of any particulate matter larger than 250 microns in size at sufficient duration or quantity, as to create an observable deposition upon the real property of another person. DEQ will verify that the deposition exists and will notify the permittee that the deposition must be controlled.

2.5. Nuisance and Odors The permittee must not cause or allow air contaminants from any source to cause a nuisance. Nuisance conditions will be verified by DEQ personnel.

3.0 WORK PRACTICES

3.1. Best Management Practices Plan The permittee must prepare and implement a site-specific best management practices plan to minimize fugitive dust and visible emissions. The plan must be submitted to the Department prior to the facility receiving coal. The plan is to be submitted in a loose leaf binder. The Department will review for completeness within 30 days of receipt. A current copy of the plan must be maintained at the facility and made available to operation and maintenance personnel. The plan shall identify reasonable measures to prevent particulate matter from becoming airborne. Such reasonable measures must include, but are not limited to the following:

a. Monitoring and compliance with Condition 2.3 of this permit;
b. Management and operation procedures for the electric powered positioning system used for maneuvering railcars through the Railcar Unloading Building;

c. Routine inspections and cleaning of the Railcar Unloading Building and train tracks to prevent the migration of coal material offsite;
d. Control measures to ensure the railcar unloading building is operated in a manner that minimizes wind movement at the rotary dump mechanism;
e. Management and operation procedures for ensuring that all access doors and openings to the storage buildings are closed during active coal handling and emissions originating within a storage building exit through a wet scrubber system that is operated in accordance with manufacturer's design parameters or site-specific operating parameters;
f. Management and operation procedures to ensure the dust suppression fogger stations are effective in controlling particulate emissions within the enclosed conveyor system and at each conveyor to conveyor transfer drop point;
g. Management and operation procedures for ensuring that each conveyor to conveyor drop point is operated and maintained within a fully enclosed structure;
h. Management and operation procedures of the retractable telescoping loading chute that ensures effective control of particulate emissions when loading a barge;
i. Management and operation procedures for a resitain valve assembly installed at the base of the retractable telescoping loading chute prior to the skirt. The resitain valve may be in the opened position only when coal is being actively loaded into a below deck cargo hold or for maintenance and repair. The resitain valve must be actuated into a closed position when loading is complete and prior to raising the telescoping loading chute above the barge deck.
j. Routine inspections and periodic sweeping or cleaning of paved roads and other areas as necessary to prevent migration of coal materials offsite; and
k. Annual review and update of the best management practices plan. All updates and modifications must be retained on site and submitted to DEQ upon request.

4.0 PLANT SITE EMISSION LIMITS

4.1. Plant Site Emission Limits (PSEL)

Plant site emissions must not exceed the following:

Pollutant	Limit	Units
PM	24	tons per year
PM_{10}	14	tons per year
$PM_{2.5}$	9	tons per year

4.2. Annual Period

The annual plant site emission limits apply to each 12-consecutive calendar month period.

5.0 COMPLIANCE DEMONSTRATION

5.1. Testing Requirements

By no later than 30 days after startup (i.e., first shipment of coal received at the facility), the permittee must demonstrate that the facility is capable of operating at its maximum operating capacity in compliance with Conditions 2.1 and 2.3 by conducting a source test as follows:

a. For each of the following emissions sources, visible emissions must be measured three times in accordance with **Modified EPA Method 9** for a minimum period of 30 minutes each time:
   i. The Railcar Unloading Building and Wet Scrubber Systems (15 minutes per scrubber, if both scrubbers are operating);
   ii. The railcar entry and exit areas of the Railcar Unloading Building;
   iii. Each Coal Storage Building being utilized and the associated Wet Scrubber Systems (6 minutes per scrubber if all scrubbers are operating or an equal amount of time per scrubber for the scrubbers that are operating); and
   iv. The Telescoping Loading Chute to the Barge Hull (one test run must include observation of the loading chute being retracted to either load another barge or secure the chute in the holding position after loading the barges).

b. For each of the following emission sources, visible emissions must be measured three times in accordance with **EPA Method 22** for a minimum period of six minutes:
   i. Each Conveyor to Conveyor Drop Point enclosure; and
   ii. Each storage building access point (e.g., doorways).

c. All testing must be performed only when coal is being handled within the emissions source. (Note, it may be necessary to schedule the testing on multiple days to ensure that all emission sources are tested when loading directly to the barges or to a storage building and when future storage buildings are put in service). The following parameters must be monitored and recorded at each location at the time of the source test:
   i. Tons per hour of coal being transferred, as measured at either the railcar unloading building or barge loading area;
   ii. Wet Scrubber system flow rates and pressure readings; and
   iii. The conveyance path the coal is being transferred to when the source test is performed (e.g., to or from storage building or directly to the barge loading area).

d. All tests must be conducted in accordance with DEQ's Source Sampling Manual and the approved pretest plan. The pretest plan must be submitted at least 15 days in advance and approved by the Regional Source Test Coordinator. Test data and results must be submitted for review to the Regional Source Test Coordinator within 30 days unless otherwise approved in the pretest plan.

e. Only regular operating staff may adjust the processes and emission control parameters during the source test and within two hours prior to the source test. Any operating adjustments made during the source test, which are a result of consultation with source testing personnel, equipment vendors or consultants, may render the source test invalid.

f. As used in this permit, **"Modified EPA Method 9"** is the same as EPA Method 9, except the data is not reduced to 6-minute averages. Instead, each observation represents 15 seconds for the purpose of determining the amount of aggregate time in a 60-minute period that the visible emissions are equal to or greater than the opacity limit. If any one reading during the observation periods specified

for each emissions source is greater than the opacity standard, the observer must perform a full 60-minute test on that emission source. The observation period can be less than 60 minutes if the observer documents a violation of the standard before the 60-minute observation period is completed.

5.2. Visible Emissions Monitoring Requirements

The permittee must monitor the operation and maintenance of the plant and associated air contaminant control devices as follows:

a. At least once a week during daylight hours and during active operations at each of three separate locations within the plant, the permittee must visually survey the plant for any sources of visible emissions, except for the telescoping loading chute, for a minimum period of 30 minutes. The person conducting the survey does not have to be EPA Method 9 certified. However, the individual should be familiar with the procedures of EPA Method 9, including using the proper location to observe visible emissions. For each survey, the permittee must:

   i. Document the date, time and location of the visible emissions survey; and
   ii. Document the source(s) of visible emissions and the duration of visible emissions, if present.
   iii. If visible emissions are observed for more than 30 seconds during an observation period, immediately take corrective action to minimize the fugitive emissions, document the corrective action taken, and conduct a follow-up survey of the visible emissions source within 30 minutes after taking corrective action.
   iv. If, after taking corrective action, visible emissions are observed for more than 30 seconds during an observation period, continue taking corrective action and conducting surveys until visible emissions are observed for 30 seconds or less during an observation period.
   v. If required to continue taking corrective action and conducting visible emissions surveys after 24 hours from the first observation, the permittee must notify DEQ and conduct a modified EPA Method 9 test on the source(s) of visible emissions as soon as possible, but by no later than 48 hours after the first observation of visible emissions that lasted more than 30 seconds.

b. At least once a week during daylight hours when loading coal into a barge, the permittee must visually survey the Telescoping Loading Chute for visible emissions for a minimum period of 30 minutes three times during a day. At least one of the observation periods must be conducted when the loading chute is retracted to either load another barge or secure the chute in the holding position after completing the loading operations. For each survey, the permittee must:
   i. Document the date, time and location of the visible emissions survey; and
   ii. Document the duration of visible emissions, if present.
   iii. If visible emissions are observed for more than 30 seconds during an observation period, immediately take corrective action to minimize the fugitive emissions, document the corrective action taken, and conduct a follow-up survey within 30 minutes after taking corrective action.
   iv. If, after taking corrective action, visible emissions are observed for more than 30 seconds during an observation period, continue taking corrective action and conducting surveys until visible emissions are observed for 30 seconds or less during an observation period.
   v. If required to continue taking corrective action and conducting visible emissions surveys after 24 hours from the first observation, the permittee must notify DEQ and conduct a modified EPA Method 9 test as soon as possible, but by no later than 48 hours after the first observation of visible emissions that lasted more than 30 seconds.

5.3. Wet Scrubber Monitoring At least once a day, the permittee must observe and record wet scrubber system flow rates and pressure readings during active operations.

5.4. Equipment Inspections At least once a month, the permittee must visually inspect the conveyor system and Telescoping Loading Chute for damage and excessive wear and make repairs, as necessary.

5.5. PSEL Compliance Monitoring Compliance with the PSEL is determined for each 12-consecutive calendar month period based on the following calculation for each pollutant:

$$E = \Sigma(EF \times P)/2000 \text{ lbs}$$

Where,

E = pollutant emissions (ton/yr);
EF = pollutant emission factor (see Condition 12.0);
P = process records (see Condition 13.0)

5.6. Emission Factors The permittee must use the default emission factors provided in Condition 12.0 for calculating pollutant emissions, unless alternative emission factors are approved by DEQ. The permittee may request or DEQ may require using alternative emission factors provided they are based on actual test data or other documentation (e.g., AP-42 compilation of emission factors) that has been reviewed and approved by DEQ.

6.0 SPECIAL CONDITIONS

6.1. Special Conditions Permittee must comply with the following:

a. Permittee must notify DEQ in writing when the facility has started operations. The notification must be provided not more than seven (7) days after the facility starts operating.
b. Permittee must notify DEQ in writing prior to starting construction of the second and third coal storage buildings;
c. The permittee must only unload, transfer, or store sub-bituminous coal;
d. The facility must only accept and transfer coal that has had a topping agent applied to all railcars prior to shipping;
e. Windblown erosion from railcars on site is to be minimized by only accepting railcars that have been loaded using loading profiles that are designed to minimize emissions during transit.
f. The permittee must use an electric powered positioning system when maneuvering railcars through the Railcar Unloading Building.
g. The permittee must provide the Regional Office of DEQ with written notification within five days of all nuisance complaints received by the permittee during the operation of the facility. Documentation must include date of contact, time of observed nuisance conditions, description of nuisance condition, location of receptor, and status of plant operation during the observed period.
h. If the preventive measures specified in Conditions d and e above do not prevent fugitive emissions from being

emitted from the railcars, the permittee must prepare and submit to DEQ a plan for controlling fugitive emissions from the railcars when requested by DEQ. The plan may include, but is not limited to installing a system for applying topping agent to the railcars as they enter the facility or covering each railcar until the railcar enters the Railcar Unloading Building. DEQ will use visible emissions monitoring data and information from complainants to determine whether the plan must be submitted to DEQ. Once approved by DEQ, the plan must be implemented as expeditiously as possible in accordance with a schedule approved by DEQ.

7.0 RECORDKEEPING REQUIREMENTS

7.1. Operation and Maintenance

The permittee must maintain the following records related to the operation and maintenance of the plant and associated air contaminant control devices. Inspection dates, findings and identification of the person performing the inspection shall be maintained in a log:

a. Coal shipment records, including the date and time that each train arrives at the site, the amount of coal delivered per train, and documentation of the loading profiles, as well as the topping agents applied during loading;
b. Daily observation and recording of the Railcar Unloading Building wet scrubber system flow rates and pressure readings during active operations;
c. Daily observations and recordings of each Coal Storage Building wet scrubber system flow rates and pressure readings during active operations;
d. Weekly visual emissions observations and corrective action, if necessary;
e. Monthly visual inspections for damage and excessive wear of the conveyance system;
f. Monthly visual inspections of the Telescoping Loading Chute, including the resitain valve assembly and attached boot for damage and excessive wear.

7.2. Excess Emissions The permittee must maintain records of excess emissions as defined in OAR 340-214-0300 through 340-214-0340 (recorded on occurrence). Typically, excess emissions are caused by process upsets, startups, shutdowns or scheduled maintenance. For this source, excess emissions are evident when visible emissions are equal to or greater than 20% opacity for 3 minutes or more in any 60-minute period. If there is an ongoing excess emission caused by an upset or breakdown, the permittee must cease operation of the equipment or facility no later than 48 hours after the beginning of the excess emissions, unless continued operation is approved by DEQ in accordance with OAR 340-214-0330(4).

7.3. Complaint Log The permittee must maintain a log of all written complaints and complaints received via telephone that specifically refer to air pollution concerns associated with the permitted facility. The log must include a record of the permittee's actions to investigate the validity of each complaint and a record of actions taken for complaint resolution.

7.4. Retention of Records Unless otherwise specified, all records must be maintained on site for a period of two (2) years and made available to DEQ upon request.

8.0 REPORTING REQUIREMENTS

8.1. Excess Emissions The permittee must immediately notify DEQ of excess emissions events. Excess emission events are visible emissions equal to or greater than 20% opacity for more than an aggregate of 3 minutes in any 60 minute period.

a. Such notice must be provided as soon as possible, but never more than one hour after becoming aware of the problem. Notice must be made to the regional office identified in Condition 9.4 by email, telephone, facsimile or in person.
b. If the excess emissions occur during non-business hours and are of a nature that could endanger public health, the permittee must notify DEQ by calling the Oregon Emergency Response System (OERS). The current number is 1-800-452-0311.
c. The permittee must also submit follow-up reports when required by DEQ.

8.2. Annual Report

For each year this permit is in effect, the permittee must submit to DEQ by **February 15** two (2) copies of the following information for the previous calendar year:

a. Operating parameters:
   i. Tons of coal received; and
   ii. Tons of coal shipped.
b. An annual certificate that states:
   i. A topping agent has been applied to all railcars as required by loading procedures in Condition 6.1.d;
   ii. The identification of all topping agent(s) that have been used during the reporting year; and
   iii. All railcars have been loaded to approved heights and profile as required in Condition 6.1.e.
c. A summary of rolling 12-month total pollutant emissions determined each month in accordance with Condition 5.5.
d. Records of all planned and unplanned excess emissions events.
e. Summary of complaints relating to air quality received by permittee during the year.
f. List permanent changes made in plant process and pollution control equipment which affected air contaminant emissions.
g. List major maintenance performed on pollution control equipment.

8.3. Initial Startup Notice

See Condition 6.1.a

8.4. Notice of Change of Ownership or Company Name

The permittee must notify DEQ in writing using a Departmental "Transfer Application" form within 60 days after the following:

a. Legal change of the name of the company as registered with the Corporations Division of the State of Oregon; or
b. Sale or exchange of the activity or facility.

8.5. Construction or Modification Notices

The permittee must notify DEQ in writing using a Departmental "Notice of Intent to Construct" form, or other permit application forms, and obtain approval in accordance with OAR 340-210-0205 through 340-210-0250 before:

a. Constructing, installing or establishing a new stationary source that will cause an increase in any regulated pollutant emissions;
b. Making any physical change or change in operation of an existing stationary source that will cause an increase, on an hourly basis at full production, in any regulated pollutant emissions; or

c. Constructing or modifying any air pollution control equipment.

8.6. Where to Send Reports and Notices The reports, with the permit number prominently displayed, must be sent to the Permit Coordinator for the region where the source is located as identified in Condition 9.3.

9.0 ADMINISTRATIVE REQUIREMENTS

9.1. Permit Renewal Application The completed application package for renewal of this permit is due on **December 1, 2018**. Two (2) copies of the application must be submitted to the DEQ Permit Coordinator listed in Condition 9.3

9.2. Permit Modifications Application for a modification of this permit must be submitted not less than **60** days prior to the source modification. A special activity fee must be submitted with an application for the permit modification. The fees and two (2) copies of the application must be submitted to the DEQ Business Office.

9.3. Permit Coordinator's Address All reports, notices and applications should be directed to the Permit Coordinator for the area where the source is located. The Permit Coordinator's address is as follows:

Department of Environmental Quality
Eastern Region – Bend Office
475 NE Bellevue Drive, Suite 110
Bend, OR 97701-7415
Telephone: 541-633-2021

9.4. Department Contacts Information about air quality permits and DEQ's regulations may be obtained online at www.oregon.gov/DEQ/. All inquiries about this permit should be directed to the following regional office:

Department of Environmental Quality
Eastern Region - Pendleton Office
800 SE Emigrant Avenue, Suite 330
Pendleton, OR 97801-2597
Telephone: 541-276-4063

10.0 FEES

10.1. Annual Compliance Fee

The Annual Fee specified in OAR 340-216-0020, Table 2, Part 2 for a Standard ACDP is due on **December 1** of each year this permit is in effect. An invoice indicating the amount, as determined by DEQ regulations will be mailed prior to the above date. **Late fees in accordance with Part 4 of the table will be assessed as appropriate.**

10.2. Change of Ownership or Company Name Fee

The non-technical permit modification fee specified in OAR 340-216-0020, Table 2, Part 3(a) is due with an application for changing the ownership or the name of the company.

10.3. Special Activity Fees

The special activity fees specified in OAR 340-216-0020, Table 2, Part 3 (b through i) are due with an application to modify the permit.

10.4. Where to Submit Fees

Fees must be submitted to:

Department of Environmental Quality
Business Office
811 SW Sixth Avenue
Portland, OR 97204-1390

11.0 GENERAL CONDITIONS AND DISCLAIMERS

11.1. Permitted Activities

This permit allows the permittee to discharge air contaminants from processes and activities related to the air contaminant source(s) listed on the first page of this permit until this permit expires, is modified, or is revoked.

11.2. Other Regulations

In addition to the specific requirements listed in this permit, the permittee must comply with all other legal requirements enforceable by DEQ.

11.3. Conflicting Conditions

In any instance in which there is an apparent conflict relative to conditions in this permit, the most stringent conditions apply.

11.4. Masking of Emissions

The permittee must not cause or permit the installation of any device or use any means designed to mask the emissions of an air contaminant that causes or is likely to cause detriment to health, safety, or welfare of any person or otherwise violate any other regulation or requirement.

11.5. Department Access

The permittee must allow DEQ's representatives access to the plant site and pertinent records at all reasonable times for the purposes of performing inspections, surveys, collecting samples,

obtaining data, reviewing and copying air contaminant emissions discharge records and conducting all necessary functions related to this permit in accordance with ORS 468-095.

11.6. Permit Availability The permittee must have a copy of the permit available at the facility at all times.

11.7. Open Burning The permittee may not conduct any open burning except as allowed by OAR 340 Division 264.

11.8. Asbestos The permittee must comply with the asbestos abatement requirements in OAR 340, Division 248 for all activities involving asbestos-containing materials, including, but not limited to, demolition, renovation, repair, construction and maintenance.

11.9. Property Rights The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

11.10. Permit Expiration

a. A source may not be operated after the expiration date of the permit, unless any of the following occur prior to the expiration date of the permit:
   i. A timely and complete application for renewal or for an Oregon Title V Operating Permit has been submitted, or
   ii. Another type of permit (ACDP or Oregon Title V Operating Permit) has been issued authorizing operation of the source.

b. For a source operating under an ACDP or Oregon Title V Operating Permit, a requirement established in an earlier ACDP remains in effect notwithstanding expiration of the ACDP, unless the provision expires by its terms or unless the provision is modified or terminated according to the procedures used to establish the requirement initially.

11.11. Permit Termination, Revocation or Modification DEQ may modify or revoke this permit pursuant to OAR 340-216-0082 and 340-216-0084.

12.0 EMISSION FACTORS

Emissions Activity	Pollutant	Emission Factors[(1)] (lbs/ton)
Combined emission factors for coal transferred from railcars through Storage Building #3 and into a barge cargo hold.	PM	3.74E-04
	PM_{10}	1.83E-04
	$PM_{2.5}$	2.79E-05

(1) These emission factors are aggregate emission factors for all activities at the facility using the conservative assumption that all coal is loaded into the barges after being temporarily stored in the third storage building, which will result in the most transfer points throughout the facility. The aggregate emission factors are the sum of the emission factors calculated for each activity using equations from EPA's Compilation of Emission Factors (AP-42) and applying the applicable capture and control efficiencies for each activity. The equation in Section 13.2.4.3 was used to calculate the emissions from material transfer points and the equation in Section 13.2.5.5 was used to calculate wind erosion emissions from the loaded railcars while on site.

13.0 PROCESS RECORDS

Emissions Activity	Process Parameter	Frequency
Coal received at the transfer facility	Tons	Daily and Monthly
Tons of coal shipped from the transfer facility		

14.0 ABBREVIATIONS, ACRONYMS AND DEFINITIONS

ACDP	Air Contaminant Discharge Permit
ASTM	American Society for Testing and Materials
AQMA	Air Quality Maintenance Area
calendar year	The 12-month period beginning January 1st and ending December 31st
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CO_2e	Carbon Dioxide Equivalent
DEQ	Oregon Department of Environmental Quality
dscf	dry standard cubic foot
EPA	US Environmental Protection Agency
FCAA	Federal Clean Air Act
Gal	Gallon(s)
GHG	Greenhouse Gas
gr/dscf	grains per dry standard cubic foot
HAP	Hazardous Air Pollutant as defined by OAR 340-244-0040
I&M	Inspection and Maintenance
lb	Pound(s)
MMBtu	Million British thermal units
NA	Not Applicable
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NO_X	Nitrogen Oxides
NSPS	New Source Performance Standard
NSR	New Source Review
O_2	Oxygen
OAR	Oregon Administrative Rules
ORS	Oregon Revised Statutes
O&M	Operation and Maintenance
Pb	Lead
PCD	Pollution Control Device
PM	Particulate Matter
PM_{10}	Particulate Matter less than 10 microns in size
$PM_{2.5}$	Particulate Matter less than 2.5 microns in size
ppm	part per million
PSD	Prevention of Significant Deterioration
PSEL	Plant Site Emission Limit
PTE	Potential to Emit
RACT	Reasonably Available Control Technology
scf	standard cubic foot
SER	Significant Emission Rate
SIC	Standard Industrial Code
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
Special Control Area	as defined in OAR 340-204-0070
VE	Visible Emissions
VOC	Volatile Organic Compound
year	A period consisting of any 12-consecutive calendar months

State of Oregon
Department of
Environmental
Quality

STANDARD AIR CONTAMINANT DISCHARGE PERMIT REVIEW REPORT

Department of Environmental Quality
Eastern Region

Source Information:

SIC	4491
NAICS	488320

Source Categories (Table 1 Part, Code)	Part B, 85
Public Notice Category	III

Compliance and Emissions Monitoring Requirements:

FCE	No
Compliance Schedule	No
Unassigned Emissions	No
Emission Credits	No
Special Conditions	Yes

Source test [date(s)]	30 days after startup
COMS	No
CEMS	No
PEMS	No
Ambient Monitoring	No

Reporting Requirements:

Annual Report (due date)	2/15
Quarterly Report (due dates)	No

Monthly Report (due dates)	No
Excess Emissions Report	15 days

Air Programs

Synthetic Minor (SM)	No
SM -80	No
NSPS (list subparts)	No
NESHAP (list subparts)	No
Part 68 Risk Management	No
CFC	No

NSR	No
PSD	No
RACT	No
TACT	No
Other (specify)	No

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PERMITTING

PERMITTEE IDENTIFICATION

1. Ambre Energy has submitted an application for a Standard Air Contaminant Discharge Permit (ACDP) for approval to construct and operate an enclosed coal bulk transfer facility to be located at 72000 Dewey West Lane at the Port of Morrow in Boardman, Oregon. The facility is registered with the state of Oregon Corporations Division as Coyote Island Terminal.

PERMITTING ACTION

2. The proposed Air Contaminant Discharge Permit (ACDP) is a new permit that regulates air emissions from a new coal transfer facility. The proposed ACDP does not circumvent applicable permitting requirements, certifications or obligations established by other federal, state or local regulating authorities.

OTHER PERMITS

3. Other permits to be issued by the DEQ for this source include: a Water Pollution Control Facilities (WPCF) Permit and a general 1200-C National Pollutant Discharge Elimination System (NPDES) storm water permit for construction activities.

ATTAINMENT STATUS

4. This source is located in an area that is in attainment for all pollutants. This source is not located within 10 kilometers (6.2 miles) of a Class I air quality protection area.

SOURCE DESCRIPTION

OVERVIEW

5. The applicant proposes to operate a coal transfer station where up to 8,800,000 tons per year of sub-bituminous coal would arrive by railcar and be transferred to barges on the Columbia River. The coal transfer station facility proposes to operate three shifts, 8-hours per day, and employ up to 28 full time positions annually. Upon arrival the coal is to be unloaded from railcars and conveyed through fully enclosed spaces to either enclosed cargo holds on a barge or temporarily stored in a storage building at the facility. The components of the facility to be regulated by the proposed permit consist of an indoor rotary railcar unloading station, an enclosed transfer conveyor system with completely enclosed conveyor to conveyor drop points, three coal storage buildings, and barge loading equipment. The coal transfer terminal will operate with all power and water provided by the Port of Morrow. No electrical generation or emergency generator units are proposed to be installed and operated at the terminal.

6. Ancillary facilities that are not part of the actual coal transfer operations include a small Operations Building located southwest of the storage buildings. It will house a shift office, control room, maintenance office, change/shower rooms, restrooms, lunch room, warehouse, and shop/tool storage space. There will also be an administration building located on site. It will house the administration staff and will have a small conference room/visitors center.

7. The facility is to be designed with an electric powered positioning system for maneuvering railcars through the railcar unloading building. The railcars will enter an unloading building which will be enclosed, except for entrance and exit doorways for the railcars. The entrance and exit of the unloading building are only marginally larger than the railcars to limit influence by ambient winds. Below ground hoppers will receive the coal as it is unloaded via a rotary dump mechanism. The unloading building will have an advanced dust extractor/scrubber system and a water fogging system located under the railcars. The dust extractor/scrubber system will be operated with two sizeable blowers. These systems are designed to contain dust within the building and prevent dust from settling on the railcars during unloading. The dust extraction/scrubber system will draw air from the railcar unloading building which in turn will draw air inward through the entrance and exit of the unloading building, creating a net flow of air towards the underside of the railcar and through the wet scrubbers. In the event that there is a small amount of counter air flow during unloading, the water spray fogging system under the railcar is designed to entrain the dust particles so that they can more readily be collected with the extraction/scrubber system. A closed loop wash water system will be used after each train to clean-up the railcar unloading station.

8. After unloading from the railcars to the underground hoppers, the coal will be transferred via fully enclosed conveyors either directly to barges on the Columbia River (via the bypass to the Loadout Conveyor) or to one of three planned storage buildings. The conveyor belt system is designed to operate at capacity of 850 feet per minute, transferring up to 3,000 tons of coal per hour. The coal storage buildings are to be identical. The path that leads to Coal Storage Building #1 and to a barge from the railcar unloading station involves the fewest number of conveyor to conveyor drop points at six (6). The path that leads to the Coal Storage Building #2 and to a barge involves the average number of conveyor to conveyor drop points at seven (7). The path that leads to the Coal Storage Building #3 and to a barge involves the most number of conveyor to conveyor drop points at eight (8). An average of seven (7) fully enclosed conveyor to conveyor drop points will be used throughout the year when transferring coal through the three storage buildings and to a barge. There will be multiple wash down and dust suppression fogger stations throughout the conveyor belt system. The wash down stations are designed to periodically rinse down areas where coal dust may accumulate as a housekeeping measure and to prevent coal dust from becoming re-suspended in the transfer terminal system. The dust suppression foggers are designed to control particulate matter emissions by operating along designated sections of the enclosed conveyor system and at each conveyor transfer drop point.

9. Initially one coal storage building is to be constructed with two future coal storage buildings to be constructed at a later date. Each of the coal storage buildings will have a design storage capacity of 100,000 tons of coal. Each coal storage building will utilize five (5) wet scrubbers for a combined total of fifteen (15) wet scrubbers. Three of the five wet scrubbers in a coal storage building located nearest to where the coal is being loaded or unloaded are to be operated to control dust and particulate emissions at all times. The wet scrubber systems are designed to achieve complete capture of the particulate emissions generated within the coal storage buildings. The wash down and wet scrubber water used in the system will be collected and conveyed in a closed loop system for treatment and re-use. The solids collected in the treatment system are to be returned to the coal stream and the treated water is to be re-circulated back to scrubbers and wash down systems.

10. All access points to all conveyor systems and each storage building are to remain secured and closed during operations. When transferring coal to storage, the coal will be diverted through the Tripper Conveyor line to a storage building. There will be three (3) man doors on the Tripper Conveyor line at the building ridge. There will be one (1) door at both end walls and one (1) exiting out the side of the roof through a dog-house as an emergency exit. Each storage building will have six (6) man doors at grade level. There will be two (2) on each end and one (1) on each side of a storage building. All man doors will be of steel construction and some may be constructed with ½ clear-light reinforced glass inserts. All doors will be equipped with self-closers. There will be four (4) roll up doors with two (2) on each end of a storage building. The roll up doors will have the approximate dimension of 16-ft x 16-ft. Each roll up door will be powered and will be interlocked through the control system to assure they are shut during coal placement in the building or when drawing coal out of the building. Doors will only be opened during maintenance work and this will only be performed when the building is not in operation. These doors will be metal slat roll up doors with weather stripping to ensure a good seal.

11. At the barge loading station the facility proposes to operate a retractable telescoping loading chute that will be used to off load coal into below deck cargo holds. The telescoping chute is designed with internal collapsible cascading cones that will minimize the drop velocity of the material, greatly reducing the potential for creating suspended dust. The outer wall of the telescoping chute provides a barrier that contains the formation of any fugitive dust within the chute. The outer wall of the telescoping chute will be attached to a flexible boot that maintains contact with the pile of loaded coal within the barge by the incorporation of sensors. As a result, any dust generated inside the load-out chute has nowhere to go. It settles and becomes re-entrained with the material passing through the internal cones. In addition, a resitain valve assembly will be installed at the base of the retractable telescoping loading chute prior to the skirt. The resitain valve is a trap door closure that will be open when coal is actively being loaded into a below deck cargo hold in a barge and closed at all other times.

12. Four (4) enclosed empty barges in tow will arrive at the dock loading area with all hatches closed. The barges will be positioned next to the dock and two (2) barges end to end will be attached to the barge positioning system and released from the tow for loading. As this

transition is taking place the barge hatches on these two barges will be opened. When the first barge is loaded and while loading the second barge, the first barge hatches will be closed. When the second barge is loaded the tugboat will position the remaining two barges at the upstream dock and they are attached to the positioning system. As this occurs the second barge's hatches will be closed and the third and fourth barge hatches will be opened. As the third and fourth barges are being loaded the tugboat would tie onto the first two (2) loaded barges and will position them next to the third and fourth barges to complete the tow. Upon loading the third and fourth barges, hatches will be closed. At this time all four (4) barges are full and fully enclosed.

PROCESS AND CONTROL DEVICES

13. The moisture content of sub-bituminous coal is typically in the range of 20% to 30%, which is higher than other types of coals, such as bituminous coal or anthracite. Sub-bituminous coal is therefore generally less dusty when handled. In addition, the dust suppression foggers located in the Railcar Unloading Building and Conveyor System will add moisture to the coal. The moisture in the coal will help to prevent fugitive emissions from occurring. Other emissions controls at the facility will include the following:

    a. The rotary railcar unloading dust extractor equipment system includes two (2) Engart Type 46 (200 hp, 460 volt) Dust Extractor Units or equivalent. Pre-filters are connected to individual ductwork manifolds with collection hoods located along the length of each side of the railcar. Each Engart unit is designed to pull exhaust ventilation and dust extraction independently from each side of the railcar.
    b. Wash down stations are included along conveyor systems for periodic housekeeping measures. The dust suppression foggers are to be located at every conveyor to conveyor drop point and along each conveyor system. All conveyor drop points and conveyor lines are fully enclosed systems.
    c. Each storage building will be equipped with five (5) wet scrubber systems. Each system will include an Engart Type 33H (75 hp, 460 volt) Dust Extractor Unit or equivalent. Pre-filters are connected to individual ductwork manifolds with collection hoods located along the length of each side of storage building.
    d. The retractable telescoping loading chute is designed to control potential particulate dust emissions by utilizing sensors that allow a one (1) meter long shroud attached to the tip of the loading chute to maintain contact with the surface of the coal pile in the barge hull while loading. The shrouded tip is designed to cover and contain particulate dust generated during loading. The internal cascading drop mechanism within the retractable telescoping loading chute is designed to minimize the drop velocity of the coal to further reduce particulate dust formation at the shrouded tip. In addition to the shrouded tip, a resitain valve assembly will be used to contain any residual coal within the chute between loading barges and when docked. The resitain valve will be remotely activated to close before the shrouded tip rises above a barge hatch and does not re-open until the shrouded tip is lowered below the next barge hatch.

14. The unit descriptions, activities and pollution control devices at the facility include the following:

Unit Description	Device Description	Pollution Control Devices	
		Description	**PCD ID**
Railcar Unloading Building	Rotary Railcar Drop into Underground Hopper in the Railcar Unloading Building	(2) Engart/Type 46 Wet Scrubbers	WS-R01 & WS-R02
		(2) Dust Fogger Systems	Enclosed Drop
First Unloading Conveyor	Enclosed Drop from Railcar Unloading Building to First Unloading Conveyor	Dust Fogger System	Enclosed Drop
Second Unloading Conveyor	Enclosed Drop from First Unloading Conveyor to Second Unloading Conveyor	Dust Fogger System	Enclosed Drop
Transfer Conveyor	Enclosed Drop from Second Unloading Conveyor Diverter to Transfer Conveyor for Coal Storage Buildings #2 and #3	Dust Fogger System	Enclosed Drop
Loadout Conveyor Drop	Enclosed Drop from Second Unloading Conveyor Diverter to Barge Loadout Conveyor, bypassing storage	Dust Fogger System	Enclosed Drop
Tripper Conveyor	Enclosed Drop from Second Unloading Conveyor Diverter to Tripper Conveyor for Coal Storage Building #1	Dust Fogger System	Enclosed Drop
Three Coal Storage Buildings with Reclaim Conveyors	Tripper Conveyor Drops to Storage Building Piles	Engart/Type 33 Wet Scrubbers	WS-01 thru WS-15 (5 per building)
	Storage Building Pile Extraction Drops to the Reclaim Conveyor		
Loadout Conveyor	Enclosed Drop from Reclaim Conveyors to the Loadout Conveyor	Dust Fogger System	Enclosed Drop
Transfer Conveyor	Enclosed Drop from Loadout Conveyor to Transfer Conveyor	Dust Fogger System	Enclosed Drop
Barge Loading Conveyor	Enclosed Drop from Transfer Conveyor to the Barge Loading Conveyor	Dust Fogger System	Enclosed Drop
Barge Loading	Barge Loading Conveyor Drop through the Retractable Telescoping Chute into a Barge Cargo Hold	Internal Cascading Cone Drops, Resitain Valve, and Shrouded Tip	TLC-01

EMISSIONS

15. The pollutant emitted from the proposed facility is particulate matter ($PM/PM_{10}/PM_{2.5}$). The potential particulate matter emissions from the facility were calculated based on AP-42 Section 13.2.4.3 (11/2006), Page 13.2.4-3, for batch/continuous drop operations. The calculated potential particulate matter emissions for $PM/PM_{10}/PM_{2.5}$ are provided in the Emissions Detail Sheets at the end of this report. The following is the equation provided in AP-42, Section 13.2.4.3. The calculations are based on the particulate matter size, physical conditions of the coal at the facility, along with the capture and control efficiencies of the enclosures and control devices used to minimize emissions:

AP-42 Equation with Control & Capture Efficiencies:			
Emission Factors (lbs/ton) for $PM/PM_{10}/PM_{2.5}$	=	Particle size multiplier [K]x0.0032*(wind speed [U]/5)$^{1.3}$ /(moisture content [M]/2)$^{1.4}$	
Where:			
PM particle size multiplier (k)	=	0.74	Aerodynamic Particle Size Multiplier [AP-42
PM_{10} particle size multiplier (k)	=	0.35	Section 13.2.4.3 Predictive Emission Factor
$PM_{2.5}$ particle size multiplier (k)	=	0.053	Calculations]
	=	2 mph	Estimated air movement within full enclosures (conveyor drop points and storage buildings).
	=	4 mph	Estimated air movement within railcar unloading building (partial enclosure)
Wind Speed [U]	=	25.3 mph	Estimated air movement for open railcars and Fully Loaded railcars & telescoping chute based on 24-hr highest annual 24-hr average wind speed at the Port of Morrow: (ref: PGE Coyote Springs 1995 Wind Speed Collection Data)
Moisture Content [M]	=	20%	Low end of moisture content for the sub-bituminous coal
	=	5%	Estimated moisture content of coal at the surface of the loaded railcars that enter the facility.
Loaded railcars entering the facility. The control efficiency is based on the first 1/4 foot of uncovered coal in a fully loaded railcar being exposed to wind erosion. Coal below the 1/4 foot depth is not subject to wind erosion because it is completely enclosed by the sides and bottom of the railcar:			
Fully Loaded Railcar Control Efficiencies:	=	97.6%	Engineering Estimate for worst case
Conveyor process control efficiencies are estimated based on fully enclosed conveyors and the utilization of fogging systems:			
Enclosed Conveyor Control Efficiencies:	=	95%	Engineering Estimate for worst case
Telescoping Retractable Loading Chute control efficiency is estimated based on internal cascading cone drop design and shrouded tip:			
Loading Chute Control Efficiency	=	80%	Engineering Estimate for worst case

The Capture and Control Efficiencies of each wet scrubber used in the Railcar Unloading Building and in each Storage Building are as follows:			
Unloading Building Capture Efficiency	=	90%	Estimated capture efficiency of the dust extractor system
Storage Building Capture Efficiency	=	100%	Storage Buildings must vent through scrubber system
PM Scrubber Control Efficiency	=	99.7%	Control efficiencies provided by wet scrubber manufacturer/vendor
PM_{10} Scrubber Control Efficiency	=	98.4%	
$PM_{2.5}$ Scrubber Control Efficiency	=	94.99%	

16. The unloading, conveying, storage, and loading activities will generate particulate matter emissions to some extent because the coal is disturbed during these activities. Other potential sources of emissions are the loaded uncovered railcars located at the site prior to unloading. The application did not include an estimate of the emissions from these railcars. DEQ assumes that the emissions from the railcars will most likely be negligible because the coal will not be disturbed and the coal will be loaded into the railcars before arriving at the site using techniques that will minimize emissions during transit (e.g., loading profiles and topping agents). Three separate topping agents have been proposed. Each topping agent manufacturer specifications claims to control at least 85 percent of coal dust erosion compared to coal cars without topping agents. In addition, any fine material at the surface of the railcar will most likely be emitted (e.g., eroded by wind) before the railcars arrive at the site. However, as a conservative estimate, DEQ calculated potential emissions assuming that there will be some wind erosion from the surface area of the coal in each railcar. For these calculations, DEQ used the highest 24-hour average wind speed for the Boardman area at 25.3 mph. The potential particulate matter emissions from the facility were calculated based on AP-42 Section 13.2.5.2 (11/2006), Page 13.2.5-13, wind erosion from flat area covered with coal dust. The emission calculations and detail sheets are provided at the end of this review report. The variables used in the equations are provided in the following table:

AP-42 Section 13.2.5.5 Equations for wind erosion from flat area covered with coal dust:				
(EQ 2) Emission Factor	(E)	=	$(k)\sum P_i$	
(EQ 3) Erosion Potential Function	(P)	=	$58(u^*-u_t^*)^2 + 25(u^*-u_t^*)$	
(EQ 4.) Equivalent Friction velocity	(u^*)	=	$(0.053) \times (u^+_{10m})$	
		=	0.54 m/s	Fine coal dust on concrete pad conservative est.
Control Efficiency (Manufacturer Spec.)		=	85%	
Where:				
PM particle size multiplier (k)		=	1.0	
PM_{10} particle size multiplier (k)		=	0.5	
$PM_{2.5}$ particle size multiplier (k)		=	0.075	
Wind Speeds	(u^+_{10m})	=	25.3 mph	Estimated air movement for open fully loaded uncovered railcars based on 24-hr highest annual 24-hr average wind speed at the Port of Morrow. *(ref: PGE Coyote Springs 1995 Wind Speed Collection Data)*

17. Proposed PSEL information:

Pollutant	Baseline Emission Rate (tons/yr)	Netting Basis		Plant Site Emission Limits (PSEL)		
		Previous (tons/yr)	Proposed (tons/yr)	Previous PSEL (tons/yr)	Proposed PSEL (tons/yr)	PSEL Increase (tons/yr)
PM	0	0	0	0	24	24
PM_{10}	0	0	0	0	14	14
$PM_{2.5}$	0	0	0	0	9	9

a. The baseline emission rate and the netting basis are zero because this facility was constructed after the baseline period of 1977-1978 for all pollutants. In addition, the source is not subject to New Source Review (NSR).
b. The proposed PSEL for particulate matter pollutants are equal to the Generic PSEL in accordance with OAR 340-222-0040(1).
c. Generic PSELs are not established for SO_2, NO_x, CO, VOC, and greenhouse gases (GHG) because the source would generate less than the deminimis level for each of these criteria pollutants. (Note: Emissions from mobile source engines - locomotives and tug boats - are not regulated by this permit.)
d. A PSEL was not established for GHG emissions because the source does not have the potential to generate 2,500 metric tons, or more, of carbon dioxide equivalent of greenhouse gases per year. (See also Section 31 of this review report.)
e. The PSEL is a federally enforceable limit on the potential to emit.

SIGNIFICANT EMISSION RATE ANALYSIS

18. The proposed PSELs are greater than the netting basis for all pollutants as shown below:

Pollutant	Significant Emission Rate (tons/yr)	Generic PSEL (tons/yr)	Increase Due to Proposed Activities (tons/yr)
PM	25	24	1.6
PM_{10}	15	14	<1
$PM_{2.5}$	10	9	<1

19. Since the PSELs are less than the significant emission rate, an air quality impact analysis is not required in accordance with OAR 340-222-0041.

REGULATORY REQUIREMENTS

20. The proposed facility is required to obtain an Air Contaminant Discharge permit in accordance with Oregon Administrative Rule (OAR) 340-216-0020 (Table 1, Part B, Category 85).

21. The proposed facility is subject to the following emission limits and standards:

    a. OAR 340-208-0110: 20% opacity (visible emissions) limits
    b. OAR 340-208-0210: minimize fugitive emissions to the extent practicable
    c. OAR 340-208-0300: prohibits nuisances
    d. OAR 340-208-0400: prohibits masking emissions
    e. OAR 340-208-0450: prohibits particulate matter fallout; and
    f. OAR 340, Division 222: Plant Site Emission Limits

22. In addition to the emissions limits and standards identified above, the facility is also subject to the rules for highest and best practicable treatment and control in OAR 340-226-0100 through 340-226-0140.

    a. Based on the design of the facility, particulate matter and visible emissions, which is an indicator of particulate matter emissions, should be minimal.
    b. Therefore, the permit includes requirements for conducting routine visible emission surveys and requiring the permittee to take corrective action when visible emissions are observed.
    c. In addition, the permit requires the permittee to develop and implement a best work practices plan to ensure that the activities, process equipment, and emissions control equipment are operated and maintained in a manner that will minimize emissions to the extent practicable (see further discussion below). The initial plan must be submitted to DEQ 30 days prior to receiving coal. DEQ will review the plan for completeness. The plan must be reviewed and updated by the permittee on an annual basis.

23. The rules for the review and approval of new federal major sources (OAR 340, Division 224) that include requirements for the best available control technology (BACT) and ambient air quality impact analysis do not apply to this facility because it is not a federal major source of pollutant emissions. A federal major source for this type of activity is one that has the potential to emit 250 tons or more of any criteria pollutant. Secondary emissions, which include emissions from the tug boats and locomotives, are not included in the calculations for determining whether a source is a major source in accordance with OAR 340-224-0100 and the definition of "secondary emissions" in OAR 340-200-0020.

24. There are no federal standards (New Source Performance Standards – 40 CFR Part 60 or National Emission Standards for Hazardous Air Pollutants – 40 CFR Part 63) that apply to this facility.

25. The mobile sources used to transport coal to and from the facility (e.g., locomotives and tug boats) are not regulated under DEQ's stationary source air permitting program. Other state and federal standards (engine emission standards) may apply to the mobile sources, depending on the model year and regulation.

SPECIAL CONDITIONS

26. The permittee must notify DEQ in writing of the date the new facility is started up as soon as practicable, but not more than seven (7) days after the facility starts operating.

27. The permittee must develop, install, and maintain best management practices to minimize fugitive and visible dust emissions. Design measures shall include enclosed material handling processes with enclosed storage and air pollution equipment. The following best management practices are proposed at the coal transfer terminal:

    a. The permittee may only receive coal that has been prepared for shipping using techniques that will minimize fugitive emissions from the railcars. These techniques include loading profiles that minimize emissions while in transit, as well as the application of topping agents that form a surface crust. These loading procedures should prevent fugitive emissions from occurring while the loaded railcars are on site before they enter the unloading building since the coal will not be disturbed before it is unloaded. However, if that is not the case and fugitive emissions do occur, the permit includes a requirement for the permittee to submit a plan for controlling the fugitive emissions. Once approved by DEQ, the plan must be implemented by the permittee. Additional measures for controlling fugitive emissions may include installing a system for applying a topping agent to the coal in the railcars as they arrive at the site or covering the railcars while on site before they are unloaded.
    b. Two wet scrubbers will be used in the rotary railcar unloading building. The building will be constructed and operated in a manner that minimizes wind movement at the rotary dump mechanism.
    c. Each storage building will be equipped with five (5) wet scrubbers. All emissions originating within a storage building must exit though a properly functioning wet scrubber system.
    d. All conveyor to conveyor drop points are to occur and be maintained within a fully enclosed structure.
    e. There will be wash down for housekeeping and dust suppression fogger stations used to control particulate emissions along sections of the enclosed conveyor system and located at all conveyor to conveyor transfer drop points.
    f. Permittee must manage all access points to storage buildings and conveyor system to ensure fugitive emissions are minimized at all times.
    g. The barges are to be loaded with a retractable telescoping loading chute with internal collapsible cascading cones, an attached flexible boot that maintains contact with the pile of the coal in the barge, and a resitain valve that will remain closed when not loading coal into the barges.

28. The permittee must provide the Regional office of DEQ with written notification within five days of all nuisance complaints received by the permittee during the operation of the facility. Documentation must include date of contact, time of observed nuisance conditions, description of nuisance condition, location of receptor, and status of plant operation during the observed period.

COMPLIANCE

29. The permittee is required to conduct an initial performance test for demonstrating compliance with the visible emissions standards. The testing must be performed in accordance with EPA's reference test Method 9 modified to determine compliance with DEQ's emission standard, which is based on a 3 minute aggregate in any 60 minute period instead of a 6-minute average. Each emission source at the facility will be tested.

30. For ongoing compliance assurance:

    a. The permit includes requirements for conducting weekly visible emission surveys. If any visible emissions are observed for more than 30 seconds from the emission sources, the permittee is required to take corrective action immediately.
    b. The permit requires the permittee conduct periodic inspections of the process equipment and make repairs, as necessary.
    c. The permit requires the permittee to monitor emission control parameters to ensure that the control equipment remains effective for controlling emissions from the unloading and storage buildings.

31. In addition, the facility will be inspected by DEQ personnel at least twice within the first year of operation to ensure compliance with the permit conditions.

TITLE V MAJOR SOURCE APPLICABILITY

CRITERIA POLLUTANTS

32. A major source is a facility that has the potential to emit 100 tons/yr or more of any criteria pollutant. For greenhouse gases, the source must also have the potential to emit 100,000 tons/year or more of CO_2e to be a major source. This facility is not a major source of criteria pollutant emissions.

    The permitted activities are not combustion sources so carbon dioxide and nitrous oxide greenhouse gases will not be emitted from the facility. There is some potential for methane emissions which is contained in coal when it is mined. However, DEQ has determined that the methane emissions will be well below the GHG deminimis level of 2,500 metric tons per

year. This determination is based on studies that have determined the rate at which the methane desorbs from the coal, a conservative estimate of the amount of time it takes for the coal to arrive at the facility from the mine, and the amount of time that the coal will be at the facility.

HAZARDOUS AIR POLLUTANTS

33. A major source is a facility that has the potential to emit 10 tons/yr or more of any single Hazardous Air Pollutant (HAP) or 25 tons/yr or more of combined HAPs. This source is not a major source of hazardous air pollutants. The HAP emissions detail for the proposed Coyote Island Terminal is provided at the end of this report. A complete list of regulated HAPs is provided on the USEPA website at http://www.epa.gov/ttnatw01/187polls.html.

INFORMATION MEETINGS

34. DEQ held three information meetings in December 2012 prior to preparing the draft permit. The meetings were held in Boardman, Clatskanie, and Portland. At each meeting, there was a question and answer period followed by a comment period. DEQ also received numerous written comments before, during, and after the public meetings. The meetings were not formal hearings, so DEQ has not prepared a formal response to the comments. However, DEQ has reviewed the comments and taken them into consideration while preparing the draft permit. Provided below is a summary of the comments received and general responses to those comments:

a. Meeting participation: At each meeting, DEQ asked those attending the meeting to sign an attendance sheet and provide their e-mail address if they wanted electronic notices of permit actions regarding the proposed facility. Personal observations and newspaper reports suggest that many more people attended the meetings than signed in on the attendance sheet. However, according to the attendance sheets, the following number of people attended each meeting:

Boardman meeting (12/4/12):	147 people signed in on the attendance sheet
Clatskanie meeting (12/5/12):	132 people signed in on the attendance sheet
Portland meeting (12/6/12):	587 people signed in on the attendance sheet

b. Written comments: In addition to those that attended the meetings and provided comments at the meetings (not all commented, but many did), DEQ received 5,379 written comments via e-mail and mail. Most of the people that commented submitted form letters in opposition to the proposed facility. There were 10 comments received that specifically addressed the permit application.

35. Most of the comments addressed three areas of general concern: 1) Global impacts related to the combustion of coal, such as greenhouse gas emissions and climate change, regional haze, mercury emissions, and other hazardous air pollutant emissions; 2) transportation

issues, such as increased train traffic, locomotive and tugboat emissions, noise, spills, and fugitive dust while the coal is in transit; and 3) economic benefits associated with the project, such as jobs for Oregonians and revenue for local communities. DEQ acknowledges that these are significant concerns, but are not within DEQ's authority to address in an air contaminant discharge permit action. To the extent possible, given DEQ's limited resources and authority, DEQ has prepared question and answer (Q&A) documents that provide general responses to these concerns. The Q&A documents are available at the following website: http://oregon.gov/DEQ/Pages/CoalExport.aspx.

36. Comments specific to the permit application: DEQ received a few comments specifically related to the permit application, which were considered while drafting the permit. The comments and DEQ's general responses are as follows:

a. **Comment:** Emissions were underestimated using incorrect assumptions for wind speeds, coal moisture content, and control efficiencies for enclosures and add-on control equipment.

Response: *DEQ has carefully reviewed the information provided in the permit application, as well as the comments, and developed emission estimates based on recognized procedures for estimating emissions from material handling operations. The basis for the estimates is provided in this review report and the attached emissions detail sheets. DEQ does not agree that average wind speeds in the Boardman area should be used in the calculations for emissions from activities that occur within enclosures that are protected from the wind. However, there are a few activities that do not have full enclosures. For these activities, DEQ did use average maximum wind speeds for calculating the emissions.*

b. **Comment:** Secondary emissions from locomotive and tug boat engines were not included in the stationary source's emission inventory.

Response: *DEQ does not agree that emissions from tugboat and train engines that bring material to and from the source should be included in the emission inventory for the source. These emissions are considered "secondary emissions", as defined in OAR 340-200- 0020 and are not included in the determination of whether a source is a major source in accordance with OAR 340-224-0100.*

c. **Comment:** The results of an air dispersion modeling exercise showed violations of the National Ambient Air Quality Standards.

Response: *DEQ's regulations do not require air dispersion modeling for sources that are not major sources. This source is not considered a major source. If modeling were required, DEQ has requirements for developing a modeling protocol to ensure that the modeling is performed in accordance with EPA models and guidelines, including identifying the emission points to be modeled, the emissions from the emissions points, the appropriate models, receptor grids, and*

meteorological data to be used in the models. The modeling does not address mobile source emissions.

d. **Comment:** Fugitive emissions will not be adequately controlled.

Response: *DEQ has reviewed the proposed design of the facility and obtained additional clarifying information from the applicant. Based on this information, DEQ has determined that the emissions will be effectively controlled, as indicated by the emissions estimates provided in this review report. To ensure adequate control, DEQ has included requirements for a Best Management Practices Plan, initial compliance testing, and routine visible emissions monitoring. Based on the design of the facility, visible emissions from the activities should not occur, but if there are visible emissions, the emissions should not last long. Therefore, DEQ has structured the monitoring such that if visible emissions are observed for more than 30 seconds, corrective action must be taken by the operators to minimize the emissions. In addition, the permittee must notify DEQ of complaints and DEQ will conduct at least two inspections of the facility in the first year of operation.*

PUBLIC NOTICE

37. Pursuant to OAR 340-216-0066(4)(a)(A), issuance of Standard Air Contaminant Discharge Permits requires public notice in accordance with OAR 340-209-0030(3)(c), which requires DEQ to provide notice of the proposed permit action and a minimum of 35 days for interested persons to submit written comments. In addition, two hearings have been scheduled to allow interested persons to submit oral or written comments. The date, time and location of the public hearings is provided below. DEQ will provide a minimum of 30 days notice for the hearing. **The public notice was issued on May 31, 2013 and originally expired on July 12, 2013. On July 1, 2013 DEQ extended the comment period to August 12, 2013.** Hearing details did not change.

Public hearings were held on July 9, 2013 and DEQ received numerous comments. DEQ's response to the comments begins on page 21 of this Review Report.

EMISSIONS DETAIL SHEETS

Proposed $PM/PM_{10}/PM_{2.5}$ Emission Calculations:

Loaded Uncovered Railcars: $PM/PM_{10}/PM_{2.5}$					
EU ID	**Operating Parameters (tons/yr)**	**Emission Factors (lbs/ton)**		**Reference**	**Emissions (tons/yr)**
Uncovered railcars fully loaded	8,800,000	PM	2.00E-04	AP 42 - Section 13.2.5.5 with Topping Agent Control	8.8E-01
		PM_{10}	1.00E-04		4.4E-01
		$PM_{2.5}$	1.50E-05		6.6E-02

For these emission factor calculations, DEQ used the highest 24-hour average wind speed for the Boardman area at 25.3 mph based on 24-hr highest annual 24-hr average wind speed at the Port of Morrow. The emission factors were conservatively developed assuming there would be a constant wind speed of 25.3 mph at the transfer facility throughout the entire year. *(ref: PGE Coyote Springs 1995 Wind Speed Collection Data)*.

Railcar Unloading Building Wet Scrubbers/Fogging System: $PM/PM_{10}/PM_{2.5}$					
EU ID	**Operating Parameters (tons/yr)**	**Emission Factors (lbs/ton)**		**Reference**	**Emissions (tons/yr)**
WS-R01 WS-R02	8,800,000	PM	7.24E-06	AP 42 Section 13.2.4.3 and wet scrubber vendor	3.2E-02
		PM_{10}	3.82E-06		1.7E-02
		$PM_{2.5}$	7.33E-07		3.2E-03

Coal Storage Building Wet Scrubbers: $PM/PM_{10}/PM_{2.5}$					
EU ID	**Operating Parameters (tons/yr)**	**Emission Factors (lbs/ton)**		**Reference**	**Emissions (tons/yr)**
Drop to Storage Pile					
WS-01 thru WS-15	8,800,000	PM	8.59E-08	AP 42 Section 13.2.4.3 and wet scrubber vendor	3.8E-04
		PM_{10}	2.17E-07		9.5E-04
		$PM_{2.5}$	1.03E-07		4.5E-04
Storage Pile Drop to Reclaim Conveyor					
WS-01 thru WS-15	8,800,000	PM	8.59E-08	AP 42 Section 13.2.4.3 and wet scrubber vendor	3.8E-04
		PM_{10}	2.17E-07		9.5E-04
		$PM_{2.5}$	1.03E-07		4.5E-04

Enclosed Conveyor to Conveyor Drop Points: $PM/PM_{10}/PM_{2.5}$							
	Emission Factor (lbs/ton)				Emissions (tons/yr)		
Emission Point ID	PM	PM_{10}	$PM_{2.5}$	Reference	PM	PM_{10}	$PM_{2.5}$
Railcar Unloading Building to First Unloading Conveyor (BC-0.5)	1.43E-06	6.77E-07	1.03E-07	AP 42 - Section 13.2.4.3 with enclosure control efficiencies	6.30E-03	2.98E-03	4.51E-04
First Unloading Conveyor to Second Unloading Conveyor (BC-01)	1.43E-06	6.77E-07	1.03E-07		6.30E-03	2.98E-03	4.51E-04
Second Unloading Conveyor diverter gate drop to Loadout Conveyor to bypass storage.	1.43E-06	6.77E-07	1.03E-07		6.30E-03	2.98E-03	4.51E-04
Second Unloading Conveyor diverter gate drop to Tripper Conveyor (BC-02)	1.43E-06	6.77E-07	1.03E-07		6.30E-03	2.98E-03	4.51E-04
Second Unloading Conveyor diverter gate drop to Storage Transfer Conveyor (BC-04)	1.43E-06	6.77E-07	1.03E-07		6.30E-03	2.98E-03	4.51E-04
Storage Transfer Conveyor diverter gate drop to the Tripper Conveyor (BC-05)	1.43E-06	6.77E-07	1.03E-07		6.30E-03	2.98E-03	4.51E-04
Storage Transfer Conveyor) diverter gate drop to Transfer Conveyor (BC-07)	1.43E-06	6.77E-07	1.03E-07		6.30E-03	2.98E-03	4.51E-04
Transfer Conveyor drop to the Tripper Conveyor (BC-08)	1.43E-06	6.77E-07	1.03E-07		6.30E-03	2.98E-03	4.51E-04
Storage Reclaim Conveyor drop to the Loadout Conveyor (BC-10)	1.43E-06	6.77E-07	1.03E-07		6.30E-03	2.98E-03	4.51E-04
Loadout Conveyor drop to the Transfer Conveyor (BC-11)	1.43E-06	6.77E-07	1.03E-07		6.30E-03	2.98E-03	4.51E-04
Transfer Conveyor drop to the Barge Loading Conveyor (BC-12)	1.43E-06	6.77E-07	1.03E-07		6.30E-03	2.98E-03	4.51E-04

Telescope Loading Chute: $PM/PM_{10}/PM_{2.5}$					
EU ID	**Operating Parameters (tons/yr)**	**Emission Factors (lbs/ton)**		**Reference**	**Emissions (tons/yr)**
TLC-01	8,800,000	PM	1.55E-04	AP 42 Section 13.2.4.3 and enclosure control efficiencies	6.83E-01
		PM_{10}	7.34E-05		3.23E-01
		$PM_{2.5}$	1.11E-05		4.89E-02

Total Emissions: $PM/PM_{10}/PM_{2.5}$			
	Emissions (tons/yr)		
Emission Point ID	PM	PM_{10}	$PM_{2.5}$
Uncovered railcars fully loaded	0.88	0.44	0.07
Railcar Unloading Building Rotary Dump	3.19E-02	1.68E-02	3.23E-03
Railcar Unloading Building to First Unloading Conveyor (BC-0.5)	6.30E-03	2.98E-03	4.51E-04
First Unloading Conveyor to Second Unloading Conveyor (BC-1)	6.30E-03	2.98E-03	4.51E-04
Second Unloading Conveyor to Storage Transfer Conveyor (BC-04	6.30E-03	2.98E-03	4.51E-04
Storage Transfer Conveyor to Transfer Conveyor (BC-07)	6.30E-03	2.98E-03	4.51E-04
Transfer Conveyor to Tripper Conveyor for Storage (BC-08)	6.30E-03	2.98E-03	4.51E-04
Tripper Conveyor drop to Storage Pile in Storage Building #3	3.78E-04	9.54E-04	4.52E-04
Storage Pile drop to Storage Reclaim Conveyor (BC-09)	3.78E-04	9.54E-04	4.52E-04
Reclaim Conveyor to the Loadout Conveyor (BC-10)	6.30E-03	2.98E-03	4.51E-04
Loadout Conveyor to Transfer Conveyor (BC-11)	6.30E-03	2.98E-03	4.51E-04
Transfer Conveyor to Barge Loading Conveyor (BC-12)	6.30E-03	2.98E-03	4.51E-04
Barge Loading Conveyor through the Telescope Loading Chute to a Barge Hull	6.83E-01	3.23E-01	4.89E-02
Total Particulate Emissions (tons/yr):	**1.65**	**0.81**	**0.12**
Total Particulate Emissions (pounds/yr):	**3295**	**1612**	**246**

The maximum potential emissions were calculated assuming that all 8.8 million tons/year of the coal are conveyed through the maximum number of possible drop points to and from the furthest Storage Building #3. The emission factors incorporate capture and control efficiencies of enclosures and air pollution equipment where applicable. Emission factors are established by reference from the USEPA Technology Transfer Network Clearinghouse for Inventories & Emissions Factors, AP 42 website: (http://www.epa.gov/ttn/chief/ap42/).

Emission Factors Based on Coal Transfer Activity

Coal Transfer Locations [1]	Pollutant	Emission Factor (lbs/ton)
Tons of Uncovered Coal Received by Railcar	PM	2.00E-04
	PM_{10}	1.00E-04
	$PM_{2.5}$	1.50E-05
Tons of Coal Transferred From The Railcar Unloading Building Into Coal Storage Building #1	PM	1.16E-05
	PM_{10}	6.07E-06
	$PM_{2.5}$	1.14E-06
Tons of Coal Transferred From The Railcar Unloading Building Into Coal Storage Building #2	PM	1.31E-05
	PM_{10}	6.74E-06
	$PM_{2.5}$	1.25E-06
Tons of Coal Transferred From The Railcar Unloading Building Into Coal Storage Building #3	PM	1.45E-05
	PM_{10}	7.42E-06
	$PM_{2.5}$	1.35E-06
Tons of Coal Transferred From a Coal Storage Building to a Barge	PM	1.60E-04
	PM_{10}	7.56E-05
	$PM_{2.5}$	1.15E-05
Tons of Coal Transferred From The Railcar Unloading Building Directly to a Barge, Bypassing Storage	PM	1.70E-04
	PM_{10}	8.06E-05
	$PM_{2.5}$	1.24E-05

(1) Emission Factors were developed from AP-42 Section 13.2.5.5 for the loaded uncovered railcars and AP-42 Section 13.2.4.3 Predictive Emission Factor for drop points along with control and capture efficiencies.

The emission factors provided in the table above are based on coal arriving at the Coyote Island Terminal having to be transferred to one of the three coal storage buildings, transferred from a coal storage building to a barge, or transferred from the railcar unloading building directly to a barge. The emission factors for each drop and transfer point between these specified locations have been aggregated. Recordkeeping of the tons of coal transferred between these locations may be used to calculate actual particulate matter emissions. The facility will have the ability to measure the weight of coal (in tons) upon arriving at the transfer facility. There will be no weights available between or after the storage buildings. To conservatively estimate emissions the permittee must assume all coal received at the transfer facility will take the longest route prior to being loaded into a barge. Therefore, emission will be calculated assuming that all coal is transferred through storage building #3 prior to being loaded in a barge. The table below provides emission factors to determine the monthly and annual emission:

Aggregate Emission Factors based on the entire Coal Transfer Facility:

Combined Coal Transfer Emission Factors	Pollutant	Emission Factor (lbs/ton)
Emission Factors for coal received by railcar, transferred through Storage Building #3, and transferred into a barge cargo hold	PM	3.74E-04
	PM_{10}	1.83E-04
	$PM_{2.5}$	2.79E-05

Emission factors were developed from AP-42 Emission Factors Section 13.2.5.5 for the loaded uncovered railcars entering the transfer facility and AP-42 Section 13.2.4.3, Predictive Emission Factors was used to calculate emissions for all drop points within the transfer facility. The AP-42 emission factors are adjusted to incorporate established control and capture efficiencies of the controls and pollution control devices such as topping agents, wet scrubbers, and the dust suppression fogger stations.

Hazardous Air Pollutants:

Hazardous Air Pollutants Calculations		
Hazardous Air Pollutant	**Fraction of PM 1/**	**Potential to Emit (tons/year)**
Antimony	4.90E-07	6.81E-08
Arsenic	2.60E-06	3.61E-07
Beryllium	5.40E-07	7.51E-08
Cadmium	2.10E-07	2.92E-08
Chromium	6.10E-06	8.48E-07
Cobalt	1.90E-06	2.64E-07
Lead	3.00E-06	4.17E-07
Manganese	2.60E-05	3.61E-06
Mercury	1.30E-07	1.81E-08
Nickel	4.60E-06	6.39E-07
Selenium	1.10E-06	1.53E-07
Uranium	1.30E-06	1.81E-07
Total Annual HAP Emissions (tons/yr):		**6.67E-06**
Total Annual HAP Emissions (pounds/yr):		**0.01334**

1. Stricker, G.D., and Ellis, M.S., "Coal Quality and Geochemistry, Powder River Basin, Wyoming and Montana" in U.S. Geological Survey Professional Paper 1625-A, Chapter PQ, 1999, Table PQ-1. (http://pubs.usgs.gov/pp/p1625a/Chapters/PQ.pdf)

RESPONSE TO COMMENTS

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RESPONSE TO PUBLIC COMMENTS

State of Oregon Department of Environmental Quality

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I. SUMMARY

The Oregon Department of Environmental Quality released three draft permits simultaneously for public notice and comment. These permits included conditions for protecting air and water during construction and operation of a proposed coal transfer facility in Boardman, Oregon. These permits included: an Air Contaminant Discharge Permit (ACDP); an industrial Water Pollution Control Facility permit (WPCF); and a Construction Stormwater permit. These permits must be issued or assigned prior to construction of the facility.

The draft permits for the proposed Coyote Island Terminal facility in Boardman, Oregon were made available for public comment on May 31, 2013. Public hearings were held in Portland and Hermiston on July 9, 2013. The comment period was extended to August 12, 2013. DEQ received 16,515 comments on the draft permits.

- 13,321 of the comments were form letters opposed to issuing the permits.
- 2,771 of the comments were form letters in favor of issuing the permits.
- 336 people provided comments at the public hearings, some of whom also provided written comments (205 opposed and 129 in favor of issuing the permits)
- 87 people provide written comments (57 opposed and 30 in favor of issuing the permits)

Most of the comments, including the form letters, addressed three areas of general concern: 1) Global impacts related to the combustion of coal, such as greenhouse gas emissions and climate change, regional haze, mercury emissions, and other hazardous air pollutant emissions; 2) transportation issues, such as increased train traffic, locomotive and tugboat emissions, noise, spills, and fugitive dust while the coal is in transit; and 3) economic benefits associated with the project, such as jobs for Oregonians and revenue for local communities. DEQ acknowledges that these are significant concerns, but are not within DEQ's authority to address in the air and water quality permit action. To the extent possible, given DEQ's limited resources and authority, DEQ has prepared question and answer (Q&A) documents that provide general responses to these concerns. The Q&A documents along with other documents related to these permit actions are available at the following website: http://www.oregon.gov/DEQ/Pages/CoalExport.aspx

There were comments requesting that DEQ insist on state certification of the project under Section 401 of the federal Clean Water Act. A water quality certification is not a requirement for issuance of air or water quality permits for this project and has not been considered in their development. Separately, DEQ has determined that some in-water work associated with this project is likely to create water quality impacts that require implementation of best management practices to protect water quality. DEQ has requested that the U.S. Army Corps of Engineers require a Section 401 water quality certification prior to issuing a Section 10 permit for this project.

A few of the comments were related to the public hearing process. One person did not agree with the process because it prevented people from witnessing other people when they provided their comments. A couple of people thought the format was good because they could schedule the time to provide comments, which was more convenient for them. One person was concerned that DEQ lost some of the oral comment due to a problem with a recorder. DEQ contacted each person that testified and asked them to resubmit their comments by phone. The transcribed phone messages are included in the permit record.

Provided below are DEQ's responses to the specific comments for each permit. The persons or organizations that provided comments are listed in bold followed by a summary of their comments with DEQ's response provided in italics immediately following each comment.

II. WATER QUALITY WPCF PERMIT COMMENTS

Coyote Island Terminal, LLC (CIT)

1. Calibration of flow meters should be every five years instead of annually.

DEQ typically requires verification of flow meter calibration at least annually. However, if constituents in CIT's wastewater affect the calibration based on annual verification, more frequent verification may be necessary. DEQ will address that need when it arises. For now, DEQ believes that verification of flow meter calibration should remain annually.

2. Weekly logging of parameters is most sensible based on anticipated operations.

DEQ typically requires daily flows. At any time the equipment is not operating, the monitoring report can reflect that status.

3. Filter press monitoring should be per event.

DEQ supports CIT's suggestion that monitoring of the filter press should be per event. The permit will be revised to reflect that removal of a filter cake will be required to be recorded as an event.

4. DEQ should require logging filter press runs.

This comment requests clarification of what "recording of the filter press event" means. You are requesting that you log if the filter press is running. The actual wording in the permit requires the permittee to record the "Removal of filter cake from filter press." This requires the permittee record when a filter cake is removed from the press.

Confederated Tribes of the Umatilla Indian Reservation

1. The CTUIR believes the state and federal agencies with permitting authority over the proposed CIT should be analyzing the impacts of the project in a more coordinated manner.
2. The CTUIR believes that the project should not be able to move forward without a DEQ-issued Clean Water Act Section 401 Water Quality Certification from the State of Oregon for the Coyote Island Terminal.
3. Oregon must take a cumulative look at the impacts of this project rather than examining the footprint of only one element of the project in isolation.

DEQ will respond at a later date regarding the need for a 401 Certification. See also the response to comments for the Air Contaminant Discharge Permit.

Confederated Tribes and Bands of the Yakama Nation

Additionally, from our own observations, coal trains in the Columbia Gorge that use these suppression methods alone are currently releasing coal dust along and into the Columbia River, in direct violation of the Clean Water Act. To ensure that our natural and cultural resources are protected, Yakama Nation again requests that DEQ requires all coal to be 100% contained upon entering the proposed Port of Morrow facility. If DEQ has the authority to set requirements for railcars entering the site, DEQ then has the authority and responsibility to require that the mitigation measures are fully protective, not only 80% effective. Further, Yakama Nation requests that the DEQ requires Ambre Energy to apply for a Clean Water Act Section 401 Water Quality Certification from the State of Oregon for the Coyote Island Terminal.

DEQ has requested that the U.S. Army Corps of Engineers require a Section 401water quality certification for the proposed project. The scope of the certification decision is limited to the construction and operation activities associated with the proposed terminal at the Port of Morrow. See also the response to comments for the Air Contaminant Discharge Permit.

Dr. Theodora Tsongas

1. The permit needs to specifically address monitoring and treatment of topping agents and toxic substances in wastewater from this facility. Recycling of wastewater and solids must be addressed in the permit specifically.

The permit is written based on the permittee's application asserting that the wastewater and solids will be recycled and maintained within a closed loop system. CIT will have to obtain a waste characterization and approval prior to any wastewater or waste solids disposal outside the closed loop system. Schedule A, Condition 5, requires that disposal outside of the closed loop cannot occur without DEQ approval. This condition was clarified to include submittal of waste characterization as follows:

> *"All activities pertaining to the management and disposal of the authorized wastes shall be conducted in accordance with the DEQ-approved Engineering Report/Facility Plan, and any amendments approved in writing by DEQ. A waste characterization must be submitted as part of any requests to dispose of wastewater or solids outside the closed loop system."*

2. Will the wash water remove the topping agent from the surface of the coal in the rail cars? How will this wash water be treated? Will the topping agent be reapplied before the coal is loaded into the barges? If it is reapplied, who will be doing this and how will it be done?

The WPCF permit application materials indicate that all wash water is to be contained in the closed loop system. CIT will have to obtain a waste characterization and approval prior to any disposal outside the closed loop system. Language will be added in Schedule A to clarify this. Residual effects of topping agents applied prior to loading would be found when a wastewater characterization is performed.

3. Regarding the coal washing system, will the coal be wet when it is transferred to the barges (possibly increasing its weight and changing the stability of the cargo in the barges)? If it will not be wet, how will it be dried before transferring it to the barges?

The WPCF permit does not specify the moisture content of the coal during transfer to the barges. The moisture content of the coal on the barge as well as barge stability issues are beyond the scope of this permit.

4. Schedule B.1.a. The flow meter calibration should be performed more frequently than once per year. Calibration should be conducted at least monthly for the first year and every six months thereafter. For recommendations on calibration of flow meters, see website specified in comment.

DEQ typically requires verification of flow meter calibration at least annually. However, if constituents in CIT's wastewater affect the calibration based on annual verification, more frequent verification may be necessary. DEQ

will address that need when it arises. For now, DEQ believes that verification of flow meter calibration should remain annually.

5. Schedule D. Special Conditions. 2. This section is poorly written and confusing. Wastewater can be used inside and outside of the coal transfer structures. The permit must state specifically when and where wastewater can be used, if at all.

DEQ concurs and the condition was rewritten as follows:

> *"The wastewater from the clarifier must be internally recycled back into the system for dust extraction, misting, washdown, and deluge. Fogger systems are to use fresh water."*

6. Schedule D. Special Conditions. 7. Add "and to include a public review process."

The condition states that "The Department may reopen the permit, if necessary, to include new or revised discharge limitations, monitoring or reporting requirements, compliance conditions and schedules, and special conditions." Public notice and public participation requirements for permitting actions are contained in Oregon Administrative Rules (OAR). In accordance with OAR 340-045-0027, public notice and opportunity for public participation are not required for permit actions with low environmental and public health significance. On the other hand, permit actions with potentially high environmental and public health significance do require public notice and opportunity for public participation. DEQ will evaluate any modification in light of the QAR requirements. The reopener condition is standard to WPCF permits.

7. Schedule F comments regarding A.5, C.1, D.

Schedule F is not subject to editing, therefore the items in this section will not be revised. These conditions are standard to WPCF permits and include language regarding operation and maintenance of facilities, monitoring and record keeping, and reporting requirements.

8. Schedule F comments regarding C.4 – Records must be kept on site for 10 years.

DEQ intends to treat this facility similar to others. The permit requires the records to be kept for three years. DEQ knows of no extenuating circumstance that would necessitate a longer retention period.

9. The permit needs to address monitoring and treatment of topping agents and toxic substances in wastewater from this facility. Recycling of wastewater and solids must be addressed in permit specifically.

The permit is written based on the permittee's application asserting that the wastewater and solids will be recycled and maintained within a closed loop system. CIT will have to obtain a waste characterization and approval prior to any wastewater or waste solids disposal outside the closed loop system. Schedule A, Condition 5, requires that disposal outside of the closed loop cannot occur without DEQ approval. This condition was clarified to include submittal of waste characterization as follows:

> *"All activities pertaining to the management and disposal of the authorized wastes shall be conducted in accordance with the Department-approved Engineering Report/Facility Plan, and any amendments approved in writing by the Department. A waste characterization must be submitted as part of any requests to dispose of wastewater or solids outside the closed loop system."*

The document includes comments not related to the WPCF permit. These comments, such as for fire response, safety, etc., should be addressed to the appropriate responsible party.

Dr. Andy Harris

1. What is DEQ doing to assure that the proposed coal terminal will not contaminate Boardman's municipal drinking water?

Boardman obtains its municipal drinking water from groundwater wells adjacent to the Columbia River. CIT's WPCF permit application materials indicate that all wastewater will be contained within a closed loop system. Therefore, the proposed permit does not permit discharge or disposal from the system. Accordingly, CIT will have to submit a waste characterization and obtain DEQ approval prior disposal. This will be clarified in Schedule A.

2. Shouldn't we be concerned about contamination from construction of the dock, which will stir up toxic sediments?

Water quality impacts from in-water work during dock construction is beyond the scope of DEQ's WPCF permit authority. DEQ has requested that the U.S. Army Corps of Engineers require a Section 401water quality certification for the proposed project. The scope of the certification decision is limited to the construction and operation activities associated with the proposed terminal at the Port of Morrow.

3. Has DEQ tested for PCBs, pesticides and radioactive isotopes in the riverbed?

Evaluation of constituents in the riverbed is not part of the WPCF permitting process, thus was not investigated. Entities that do not discharge to surface water apply for WPCF permits. Please see our website for possible riverbed sample results in our databases, specifically for cleanup projects.

4. What will be the impact on drinking water from diesel pollution from the barges?

Diesel pollution from barges is prohibited by Oregon Revised Statute (ORS) 468B.025. Evaluation of impacts to drinking water systems by river traffic is outside the scope of the proposed WPCF permit.

5. Wouldn't it be prudent to study the health impact of toxic coal dust spilled into the water during the loading of barges?

Discharge of coal dust to the river is prohibited by Oregon Revised Statute (ORS) 468B.025 and it is not permitted by the proposed WPCF permit.

6. Is there an alternative drinking water supply should this source be contaminated?

The WPCF permit is a non-discharging permit, therefore, surface water and groundwater are not allowed to be impacted by the facility's wastewater system. Investigation of alternative drinking water supplies is not part of the WPCF permitting process.

Tom Ehrlichman Salish Community Strategies

1. Your air quality and water quality permits fail to regulate air and water quality pollutants from fugitive coal dust emissions during ship loading.

The WPCF permit is a non-discharging permit; however, DEQ agrees that it would be clearer if there was a condition in the permit that specifically prohibited discharge of coal and coal dust to the river during barge loading. Therefore, the following condition will be added to the permit.

> *"Discharge of coal and coal dust to the Columbia River from the CIT coal transfer facilities at Port of Morrow is prohibited."*

2. DEQ is approving an unauthorized "take" of endangered species if it issues air quality, water quality and stormwater permits.

The WPCF permit prohibits discharge to waters of the state, including discharge of coal and coal dust.

Alexandra Amonette

1. The proposed terminal poses risk to the groundwater and soil. The WPCF permit makes no mention of effluent treatment due to wet scrubber and fire suppression waste water.

The facility's wastewater system recycles wastewater in a closed loop. No discharge is allowed, therefore, groundwater and soil will not be impacted. Within the system, wastewater collects in sumps and is transferred to a central washdown collection sump. From there, it is pumped through a flocculator to help settle the coal particles, and then it is sent to a clarifier. Clarified wastewater will flow to a process water tank and recycle back through the system to the scrubbers and washdown systems. Also, this system will be designed to accommodate a deluge event resulting from activation of the fire suppression system.

2. The proposal states that each storage building is to have five (5) wet scrubbers. Wet scrubbers corrode, and if there were a fire, there is no mention of fire suppression. Based on using the latest mercury speciation methods to sample several full-scale scrubbers, it's been shown that wet scrubbers effectively capture almost all of the soluble oxidized mercury but capture little if any of the elemental mercury. If wet scrubbers are to be considered an effective control method, the mercury must be in oxidized form before it reaches the scrubber. The mercury the coal is present as a sulfide, not oxidized. Therefore, the wet scrubbers will be ineffective.

The wastewater system provides water to the fire suppression system. However, the adequacy of the fire suppression system is beyond the scope of this wastewater permit. Moreover, the effectiveness of the wet scrubbers is outside the scope of this wastewater permit, as well.

3. Does DEQ know if coal pollution will dirty the local drinking water source in Boardman? Is DEQ planning to regulate coal pollution from trains? What if coal chunks are falling out of trains and into the Columbia River or local creeks and wetland en route from Wyoming and Montana? The McNary National Wildlife Refuge, the Irrigon Fish Hatchery and numerous others wetlands, sloughs, and natural areas are located within 10 miles of the proposed facility. Again millions of dollars of taxpayer's money has been expended on restoring salmon. Why permit a facility whose very activities will endanger salmon and steelhead?

Boardman obtains its municipal drinking water from groundwater wells adjacent to the Columbia River. CIT's WPCF permit application materials indicate that all wastewater will be contained within a closed loop system. Therefore, the proposed permit does not permit discharge or disposal from the system. Accordingly, CIT will have to submit a waste characterization and obtain DEQ approval prior disposal. This will be clarified in Schedule A. The WPCF permit does not regulate rail cars during transport; it covers only the wastewater system at the proposed coal transfer facilities. Discharge of coal dust to the river is prohibited by Oregon Revised Statute (ORS) 468B.025 and it is not permitted by the proposed WPCF permit.

4. DEQ could and should require a Clean Water Act section 401 certification to evaluate the water quality impacts of the entire coal project – from mining to shipping to burning to aerial deposition – examine the impacts of coal dust, barges, a new dock, and ships on salmon, river life, surrounding riparian and uplands. OR DEQ should determine if Ambre's entire project complies with Oregon's Water quality standards. For air, OR DEQ should wait for full federal analysis and evaluate the air impacts from the Port Westward end of the project before making its final determination for the proposed Port Morrow Ambre facility.

DEQ has requested that the U.S. Army Corps of Engineers require a Section 401water quality certification for the proposed project. The scope of the certification decision is limited to the construction and operation activities associated with the proposed terminal at the Port of Morrow. Air quality impacts are beyond the scope of the proposed wastewater permit.

5. To summarize this comment, Ambre has violated the Clean Water Act at the Decker Mine in Montana. The company is causing material damage to the hydrologic balance, and is in violation of environmental laws. I

strongly urge OR DEQ to contact the Western Environmental Law Center, Montana Environmental Information Center, and the Sierra Club and find out about Ambre and other coal mining companies operating in Montana and Wyoming and how they are destroying the environment there.

The proposed wastewater permit is based on the proposed activity at the Boardman site and Oregon environmental laws.

6. The remaining comments concern fire, combustion, barge accidents, impacts to local and global agricultural and industry.

The WPCF permit regulates the wastewater system, which does not discharge to surface or groundwater.

Many other comments were included regarding coal transportation, burning of coal, mining, climate change, etc. These are not addressed as they do not pertain to the WPCF permitting process as outlined in Oregon Administrative Rules.

Hellene Chapman

The commenter requests a 401 certification and to evaluate the impacts of the coal on the river.

DEQ has requested that the U.S. Army Corps of Engineers require a Section 401water quality certification for the proposed project. The scope of the certification decision is limited to the construction and operation activities associated with the proposed terminal at the Port of Morrow. Also, the facility is prohibited from discharging to surface water, therefore evaluation of a surface water discharge is not required.

Susan Applegate

The commenter requests a 401 certification and to evaluate the impacts of the coal on the river.

DEQ has requested that the U.S. Army Corps of Engineers require a Section 401water quality certification for the proposed project. The scope of the certification decision is limited to the construction and operation activities associated with the proposed terminal at the Port of Morrow. Also, the facility is not allowed to discharge to surface water or groundwater, therefore, an evaluation of the impact to waters of the state is not required.

Claudia Keith

1. Coal is toxic and DEQ should stop toxic pollution. (DEQ shouldn't allow dust from trains/terminals to pollute river and lungs)

Discharge of coal dust to the river is prohibited by Oregon Revised Statute (ORS) 468B.025 and it is not permitted by the proposed WPCF permit. Airborne coal dust is regulated under the Air Quality permit.

2. It is foolish for DEQ to only look at one small part of the coal export project – the coal storage site at the Port of Morrow. (more questions/comments that DEQ should consider: uncovered coal trains spilling coal dust into river, new coal dock would harm salmon, impact of increased barging on river, air/water impacts of other coal terminals where coal is transferred from barge to ship, this terminal is proposed in a salmon nursery 219 miles downstream from Port of Morrow at Port Westward, impacts of new coal barges on scenic area and coal ships on estuary)

DEQ does not permit the discharge of coal or coal dust to the river. It is prohibited by Oregon Revised Statute (ORS) 468B.025 and it is not permitted by the proposed WPCF permit.

3. Instead of putting on blinders and ignoring the full impacts, DEQ should require a Clean Water Act 401 certification to consider all of the impacts of Ambre's coal – from the trains to the ships. (more

questions/comments that DEQ should consider: DEQ can require a 401 cert. for entire project from train to ship, under Section 401, DEQ can evaluate entire project's complying with water quality standards, notify Ambre that 401 is necessary for dock at Port of Morrow, DEQ gives Ambre free pass by waiving 401 cert., DEQ doesn't want to know full impacts, DEQ waiving 401 cert. that would protect river from coal.)

DEQ has requested that the U.S. Army Corps of Engineers require a Section 401water quality certification for the proposed project. The scope of the certification decision is limited to the construction and operation activities associated with the proposed terminal at the Port of Morrow.

4. Without 401 certification, there are large gaps in government review. (more questions/comments that DEQ should consider: Who will check if coal barges will harm the river – Army Corps will not review and responding to spills is not enough, who will evaluate the impact of ships and barges in the salmon nursery at Port Westward)

DEQ has requested that the U.S. Army Corps of Engineers require a Section 401water quality certification for the proposed project. The scope of the certification decision is limited to the construction and operation activities associated with the proposed terminal at the Port of Morrow.

5. Oregon should not piecemeal coal permits. (more questions/comments that DEQ should consider: The Oregon Department of State Lands made the prudent decision to require the full analysis of impacts before issuing any permits. Why is DEQ plowing ahead? The State should act in a coordinated manner.)

When DEQ receives an application for a wastewater permit, we must evaluate the discharge against environmental rules and issue a permit if certain criteria are met. Each agency processes their respective applications according to their regulations.

Jessica Yarnall Loarie, Sierra Club

1. DEQ should require a 401 water quality certification

DEQ has requested that the U.S. Army Corps of Engineers require a Section 401water quality certification for the proposed project. The scope of the certification decision is limited to the construction and operation activities associated with the proposed terminal at the Port of Morrow.

2. DEQ should deny the Water Pollution Control Facilities Permit and Construction Stormwater Permit

DEQ permits wastewater facilities within the context of the rules and statutes that apply to DEQ and to the proposed facilities. If Ambre meets all of the legal requirements, DEQ will issue the WPCF and construction storm water permits.

Regna Merritt, Oregon Physicians for Social Responsibility

1. A health impact assessment

A health impact assessment is beyond the scope of the proposed wastewater permit.

2. An analysis by the DEQ Drinking Water Program of potential threats associated with this facility and this project to the drinking water source, including water quality and water quantity, for residents and businesses of the City of Boardman.

Boardman obtains its municipal drinking water from groundwater wells adjacent to the Columbia River. CIT's WPCF permit application materials indicate that all wastewater will be contained within a closed loop system. Therefore, the proposed permit does not permit discharge or disposal from the system. Accordingly, CIT will have to submit a waste characterization and obtain DEQ approval prior disposal. This will be clarified in Schedule A.

3. 401 certification; a site-specific environmental impact statement; a regional environmental impact statement

DEQ has requested that the U.S. Army Corps of Engineers require a Section 401water quality certification for the proposed project. The scope of the certification decision is limited to the construction and operation activities associated with the proposed terminal at the Port of Morrow.

Lauren Goldberg, Columbia Riverkeeper

1. 401 certification request

DEQ has requested that the U.S. Army Corps of Engineers require a Section 401water quality certification for the proposed project. The scope of the certification decision is limited to the construction and operation activities associated with the proposed terminal at the Port of Morrow.

2. The application materials submitted by Ambre are incomplete, because it has failed to document how and when it would drain the closed loop system and how that wastewater would be managed.

Ambre Energy has been advised that the completely closed loop system will be permitted as such – no discharge of any kind will be allowed outside of the closed loop system. The engineering plans for the system will be reviewed prior to installation, and part of the review will be to ensure that this condition is met. Engineering plans are not required at time of application, but these discussions have occurred.

3. Constituents in coal and associated wastewater are a threat to human health and the environment.

The facility is not allowed to discharge to surface water or groundwater.

4. The permit should require Ambre to monitor the total flow and volume of water drained from the process wastewater system.

The facility is not allowed to discharge to surface water or groundwater. Therefore, a discharge monitoring requirement is inconsistent with the express prohibition in the permit.

5. The permit should require Ambre to monitor the total mass of coal dust collected at the clarifier.

Regarding coal dust in the wastewater, the clarifier underflow, consisting of thickened slurry, will be pumped to a clarifier and plate and frame filter press where excess water will be separated and coal particles will be placed back onto the conveyor as product. The permit requires monitoring of the number of filter cakes removed from the filter press. Volumes/weights can be calculated from the results, but won't be required to be performed for monitoring purposes.

6. The permit should require Ambre to characterize and monitor the wastewater filter cakes.

The solids from the filter press will be pressed into a cake that is dewatered. The cake will be deposited on the load-out conveyor for export as part of the product stream. This WPCF permit will regulate the wastewater created at the facility, not the exported product. In the case of a spill at the site, the discharge will be considered a violation of the permit. Proper spill response actions will be expected.

7. The language of Schedule A.2 should be changed.

This condition reads as follows: "There will be no discharge allowed from the closed loop system other than to be used as recycled water within the enclosed system to be re-collected into the wastewater system." It specifically

requires the wastewater to be maintained within the closed loop wastewater system, not allowing it to be held otherwise in holding tanks, tanker trucks, or some other manner of holding tank. Therefore, this condition will remain.

8. Schedule B.1 should be amended to require more frequent equipment calibration.

DEQ typically requires verification of flow meter calibration at least annually. However, if constituents in CIT's wastewater affect the calibration based on annual verification, more frequent verification may be necessary. DEQ will address that need when it arises. For now, DEQ believes that verification of flow meter calibration should remain annually.

9. DEQ should clarify the requirement of Schedule D.2.

DEQ concurs and the condition was rewritten as follows:

> *"The wastewater from the clarifier must be internally recycled back into the system for dust extraction, misting, washdown, and deluge. Fogger systems are to use fresh water."*

10. DEQ should clarify that it will comply with the requirements of OAR 340-045-0055 if it reopens the permit.

The condition states that "The Department may reopen the permit, if necessary, to include new or revised discharge limitations, monitoring or reporting requirements, compliance conditions and schedules, and special conditions." Public notice and public participation requirements for permitting actions are contained in Oregon Administrative Rules (OAR). In accordance with OAR 340-045-0027, public notice and opportunity for public participation are not required for permit actions with low environmental and public health significance. On the other hand, permit actions with potentially high environmental and public health significance do require public notice and opportunity for public participation. DEQ will evaluate any modification in light of the QAR requirements. The reopener condition is standard to WPCF permits.

11. DEQ should commit to processing any transfer of the permit as a Category III action.

Permitting actions will be processed according to the rules outlined in OAR 340-045, which may or may not require a Category III action.

12. Ambre must allow inspection at all times.

This comment refers to Schedule F, Section C, Condition 1. Schedule F is not subject to editing, therefore the items in this section will not be revised. These conditions are standard to WPCF permits and include language regarding operation and maintenance of facilities, monitoring and record keeping, and reporting requirements.

13. Ambre should be required to retain records for ten years at the site.

This comment refers to Schedule F, Section C, Condition 4.

> *"The permittee must retain records of all monitoring and maintenance information, including all calibrations, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. The Department may extend this period at any time."*

DEQ knows of no extenuating circumstance that would necessitate a longer retention period.

14. The permit should require immediate reporting of noncompliance that endangers health or the environment.

Schedule F, Section D, Condition 4 meets this request. The condition is as follows:

"The permittee must report any noncompliance that may endanger health or the environment. Any information must be provided orally (by telephone) within 24 hours from the time the permittee becomes aware of the circumstances, unless a shorter time is specified in the permit. During normal business hours, the Department's Regional office must be called. Outside of normal business hours, the Department must be contacted at 1-800-452-0311 (Oregon Emergency Response System)."

III. WATER QUALITY STORM WATER PERMIT COMMENTS

Columbia Riverkeeper

1. To the extent that Ambre revises its draft ESCP, we request that DEQ re-notice and re-open the public comment to provide the public an opportunity to comment on a complete ESCP for the Morrow Pacific Project.

DEQ is not obligated under Rule to re-post or re-notice revised Plan. DEQ appreciates comments that may have identified the need for added information to the ESCP. OAR 340-011-0330 gives any concerned party the right to review records at any time. Also, all revised permits and ESCP will be posted to the Coal Export Project page on the DEQ website.

2. The ESCP fails to address whether stormwater will discharge to the shallow underlying aquifer. Has Ambre provided DEQ with any analysis of whether stormwater will discharge to groundwater?

The permit is a National Pollutant Discharge Elimination System general permit for construction activities that may discharge to surface waters or conveyance systems leading to surface waters of the state. The permit ensures proper handling of pollutants and allows for infiltration of potentially turbid stormwater. DEQ does not anticipate groundwater contamination from construction discharge.

Stormwater Discharge General Permit	Comment	DEQ Response
Schedule A.7.a.i.	The company's Erosion and Sediment Control Plan (ESCP) "assume[s] 'dry weather' construction. Under Schedule A.7.a.i., Ambre's ESCP must describe Wet Weather BMPs. See Schedule A.7.a.i. ("Avoid or minimize excavation and bare ground activities during wet weather."). As noted above, Ambre's ESCP addresses exclusively dry weather conditions. Based on Ambre's proposed construction timeframe, however, the ESCP must include wet weather BMPs.	*The ESCP has been revised and no longer states "These erosion and sediment control plans assume 'dry weather' construction." The ESCP as designed meets the conditions of the permit and specific language under Schedule A.7.a.i.*
Schedule A.12.b.iv.2.	Overall, the ESCP fails to meet the minimum requirements of DEQ's 1200-C Permit. For example, the 1200-C Permit requires a "Narrative Site Description," which includes a "[p]roposed timetable indicating when each erosion and sediment control BMP is to be installed and the duration that it is to remain in place." 1200-C Permit at Schedule A.12.b.iv.2. The ESCP lacks this fundamental element	*The Plan includes an implementation schedule for BMP installation. This table is not complete as the timeline for construction is unknown. The Plan states "Detailed BMP implementation schedule will be provided prior to beginning of construction."*

Stormwater Discharge General Permit	Comment	DEQ Response
	of the ESCP.	
Schedule A.12.b.v.3.	Specifically, the ESCP fails to identify: "Areas used for the storage of soils and wastes[,]" required under Schedule A.12.b.v.3.g.	*A note has been added to Figure 5 of the Plan showing soil stockpile area, storage area and concrete equipment washout.*
Schedule A.12.b.v.	Specifically, the ESCP fails to identify: "Drainage patterns before and after finish grading," required under Schedule A.12.b.v.	*Figure 4, the existing site plan, and Figure 5, the proposed site plan, includes slope arrows, depressions and topographic contour lines showing drainage patterns pre and post construction.*
Schedule A.12.b.v.3.j.	Specifically, the ESCP fails to identify: "Temporary and permanent stormwater conveyance systems," required under Schedule A.12.b.v.3.j.	*Figure 5, the proposed site plan, includes bioswales. These retention areas will collect stormwater from roof drains on building 1. There will be a piped system to convey roof water to bioswales for retention and infiltration. During construction, runoff will be confined to site and accumulate in the existing depression or percolate into the ground.*
A.12.b.v.3.g.	Specifically, the ESCP fails to identify: "All erosion or sediment control measures or structures," required under Schedule A.12.b.v.3.g.	*The revised ESCP addressed the comments received during the extended public notice and meets the conditions of the permit.*

Alexandra Amonette

Stormwater Discharge General Permit	Comment	DEQ Response
Schedule A.12.v.2.	The drawings in the permit and map are not up-to-date. They do not show all of the roads and existing buildings located near the proposed facility. How are other industries in the vicinity supposed to know about the proposed construction site if the roads are not clearly identified? Have these companies even been notified about the Ambre proposed facility?	*The permit requires the site map to show sufficient roads and features for DEQ or Agent to locate and access the site. Figure 3 of the facility's ESCP clearly meets this condition for DEQ to locate the proposed development.* *The Morrow County Planning Director has approved the land use outright under Section 3.073 port industrial ordinance. DEQ held three public information meetings, although we did not directly notify any surrounding companies.*
Schedule A.12.b.iv.2.	Overall, the ESCP fails to meet the minimum requirements of DEQ's 1200-C Permit. For example, the 1200-C Permit requires a "Narrative Site Description," which includes a "[p]roposed timetable indicating when each erosion and sediment control BMP is to be installed and the duration that it is to remain in place." 1200-C	*The Plan includes an implementation schedule for BMP installation. This table is not complete as the timeline for construction is unknown. The Plan states: "Detailed BMP implementation schedule will be provided prior to beginning of construction."*

Stormwater Discharge General Permit	Comment	DEQ Response
	Permit at Schedule A.12.b.iv.2. The ESCP lacks this fundamental element of the ESCP.	
Schedule A.7.b.ii.	Based on recent experience with seeing topsoil excavated and dirt being shoveled at a huge construction site in Umatilla, I can attest to the fact that windblown dust from construction activities occurs even if a person is on the waterer truck and wetting the dirt frequently. The wind in this part of the world blows dust and dries out wetted soil very quickly (in the time of a half hour lunch break, for example). Since this site is so close to the river, there is a danger that dust will get into the water, cover plants, shallow water macroinvertebrates and get into the water column and mother macroinvertebrates through siltation. It can also blow a cross roads, pose a traffic hazard, cover vegetation, harm nesting birds, and affect other facilities located nearby.	*DEQ agrees that soils are prone to wind erosion at the proposed industrial port. Next to all disturbed areas adjacent to the river the ESCP requires installation of a sand fence and a silt fence. The permit conditions require the permittee to prevent sediments on public roads and use water or soil-binding agents or other dust control technique as need to avoid wind-blown soil. The Plan on Figure 5 includes the statement: "Lewis and Clark Drive and Dewey West Lane shall be cleared of significant windblown soils at the end of each workday."*

Dr. Theodora Tsongas
The ground water and drinking water aquifer for the City of Boardman is fed by the Columbia River. The Columbia River is also stated in the permit to be the "receiving water body" for any construction site runoff. This is unacceptable as any release can be a threat to the local limited and very fragile drinking water supply. Allowing percolation of site runoff into the ground is unacceptable for the same reason.
DEQ does not anticipate groundwater or drinking water contamination from construction runoff. The site must control solid waste and any hazardous materials through applicable Best Management Practices. These include: written spill prevention and response procedures, employee training on spill prevention and proper disposal procedures, spill kits in all vehicles, regular maintenance schedule for vehicles and machinery, material delivery and storage controls, signage and covered storage areas for waste supplies.

IV. AIR CONTAMINANT DISCHARGE PERMIT COMMENTS

Earthrise

1. The permit must be denied because the proposed facility will cause violations of the NO_x and $PM_{2.5}$ National Ambient Air Quality Standards (NAAQS).

DEQ disagrees that the facility addressed by the draft permit will cause a violation of any NAAQS. The permit review report includes an estimate of the projected emissions from the facility. The emission estimates for course and fine particulate matter are less than 1 ton per year. The facility for which a permit has been requested does not include activities that will emit other pollutants for which a NAAQS has been established. Based on the fine and course particulate matter emission estimates, air dispersion modeling is not required and it is not reasonable to assume that emissions less than 1 ton per year would cause a violation of the NAAQS. The emissions are primarily "fugitive" emissions generated by meteorological conditions that are the opposite of conditions that occur during poor air quality events (i.e., high winds versus stagnant air conditions).

2. DEQ cannot issue the ACDP because the facility is a federal major source that requires a permit.

DEQ disagrees that the facility being permitted is a federal major source. Given the location of the proposed facility and the type of source, there would have to be potential emissions of 250 tons per year of at least one regulated pollutant for the source to be considered a federal major source (see definition of "federal major source" in OAR 340-200-0020). The permit review report includes an estimate of the projected emissions from the facility. The emission estimates for course and fine particulate matter are less than 1 ton per year. The facility does not include activities that will emit other regulated pollutants.
The commenter argues that particulate matter emissions have been underestimated because incorrect wind data and assumptions were used in the calculations. DEQ disagrees. The basis for the emission estimates are provided in the review report. DEQ used meteorological data from 1995 because it is the best available data for the site. The data was collected using DEQ approved monitoring procedures for permitting the PGE Coyote Springs plant which is very close to the proposed facility. Other data sets were considered, but were collected from sites farther from the the proposed site and may not have been collected in accordance with DEQ procedures.
DEQ used the average 24-hour maximum wind speed to calculate the annual emissions because the coal at the site will be subject to the average and not the maximum wind speed during the course of a year. Not all of the 8.8 million tons of coal will be on site during maximum wind conditions. Wind can generate fugitive emissions when it comes in contact with the coal. Sometimes the winds will be high and sometimes there will be no wind at all. The amount of coal exposed to the wind at any given time depends on the activity. Most of the activities are not affected by wind because they occur inside enclosures. The barge loading operation and open railcars are only partially enclosed. For these emission sources, DEQ used the 24-hour maximum wind speed has a conservative approach to estimating the emissions. When considering the total amount of coal handled throughout the year, it is conservative to use the average of the maximum 24-hour wind speeds to estimate the emissions.

For the unloaded railcars, DEQ calculated the emissions based on one wind erosion event per railcar using the average of the 24-hour maximum wind speeds. In addition, the emission factor is only applied to the surface layer of the coal in the coal cars that will be exposed to the wind. Although the loading profiles and topping agents applied when the coal is loaded into the railcars will minimize emissions at the site, it is possible that some loose/fine coal will accumulate at the surface due to the eddy effects of the wind passing over the railcars (i.e., the transit is equivalent to one wind disturbance). While in transit, the winds are essentially in one direction. When the railcars are on site, winds from other directions will blow across the surface of the railcars potentially picking up material built up in transit. DEQ acknowledges that this is a conservatively high estimate, but at the same time, contends that it is not reasonable to conclude that there will be zero emissions from the railcars while on site.

The commenter argues that engine emissions from the tugboats and locomotives used to transport coal to and from the facility should be included in the source's potential emissions for purposes of determining whether it is a federal major source. As stated in the review report, the engine emissions are secondary emissions that do not count

towards the federal major source determination. The definitions of a "federal major source" and "secondary emissions" are contained in OAR 340-200-0020.
Since the source is not a federal major source, the prevention of significant deterioration (PSD) requirements contained in OAR 340-224-0070 do not apply to this permitting action. The requirement for establishing Plant Site Emission Limits (PSELs) for minor sources in OAR 340, division 222 apply to this source.

3. The permit does not include all necessary conditions and must be revised to be practically enforceable. The permit should include monitoring and recordingkeeping requirements as prescribed in the Oregon Title V Operating Permit program.

DEQ does not agree that the monitoring requirements of the nationally developed Title V permitting program for major sources should be applied to the state's ACDP program for minor sources. The general comments regarding terms and phrases used in the permit have been considered and some revisions have been made to the permit to strengthen the enforceability of the permit. Provided below are responses to the comments for specific conditions in the permit:

Draft ACDP Condition #	Comment	DEQ Response
3.1.a	The ACDP says that the permittee must monitor the fugitive emission conditions outlined in section 2.3. The ACDP fails to specify information necessary to carry out this monitoring. The ACDP does not indicate when, what or how monitoring should occur. The ACDP must include these monitoring requirements so that it can be practically enforceable.	*Condition 5.1 requires an initial performance test. Condition 5.2 requires periodic monitoring. Condition 3.1.a requires the permittee to develop additional monitoring for the activities identified in condition 2.3 as part of the work practices plan.*
5.2.b	The ACDP requires that at least one of the three required observation periods be done while the chute is retracted, but does not require one of the tests to be completed while the chute is down. It is important to ensure that there are no excess emissions occurring when the chute is up and down. For this reason, the ACDP should require at least one test when the chute is retracted and one test when the chute is down.	*The testing must be performed while coal is being loaded into the barge. In order to load coal into the barge, the chute must be in the lowered position. DEQ is requiring that one of the observations be made when the chute is retracted to ensure that there is not any residual coal being emitted during the movement of the chute.*
5.3	The ACDP requires daily observations and recordings of the scrubber system flow rates and pressure readings during active operations. However, the ACDP does not state limits for the flow rates and pressure. Simply observing and recording what the rates are will not ensure that the system is operating within the permitted parameters.	*Condition 3.1.f requires the permittee to establish management and operating procedures for ensuring that all emissions originating within a storage building exit though a properly functioning wet scrubber system. In response to this comment DEQ has revised condition 3.1.e to add minimum scrubber parameters that must be addressed in the Best Management Practices Plan.*
5.2	Condition 5.2 fails to specify what test must be used to monitor visible emissions. The EPA requires a permit to specify what type of test should be used for monitoring. Though section 5.2(a) hints that the appropriate test may be EPA Method 9, the ACDP must clearly state whether this test or some other test is required. However, Method 9 would not be effective.	*A test method is not specified for the surveys required by this monitoring condition because the observer is not required to quantify the visible emissions nor document the duration of the visible emissions. The condition requires corrective action if there are any visible emissions observed for more than 30 seconds during the observation period. The condition*

Draft ACDP Condition #	Comment	DEQ Response
	To begin with Method 9 does not work at night. Thus, approximately half the time, the source will be unmonitored. But worse, Method 9 does not work with it is raining or snowing. Thus, monitoring using Method 9 would result in very little monitoring and thus lack a practical enforceability.	*does require the observer to have a basic understanding of how visible emissions should be observed as provided in EPA Method 9. This is monitoring that must be conducted during "active operations". DEQ has added a provision that the surveys must be conducted during daylight hours.* *DEQ acknowledges that visible emissions monitoring will not be conducted during the night time hours, but the conditions that cause fugitive emissions (i.e., high winds) generally occur during the daytime so monitoring at night is not as important as monitoring during the daylight hours.*
5.1.c	Section 5.1(c) requires that all tests in the section must be performed when coal is being handled within the emissions source. The ACDP fails to specify how coal must be handled during a test. The permittee could thus choose to do its tests only during the lightest days of the week, which would lead to inaccurate information. The ACDP should include a requirement that tests conducted during times of operation with maximum capacity. Similarly, section 5.2(b) requires that test be done while coal is being loaded into a barge without specifying how much coal should be loaded for a test. The ACDP should specify that these tests should be conducted during times of operation with maximum capacity.	*DEQ does not believe it is necessary to specify an operating rate for when monitoring should be conducted. Movement of coal at any rate can generate emissions, but it is most likely that the rate of coal movement will not vary significantly. It is essentially an on or off operation. However, DEQ's Source Sampling Manual requires that tests be performed while the source is operating at normal production rates. (DEQ 1992 Source Sampling Manual section 2.2.c)*
General monitoring comments	A practically enforceable permit must include a requirement that a source be constructed to accommodate the required monitoring. The ACDP does not include such a requirement for any of its monitoring requirements. The ACDP should include this requirement.	*DEQ does not agree that the permit should include special conditions for accommodating the monitoring required by the permit. Visible emissions can be observed from just about any location provided the observer has the sun at their back and can see the emissions activity. In addition, monitoring wet scrubber parameters can be done remotely using electronic equipment.*
	The ACDP fails to include any requirement for regulatory personnel to witness monitoring. DEQ claims its personnel will witness monitoring. The ACDP must include requirements for regulatory personnel to witness monitoring.	*Condition 5.1 requires notification of the initial compliance test. DEQ will observe the test if personnel are available. DEQ tries to observe as many compliance source test as possible, but due to limited resources, it is not possible to observe all tests. As stated in the review report DEQ has committed to inspecting this facility at least twice in the first year of operation. During the inspection, DEQ will review the monitoring data and procedures and witness monitoring if performed during the inspection.*

Draft ACDP Condition #	Comment	DEQ Response
General recordkeeping comment	A critical aspect of a practically enforceable permit is that the requirement may be verified. Proper recordkeeping in accordance with ACDP conditions allows DEQ and the public to verify that monitoring requirements and emission limitations are being complied with. The ACDP fails to require any recordkeeping for 5.1(b). The ACDP should require recordkeeping of the monitoring in 5.1(b) so that these requirements can be verified and therefore practically enforceable.	*Condition 5.1.d requires the permittee to submit a test report to DEQ for the testing required by conditions 5.1.a and 5.1.b. Once the report is received by DEQ, it is a document that is available to the public. Depending on the size of report, DEQ can make the report available electronically, or anyone can visit the DEQ office to review the report and obtain a copy. Anyone that would like to obtain a copy of the report must submit a records request to DEQ.*
2.3(b)	Section 2.3(b) requires fugitive dust be "adequately" controlled at all times, but fails to define adequate. "Adequateness" is completely subjective and therefore it cannot be practically enforced. The ACDP must define what adequate means in the context of controlling fugitive dust emissions.	*Condition 5.2 is the monitoring for condition 2.3.b. As such, "adequate" is either "no visible emissions" or visible emissions that have been corrected right away. Ongoing visible emissions are not "adequate", which is why condition 5.2.a.vi and 5.2.b.vi require the permittee to notify DEQ of visible emissions that continue for more than 24 hours.*
3.1(c) and (j)	In section 3.1(c) and (j), the ACDP requires "routine" inspections but fails to define routine. Routine could mean every day or every month, or something in between. Without definition, the permittee cannot know how frequent their inspections must be, and the inspections – performed at some unknown interval – may not prevent the migration of coal materials offsite. The ACDP must define the frequency of "routine".	*The permittee is required to submit the Best Management Practices Plan before beginning operations. The permittee must identify how often they will do the inspections based on their knowledge of the process and design. Once the facility begins operating, the periodic monitoring required by condition 5.2 will be used to determine whether the inspection frequency is sufficient. Condition 3.1.k requires an annual review and update of the best management practices plan. DEQ will review the plan with the permittee during inspections.*
6.1(h)	In section 6.1(h), the ACDP requires the permittee to submit a plan as "expeditiously as possible" if certain preventative measures do not prevent fugitive emissions. This phrase is too vague to be practically enforceable. If the permittee determines that the soonest the plan can be submitted is six months from the finding of a problem because the facility fails to employ sufficient or qualified workers, the only way DEQ could enforce this requirement is through costly litigation over what as "expeditiously as possible" means. The ACDP must give the permittee a clear deadline for the submission of the plan.	*DEQ agrees, but it is not possible to determine a "clear deadline" for implementing the plan because it will depend on the plan. DEQ has added a provision for implementing the plan "in accordance with a schedule approved by DEQ".*
8.1(b)	Section 8.1(b), requires the permittee to notify DEQ during non-business hours if excess emissions are of "a nature that could endanger public health." The permittee cannot be expected to define what could endanger the public health. If the permittee wrongly	*This provision is taken directly from DEQ's excess emissions rules - OAR 340-214-0330(1)(b).*

Draft ACDP Condition #	Comment	DEQ Response
	determines that an emission does not endanger the public health, the public health will be endangered until DEQ business hours resume. For this reason, the ACDP must clearly define when excess emissions would be of a nature that could endanger public health so that the permittee is clearly aware of when it must report excess emissions.	

4. Ambre must not construct the Port Westward portion of the project without an ACDP.

DEQ acknowledges this comment, but it does not relate to the draft permit for the Coyote Island Terminal.

Columbia Riverkeeper

These comments relate to the water quality permits. Please refer to Section II of this document.

Sierra Club

1. The permit should be denied because the facility will cause violations of the $PM_{2.5}$ and NO_2 ambient air quality standards.

See response to similar comment provided by Earthrise.

2. The proposed facility is a "major source".

See response to similar comment provided by Earthrise.

3. The permit lacks minimum enforceability requirements.

See response to similar comment provided by Earthrise.

4. The Port Westward facility must not be constructed without an ACDP.

See response to similar comment provided by Earthrise.

Oregon Physicians for Social Responsibility (OPSR) and Theodora Tsongas, PhD, MS

1. Position paper on coal export facilities.

DEQ acknowledges the position of OPSR.

2. DEQ should require a Health Impact Assessment.

This is not a requirement of the ACDP program for minor sources.

3. DEQ should require an Environmental Impact Statement.

This is not a requirement of the ACDP program for minor sources.

4. OPSR incorporated by reference the comments submitted by OPSR on December 20, 2012, Columbia Riverkeeper on August 9, 2013, Sierra Club on August 12, 2013, and Earthrise on August 12, 2013.

See response to those comments.

5. The emission factor calculations based on average constant wind speed are inadequate.

See response to similar comments provided by Earthrise.

6. The wind speed collection data is nearly 20 years old.

See response to similar comment by Earthrise.

7. Comments on specific permit conditions:

Draft ACDP Condition #	Comment	DEQ Response
2.3.a	Revise condition to read as follows: Treat all areas of plant site….	*This condition is included to specifically address dust that may be generated from vehicles traveling on paved and unpaved roads.*
2.3.e	Add: "….and report spill or upset to DEQ immediately. The permittee should also immediately notify the Oregon Health Authority, the City of Boardman, and residents of the area.	*This condition addresses spills that occur on site. The permit requires the permittee to clean up the spills immediately to prevent the material from migrating offsite. Spills are not necessarily excess emissions. If they become excess emissions, then condition 8.1 requires the permittee to notify DEQ within 1 hour. There is no regulatory requirement for the permittee or DEQ to notify the public of an excess emission unless the excess emission is of a nature that could endanger public health (see condition 8.1.b).*
2.4	Particulate matter fallout: This section is inadequately worded to provide for control or prevention of contamination. The permit appears to use only visible emissions to monitor for particulate matter that is not visible. This section is completely inadequate to prevent exposure to $PM_{2.5}$ and to prevent adverse health impacts.	*This requirement is based on OAR 340-208-0450. Large particles are not generally a health concern, but they could cause a nuisance. The limits for total particulate matter, including fine particulate matter, are provided in condition 2.1 and 2.2 (20% opacity and 0.1 gr/dscf). The monitoring for these conditions are conditions 5.1 and 5.2, as wells as condition 3.1, 5.3, 5.4, and 6.1. Visible emissions are a good indicator of fine PM emissions because smaller particles tend to cause more opacity: Particles with diameters approximately equal to the wavelength of visible light (0.4 to 0.7 µm) have the greatest scattering effect and cause the highest opacity. [EPA Visible Emission Field Manual – EPA 340/1-92-004, December 1993]*
3.1.e	Line 4: Correct typographical error – "though" should be "through"	*DEQ agrees.*
3.1.j	Preventing migration of coal materials offsite should not be limited to "in or near the Columbia River, and onto public road system". Migration of coal and coal dust anywhere	*DEQ agrees.*

Draft ACDP Condition #	Comment	DEQ Response
	offsite should be prevented.	
4.2	DEQ should determine what the annual period is, rather than letting the permittee determine the 12-month period.	*Compliance with the PSEL must be demonstrated for each 12-consecutive month period. The word "any" has been changed to "each".*
5.2.a and b	The person conducting the survey should be EPA Method 9 certified if EPA Method 9 is to be used.	*The corrective action criteria is "any" visible emissions. The observer is not required to quantify the visible emissions. It is not necessary for a person to be be certified to observe visible emissions.*
5.5	How is the 12-consecutive calendar month period defined? Rolling or otherwise? This should be made explicit in the test of the permit.	*See response to comment for condition 4.2.*
5.6	Emission factors: Does the DEQ approval procedure(s) include public notification and comment? It should specifically require these procedures.	*No, but the permit must be renewed every 5 years. When the permit is renewed, any factors that were approved in accordance with condition 5.6 would be included in the permit renewal and the pubic would have the opportunity to comment on the changes to the permit.*
6.0	Special conditions: If the permit and DEQ can require topping agent on coal cars, why can't the permit and agency require that rail cars be covered?	*At this time, DEQ does not know if the loading procedures will be sufficient to control fugitive emissions when the railcars are on site. The permittee has stated that the loading procedures and topping agents will be sufficient. DEQ requires monitoring. There may not be an issue, so DEQ is not requiring additional measures up front. If there is an issue, then additional measures for preventing fugitive emissions will be required.*
6.1.a	The date for the facility to notify DEQ of the date the facility starts operating should be changed to "no less than 7 days before it starts operating".	*This is a standard requirement for new sources. DEQ sees no reason to change the requirement for this particular facility. DEQ requires notification after beginning operations rather than in advance of beginning operations because schedules can change. If the notification occurs after startup, it is certain that the facility has begun operations.*
6.1.d	The ingredients of the required topping agent must be made known to the public and DEQ, for any topping agent that is applied.	*DEQ does not believe it is necessary to require public disclosure of each material used on or off of the site. There are other agencies and programs that regulate material usage and documentation (e.g., OSHA). If the information were necessary for calculating emissions, the permittee would be required maintain records of the material data sheets, but that is not the case for this facility. The amount of topping agent applied to the coal is a very small percentage of the total coal handled and the potential emissions from the*

Draft ACDP Condition #	Comment	DEQ Response
		facility.
6.1.e	Change to: "…using loading profiles that are designed and demonstrated to prevent emissions during transit."	*DEQ has no control over the development of the loading procedures. However, DEQ is aware that these procedures are available and implemented. DEQ is requiring the permittee to only handle coal that has been loaded following the procedures.*
6.1	If DEQ can require special conditions for the coal cars, DEQ must also require special conditions for the diesel locomotives moving those cars, including but not limited to requiring them to use only clean diesel fuel.	*When the loaded railcars are on-site, they are considered storage piles. DEQ regulates material storage piles at stationary sources. Locomotives bring the railcars to the site, but once on site, the railcars are moved through the unloading building with an electric powered positioning system. DEQ does not regulate mobile locomotive/engine sources under the ACDP program.*
7.2	Excess emissions: Ongoing excess emissions should require permittee to cease operations immediately. (Reference 3.a in Water Pollution Control Facilities permit.)	*The permit condition includes reference to the regulatory authority that is the basis of the condition. Requiring the source to cease operations immediately would conflict with the rule.*
7.4	Retention of Records: Records shall be maintained on site for a period of 10 years not 2 years.	*There is no regulatory authority for requiring a source to maintain records for 10 years. The 2 year record retention requirement is consistent with other ACDPs issued by DEQ. There is no basis for treating this facility differently than other facilities.*
8.1	Recordkeeping must include excess emissions inside and outside of the facility.	*The permittee has no control over what happens outside of the facility.*
8.2.b	Annual certificate must include all ingredients of all topping agents used.	*DEQ does not agree. Topping agents are applied offsite. If the topping agents are applied on site, DEQ will require the permittee to maintain records of the material data sheets associated with the topping agents. Considering the amount of coal handled and the estimated coal emissions, the amount of topping agent emitted from the facility will be negligible if it could even be detected..*
8.2.b.iii	No railcars shall be loaded to exceed approved heights & weights.	*The permit requires the permittee certify that the railcars have been loaded to the proper heights and profiles to minimize emissions while the railcars are on site. The weight should not be a factor for whether fugitive dust will be generated on site.*
8.2.e	Summary of complaints should include those applying to conditions inside and outside the terminal.	*The permit condition does not put restrictions on what conditions the complaints apply to other than being related to air quality.*
8.4	Permittee must notify DEQ in writing using Department "Transfer Application" form at least 60 days prior to legal change of name or sale or exchange of activity.	*DEQ disagrees. Transfers of ownership can be complicated legal actions that are not fully realized until completed. DEQ requires the notification after the transfer is completed to avoid having to change the permit more than*

Draft ACDP Condition #	Comment	DEQ Response
		once.
8.5	The permit must explicitly specify the timeframe for filing the "Notice of Intent to Construct" and for obtaining DEQ approval for same.	*The Notice of Construction rules (OAR 340-210-0205 through 340-210-0280) specify the types of changes and procedures for approval. In all cases, the change must be approved prior to beginning construction. For minor changes (type 1 and 2 changes), the rules allow for default approvals, but the NC must be submitted prior to the default periods.*
11.5	Department access: Permittee MUST allow DEQ's representatives access at all times. (Definition of the word "reasonable" is subjective and ambiguous.) Furthermore, the number of times the facility will be inspected by DEQ personnel should be at least six (6) times within the first year and twice per year thereafter, to ensure compliance with permit conditions. The permit should state that these inspections will be unannounced, to prevent the company from preparing for them by 'cleaning up' or changing the process before an inspection.	*This is a general condition included in all ACDPs issued by DEQ. There is no basis for revising it for this particular source. DEQ typically inspects sources operating under a Standard ACDP at least once every five years, but there is no specific requirement for the frequency of inspections. Due to the interest in this facility, DEQ has committed to two inspections in the first year of operation. DEQ may or may not announce when the inspections will be conducted. It will be important to conduct the inspection when coal is being handled at the facility.*

8. The following additional concerns should be addressed in the permit:
   - Noncompliance and notification procedures in the air quality permit should be at least as protective as those described in Section 3 of the draft Water Pollution Control Facilities Permit.

   DEQ acknowledges that each program has slightly different requirements based on the regulations.

   - No public notification of violations is included in the air permit.

   DEQ issues news releases when enforcement actions are completed.

   - What contingency plans are in effect for power outages?

   The applicant has stated that necessary emergency services and equipment will be provided from off-site sources.

   - What kinds of fire suppression systems are included in the facility design?

   The applicant has stated that necessary emergency services and equipment will be provided from off-site sources.

   - Has this company prepared and submitted an emergency plan in the event of a fire, earthquake, wind storm, flooding, or other emergency?

   Emergency plans are not a requirement of the permitting program. If excess emissions occur as a result of an emergency DEQ would evaluate the appropriate enforcement action, if any, under the excess emission rules in OAR 340-214-0300 through 340-214-0360.

- What kinds of process safety management analyses have been done to prevent hazardous exposure to employees?

Worker safety is regulated by other agencies and programs.

- What kinds of contingency plans have been made for increases or decreases in the amount of coal being transferred at this facility that may affect the entire transportation line?

The permit does not limit the amount of coal that can be processed. The permit is written for a facility that is designed to handle 8.8 million tons of coal per year. If the permittee can accommodate more coal within the design of the facility, they may do so as long as the emissions do not exceed the limits in the permit. If the permittee needs to add additional equipment, such as conveyors, storage buildings, unloading facilities, etc., the permittee would have to submit a notice of intent to construct for approval by DEQ before the adding or modifying equipment.

- Be explicit regarding the potential impacts of this permit on environmental justice communities and/or sovereign nations.

The emissions from this facility are below the levels that would require an air quality impact analysis. DEQ is not responsible for approving where facilities are located. With respect to the ACDP program, DEQ is responsible for ensuring that facilities will comply with all state and federal air quality regulations.

- We have further concerns that DEQ may not have access to the taped comments of those testifying in Conference Room C125 at the Convention Center during the August public hearings. How does DEQ intend to rectify or mitigate that loss of a substantive component of public comment?

DEQ notified the people that attended the hearings where the tapes were lost and asked them to re-submit their comments by phone. The phone calls were recorded and entered into the record.

The Morrow Pacific Project

1. DEQ should allow CIT to develop a Best Management Practices Plan to minimize fugitive emissions. Some of the requirements for a Best Management Project Plan are overly restrictive.
   - The permittee will have no control over train operations beyond the unloading positioning system.

DEQ agrees and has removed reference to train operations.

- It is excessive to restrict the operation of the Resitain valve and require it to remain shut except when coal is actively loaded. The valve may need to be opened for a number of reasons, including routine maintenance.

DEQ agrees and has added an exception for maintenance and repair.

2. Secondary emissions should not be included for determining whether the source is a "federal major source" for purposes of the PSD program.

DEQ agrees.

3. Air dispersion modeling is not required because the potential emissions from the facility are well below the significant emission rates.

DEQ agrees.

4. The monitoring requirements provided in the draft permit are not consistent with the requirements included in permits for other fugitive emission sources (e..g., rock crushers, seed cleaners, grain elevators, etc.).

DEQ has structured the monitoring requirement around the unique design of the facility.

5. The frequency of the monitoring should be reduced after a demonstrated track record of compliance.
   - The monitoring should be reduced to quarterly.
   - Facility inspections for leaks should be weekly rather than requiring several hours of visible observations.

DEQ will review the monitoring requirements when the permit is up for renewal.

6. DEQ emissions estimates are based on erroneous and incorrect assumptions.

DEQ disagrees. However, DEQ acknowledges that the emission estimates may be conservative on the high side.

7. The average wind speed, not the 24-hour worst case wind speed should be used to calculate emissions. Average wind speeds were used to calculate the emissions from the PGE Boardman facility and the Tansalta Centralia power plant.

DEQ disagrees. See response to Earthrise comments.

8. The barge design was not taken into consideration for estimating the emissions. The point at which coal will come out of the chute will be inside the hull of the barge so that the coal coming out of the chute will not be exposed to wind.

DEQ disagrees. The barge hatch must be open to load coal. Wind blowing across the open hatch can generate turbulence within the barge hold and potential emissions of the smaller size coal particles.

9. There should not be any emissions from the coal cars prior to the unloading operations because the coal will not be disturbed and a surfactant will be applied after the coal is loaded into the coal cars. (see AP-42, 13.2.5).

DEQ is not certain that this is true. There is the potential that some fine material may build up on the surface of the coal while in transit due to the eddy effects of wind blowing over the coal. The effects of wind are generally in one direction while in transit and the cars are being jostled on the tracks. Once the railcars get on site, they will be subject to winds from different directions, but probably will not be "disturbed" any further until they are unloaded. DEQ is concerned that fine/loose material accumulated on the surface will be emitted from the facility during high wind conditions.

10. Oregon's rules do not require a permit for coal transloading facilities because they are not a listed category. In addition, the design of the facility (e.g., building enclosures) should not be considered controls when determining "uncontrolled" emissions under category 85.

DEQ has determined that the conveyor enclosures and storage buildings are "controls" for the purpose of determining "uncontrolled" emissions under category 85. The enclosures are not necessarily control devices, but they are intended to prevent (i.e., control) fugitive emissions.

Golder Associates

Although modeling is not required for the proposed facility, Golder Associates provided a dispersion modeling assessment in response to modeling performed by AMI Environmental for Earthrise. Golder Associates concluded that the modeling performed by AMI was not correct so they provided a corrected version of the modeling to be included in the public record.

DEQ acknowledges receipt of Golder Associates' review and critique of the AMI Environmental modeling report, but has no comment, except to re-iterate that modeling is not required for the permit action. As with all comments received, Golder Associates' review and critique will be maintained in the permit record.

James D. Chase

Draft ACDP Condition #	Comment	DEQ Response
2.1	The phrase "must not equal or exceed… in any one hour" is open ended. How long can the limit be exceeded and what happens if the limit is exceeded.	*The emissions cannot equal or exceed 20% opacity for more than 3 minutes in any hour. If the limit is exceeded, it is a violation that is subject to enforcement action in accordance with OAR 340-214-0300 through 340-214-0360 and OAR 340, Division 12.*
2.3.b	The term "adequately" does not define the problem or a limit. Options as to what is adequate will vary.	*Condition 5.2 is the monitoring for condition 2.3.b. As such, "adequate" is either "no visible emissions" or visible emissions that have been corrected right away. Ongoing visible emissions are not "adequate", which is why condition 5.2.a.vi and 5.2.b.vi require the permittee to notify DEQ of visible emissions that continue for more than 24 hours.*
2.3.e	This language allows the permittee to continue spills and fugitive particulate emission while attempting to cleanup – which greatly reduces the urgency to correct the fault.	*This is a good housekeeping requirement that can be evaluated at any time by DEQ during an unannounced inspection. Otherwise, the routine monitoring required by condition 5.2 will determine whether spills are being addressed. Not all spills result in fugitive emissions.*
2.4	The terms "sufficient duration or quantity" and "observable" are imprecise and should be defined in quantifiable terms.	*This condition is based on OAR 340-208-0450. DEQ agrees that the regulation is difficult to implement because of the undefined terms, but to define the terms in this permit could change the meaning of the rule. DEQ has successfully used this requirement to work with companies to resolve some issues.*
2.5	The term "nuisance" is vague and subject to individual interpretation. Needs to be defined in quantifiable terms.	*This condition is based on OAR 340-208-0300. DEQ agrees that there is a subjective element to the regulation.*
3.1	This says only that the Best Management Practices Plan will be reviewed for "completeness". What does that mean? Shouldn't DEQ at least attempt to judge the effectiveness of such a plan? Also, the term "reasonable measures" is subject to individual interpretation and seems contradictory to the concept of "Best Management Practices". The permit as written fails to specify that, or when such a plan must be place in force – only that the plan need be submitted.	*DEQ is relying on the operators of the facility to develop a site specific plan that addresses the activities listed in the condition. Whether or not the plan is effective will be determined by the testing and monitoring required in conditions 5.1 through 5.4, 6.1.g., and 6.1. The permittee is also required to review and update the plan every year. DEQ will go over the plan and discuss its effectiveness during inspections.*
3.1.b and d	"Minimize" is imprecise and subject to individual interpretation. Needs to be defined in quantifiable terms.	*1. The word "minimize" has been removed from Condition 3.1.b. The word is retained in Condition 3.1.d because the unloading building is enclosed, but not "totally" enclosed.*

Draft ACDP Condition #	Comment	DEQ Response
3.1.e	After "…system" add "of adequate capacity".	*DEQ added provisions for identifying scrubber parameter ranges for verifying that the equipment is being operated properly.*
3.1.f and h	"effective" is imprecise and subject to individual interpretation. Needs to be defined in quantifiable terms.	*The monitoring in condition 5.2 will be used to determine whether the best management practices are effective. In addition, DEQ will review complaints.*
5.2.a.v. and 5.2.b	This language essentially says that the permittee may knowingly continue operation in excess of the prescribed emissions limit indefinitely as long as the DEQ is notified within 48 hours and some sort of corrective action is being attempted.	*The permit language says that the permittee must take corrective action if there are any visible emissions. The actual emission limit is 20% opacity. If the opacity limit is exceeded. it is a violation subject to DEQ enforcement.*
6.1.d and e	How does the permittee know that a topping agent has been applied and that the cars had been loaded using the prescribed loading profiles?	*DEQ has added a condition to the recordkeeping section of the permit requiring the permittee to maintain records of coal shipments, including how the coal was loaded and the topping agents applied during loading.*
6.1.h	The language permits continuing operation when knowingly exceeding standards and using ineffective measure.	*This condition requires the permittee to develop a plan if required by DEQ based on monitoring data and complaints. It does not authorize continued operation if the permittee is exceeding the standard provided in condition 2.1 (20% opacity). Monitoring conditions 5.2.a.v and 5.2.b.v require the permittee to conduct a Method 9 test to determine compliance with the opacity limit in condition 2.1 if the visible emissions/corrective actions continue for more than 24 hours.*
7.2	Permittee is allowed to continue operations while exceeding limits for 48 hours. Permittee should be required to cease operations immediately when an excess emission occurs.	*This provision is based on OAR 340-214-0330(4). DEQ does not have the authority to change the regulation within a specific permit.*
8.2.b.ii	The identification of the topping agents should include a full chemical description, and this information should be disclosed to the public.	*DEQ does not agree. Topping agents are applied offsite. If the topping agents are applied on site, DEQ will require the permittee to maintain records of the material data sheets associated with the topping agents. Considering the amount of coal handled and the estimated coal emissions, the amount of topping agent emitted from the facility will be negligible if it could even be detected..*
Review report 22.c	The permit requires that a best work practices plan be developed, but states nothing about requiring its implementation.	*Permit condition 3.1 has been revised to include a requirement for implementing the plan.*
	The term "minimize emissions to the extent practicable" is imprecise and subject to individual interpretation.	*The permit condition requires that the plan identify "reasonable measures" for minimizing emissions and goes on to list what reasonable measure should be addressed in the plan, at a minimum. The plan can be reviewed and updated, but it must at least address the items listed in permit condition 3.1.*

Draft ACDP Condition #	Comment	DEQ Response
	What is the meaning of "review for completeness"? Isn't the goal to judge the effectiveness of the plan?	*DEQ will review the plan to determine whether the "reasonable measures" provided in the permit have been addressed in the plan.*
Review report 27.a	If the topping agents applied at the point of loading coal into the railcars and the loading profiles are not effective for controlling fugitive emissions from the railcars when they are on the site of the permitted facility, the permit should require that operations be ceased immediately until more effective measures can be implemented.	*DEQ does not agree because the fugitive emissions may not be causing a violation of the opacity standard.*
Review report 30.a	Requiring only that "corrective action" be taken is open ended and does not require that the fault truly be corrected.	*If, upon reviewing the monitoring data, DEQ determines that the same problems keep occurring, DEQ may require additional operation and maintenance requirements in accordance with OAR 340-226-0120.*
General comment	The permit does not have a requirement that the permittee demonstrate sufficient fiscal resources for remediation of a significant spill, fire, or other major incident.	*The permittee is responsible for complying with the terms of the permit. DEQ can only include requirements in permit that are based on regulations. DEQ is not aware of a regulation authorizing DEQ to include the requirement proposed by the commenter.*

Robert Innes

Draft ACDP Condition #	Comment	DEQ Response
2.3	This condition should include a requirement for washing the railcars after unloading.	*DEQ considered this, but determined that it would have more negative effects than positive effects. Although it might help to prevent fugitive dust emissions, it would generate waste water. If the railcars are a source of fugitive emissions, DEQ may require additional operation and maintenance requirements in accordance with OAR 340-226-0120.*
3.1	The public should be provided an opportunity to review and comment on the best management practices plan.	*The public may request a copy of the plan or visit the DEQ offices to review the plan. DEQ will not seek public input on the plan, but the public may comment on the permit and the plan when the permit is renewed in five years.*
	Replacing "reasonable" with "most effective available" ensures that the permittee will not discount measure simply based on cost.	*DEQ does not agree that a minor source of emissions should be held to a "most effective available" criteria.*
3.1.j	Routine inspections should include sampling of residues on pave road surfaces to determine PM deposition. In addition to serving as an indicator that fugitive coal dust is escaping into the atmosphere, such sampling provides warning of potentially dangerous road conditions in wet weather. Wet coal dust can result in dangerously slippery road surfaces.	*DEQ does not agree that these detailed measurements are necessary. Coal is a pretty obvious substance*

Draft ACDP Condition #	Comment	DEQ Response
3.1.l	In addition to sub-heading a-k, the paragraph should require that the Best Management Practices plan include a sub-heading "I": "Management and operations procedures to ensure that untreated dust-bearing air flows do not escape from barges as coal being poured into the barge displaces air with the cargo holds of the barges.	*DEQ does not agree that this is necessary considering the monitoring required by condition 5.2.b.*
	Sub-headings h and I deal with the retractable telescoping loading chute and the resitain valve assembly to control PM emissions. None of the existing sub-headings deal with how air displace by coal flowing into holds will excape from the holds. Visual observations and air sampling should be performed on the deck of the barge or on the dock to which the barge is tied during the coal loading process in order to detect escaping dust-bearing air flows.	*Condition 5.2.b requires the permittee to periodically monitor for visible emissions escaping from the barges during the coal loading operations.*
5.1	Air tightness of barges during loading should be tested during the first 30 days of terminal operation. Locations tested should include the part of the barge being loaded or of the adjacent dock furthest away from the active telescoping loading chute. If the barges are not air tight, the volume of PM escaping during and immediately after loading needs to be measured to understand the full scope of contaminant discharge associated with Coyote Island coal transfer operations.	*The permittee is required to observe the entire loading operation during the initial performance test.*
5.3	Rather than once a day, wet scrubber system flow rates and pressure readings should be performed once per active work shift. Variances in work performance from shift to shift are likely to affect flow rates and pressures.	*DEQ disagrees. Daily is sufficient for these types of control devices, which do not vary significantly over short periods of time.*
6.1.d	Revise text to indicate that "The facility must only accept and transfer coal that has been shown by railroad monitoring near the coal source to suppress at least 90 percent of the fugitive coal dust that would otherwise be emitted." Usage of 90-percent effective standard would force shippers and topping suppliers to improve n the 85-percent effectiveness that was demonstrated by BNSF testing. Accumulation of fugitive dust over time can lead to serious environmental degradation, and for that reason, measures such as topping agents must be as close to 100-percent as possible. DEQ should mandate that shoppers identify and apply increasingly effective measure to prevent fugitive coal dust.	*DEQ is concerned with the effectiveness of the topping agent while in transit, but its effectiveness for minimizing emission while in transit is beyond DEQ's authority. However, DEQ does have the authority to evaluate the effectiveness of the topping emissions for minimizing emissions when the railcars are on site. The monitoring in the permit will be used to determine whether additional measures are necessary to minimize fugitive dust emissions from the railcars while on site.*

Draft ACDP Condition #	Comment	DEQ Response
6.1.f	Add "Permittee must advise DEQ of the chemical composition and the quantity of toppings applied." PM escaping from topped cards may bear traces of the chemicals used as topping agents. Knowing the chemical composition of the topping agents will help define the potential threat to air quality posed by such chemicals.	*DEQ does not agree. Topping agents are applied offsite. If the topping agents are applied on site, DEQ will require the permittee to maintain records of the material data sheets associated with the topping agents. Considering the amount of coal handled and the estimated coal emissions, the amount of topping agent emitted from the facility will be negligible if even detectable.*
6.1.h	Add "90-percent effective" in front of "topping agent." See comment for 6.1.d.	*See response to condition 6.1.d above*
7.1	Under sub-heading a and b, "daily observation and recording" should be replaced with "each 8-hour work shift should observe and record…" Given the high volume of coal to be handled by the facility, small maladjustments or failures in the coal handling systems could rapidly produce discharges in excess of permitted limits. Early detection and correction is essential if such discharges are to be prevented. A truly state-of-the-art system would use wireless sensors to provide real-time awareness of any variations in operating conditions.	*DEQ does not agree that monitoring is necessary during each shift of operation. Daily monitoring is sufficient.*
7.1.c	"Daily" should replace "weekly".	*DEQ disagrees*
7.1.d and e	"weekly should replace "monthly"	*DEQ disagrees*
8.2.b.i	The reference to "a topping agent" should be modified with a statement of the topping agent's minimum efficacy. It could, for example, refer to "a topping agent at least 90-percent effective when applied to coal loaded in an open railcar to form an appropriately rounded contour at the top" Testing by the BNSF railroad has identified at least three topping agents that meet an 85-percent criteria (see www.bnsf.com/customers/what-can-i-ship/coal). Union Pacific may have identified others. The requirement to use a topping agent of a specified efficacy should be specified in the SACDP to prevent the shipper from seeking to avoid railroad recommendations or requirements by appealing to the federal Surface Transportation Board for relief from the railroad's requirements. The efficacy of the topping agent should be specified to prevent the shopper from using a less expensive, less effective topping agent that will result in excessive fugitive coal dust emissions.	*DEQ does not agree that this is necessary. See response to condition 6.1.d. and 6.1.f*
8.2.b.ii	Revise to read "The identification, to include chemical composition, of all topping agents…" The specific chemical composition of topping agents needs to be known to guard against the toppings themselves becoming a new environmental issue.	*DEQ does not agree. See response to condition 6.1.d and 6.1.f.*

Charles B Miller

1. It appears that the wind speeds used in the AP-42 calculations were selected to come up with emission estimates just below the significant emission rates for PM, PM_{10}, and $PM_{2.5}$.

No, the calculated emissions are well below the significant emission rates. Since the projected emissions are well below the significant emission rate, the permit includes the Generic Plant Site Emission Limits in accordance with OAR 340-222-0040.

2. The permit should not allow the terminal to accept untreated train loads (i.e., cars that have not been loaded following loading profile specifications and/or do not have topping agents). All train cars carrying coal to the transfer point should be treated with certifiably-innocuous and chemically-identified topping agents.

The permit requires the permittee to certify that the topping agents were applied and loading profiles were followed when the coal was loaded in the railcars. See permit conditions 6.1.d, 6.1.e, 7.1.a, and 8.2.

3. DEQ should conduct more frequent inspections of the facility and not rely on the company to monitor its own activities.

DEQ can conduct more inspections, if necessary, based on complaints or other information.

Brian King: Schwabe, Williamson & Wyatt:

1. DEQ should not require a permit for this facility because the enclosures should not be considered controls when determining uncontrolled emissions.

See response to comment 10 provided by The Morrow Pacific Project.

2. Conditions 5.1 and 5.2 require corrective action if there is visible emissions more than 30 seconds. This requirement is far more stringent than those applicable to any other Oregon air emissions source.

The monitoring in the permit is based on the design of the facility, which includes enclosures for most activities. If the facility is built and operated as designed, there should not be visible emissions, at least not for any extended period of time.

3. Condition 3.1 requires a best management practices plan (BMPP) that is far more detailed than what is typically required for any other bulk transfer facility.

The best management practices plan is required to ensure that the facility will be built and operated as proposed in the permit application.

Paul Langner: Teevin Bros. Land & Timber Co.

1. There are specific items in The BMPs that go beyond the voluntary efforts made by the project to meet or exceed Oregon Standards.

The best management practices plan is required to ensure that the facility will be built and operated as proposed in the permit application.

2. The facility has no control over train operations. It is excessive to restrict the operations of the Resitain valve. It may need to be opened for routine maintenance activities.

DEQ agrees and has modified permit condition 3.1.i to address maintenance and repair.

Chelsey L. Bivens: Jackson Waler, L.L.P.

Concerned that including conditions and requirements not based on regulations, historical practice or any demonstrated need may reflect an unpredictable or inconsistent permitting process.

The permit includes specific operation and maintenance requirements under the authority of OAR 340-226-0120 to ensure that the facility is built and operated as proposed.

Draft ACDP Condition #	Comment	DEQ Response
3.1.b	The facility does not have control over train operations.	*DEQ agrees. Permit condition 3.1.b was revised to remove reference to train engine emissions.*
5.1	The facility should be given 60 – 180 days after startup to conduct the initial testing.	*DEQ disagrees. This type of facility should not require much time to start up and begin normal operations.*
5.1.b	DEQ should allow fenceline fugitive dust monitoring along the full length of the building rather than monitoring of each individual access point.	*DEQ considered fenceline monitoring, but for an enclosure, it is better to observe the openings rather than some distance away.*
5.2	A visibility standard of no visible emissions is not based on any regulatory requirements.	*This is an operation and maintenance requirement based on the design of the facility. OAR 340-226-0120 provides DEQ the authority to establish operation and maintenance requirements in permits.*
	DEQ Title V guidance for monitoring frequency for sources with <5 tpy emissions is quarterly, not weekly.	*The Title V guidance is guidance for Title V permits. DEQ does refer to the guidance for other types of sources, but for this facility, DEQ has determined that weekly monitoring is necessary.*
	Suggest adding that if Method 9 testing demonstrates compliance with the opacity standard, then no further action is required.	*The backup Method 9 testing is to determine if there is an opacity violation. The corrective action requirement is to ensure that the equipment is properly operated and maintained.*
Review report	The calculation of emissions using the maximum 24-hour wind speed instead of the annual average is inconsistent with AP-42 language and how the equation is used at other entities.	*See response to Earthrise comment.*
	The calculation of the barge loading emissions without considering the barge hull as a shelter from the wind overestimates the emissions.	*The barge shelter was considered in the calculation. An estimated control efficiency of 85% was applied in the emission calculation.*
	The AMI modeling report is significantly flawed. The facility will not cause or contribute to an exceedance of the ambient air quality standards.	*See response to Golder Associates' comments.*

Alexandra Amonette

1. The wind speeds used in the emission calculations is not correct.

See response to Earthrise comments.

2. There is no mention of wind power density in the emission calculations.

The AP-42 factors address wind power.

3. The strong pressure gradients that develop along the Cascades and force air to flow rapidly through the gorge were not adequately considered in the emissions calculations.

DEQ used monitoring data collected very close to the proposed facility.

4. Coal dust emissions and health hazard data are not provided for the coal trains transporting the coal. Canada found the coal terminals emit roughly 715 metric tons of coal dust each year. In addition, according to a BNSF operator, as much as 500 pounds of coal is emitted from each coal car while in transit.

The proposed permit is for the activities at the terminal in Boardman. DEQ does not have the regulatory authority to require air contaminant discharge permits for trains.

5. "Visible emissions should not occur" and, if they do, they "should not last long" are not accurate statements.

DEQ disagrees, but the monitoring in the permit, as well as inspections, will be used to verify the facility will have minimal emissions.

6. Self monitoring won't work because employees will be afraid of losing their jobs.

DEQ disagrees. There are serious penalties for knowingly falsifying data.

7. Two DEQ inspections per year are not enough.

DEQ will evaluate whether more or less inspections are necessary for this facility based on the monitoring data, as well as any complaints.

8. The facility should be fool-proof so that emissions will not occur.

DEQ has included operation and maintenance requirements in the permit to ensure that it is built and operated as proposed.

9. The Umatilla National Wildlife Refuge is 5 miles downwind and it will impacted by the fugitive emissions.

The permit is designed to minimize fugitive emissions.

Michael Riorden, Ph. D.

Fugitive dust emission calculations:

1. Covered versus uncovered activities:
   AMI calculations are based on uncovered barges, but the barges will be covered.

   DEQ agrees.

Golder Associates did not include emissions from uncovered railcars before and after they are unloaded.

DEQ will observe this activity during inspections. The permitte claims that there will be no residual material on the coal cars after they are emptied. DEQ estimated emissions from the loaded railcars.

2. Wind speeds
   AMI used highest daily wind speeds for all activities.

   DEQ does not agree with this approach.

   Golder Associates used average wind speed for open activities and 4 mph for enclosed activities. Even though the barges are enclosed the wind blowing across the hatches may generate higher wind speeds inside the barge due to the Bernoulli affect.

   DEQ agrees with the wind speeds inside the enclosures. DEQ has required monitoring of the barge loading activities.

3. Coal moisture content
   Golder Associates used 20% moisture, but the moisture will evaporate quickly especially when the coal is broken up into smaller pieces or dust.

   DEQ agrees that the moisture content of the coal will vary. DEQ has used 20% moisture (i.e., the low end of the moisture range provided in AP-42) in all calculations, except 5% moisture was used for the emissions from the loaded railcars. Coal at the surface of the railcars will be drier due to evaporation.

Stanley Niemiec

False information was provided in the application: Wind speeds used in the emission calculation are not correct. There will be some emissions from the uncovered railcars before they are unloaded. DEQ should not issue a permit the proposed facility because the applicant provided false information in the application.

DEQ evaluates information provided in applications and, in some cases, does not agree with assumptions that may have been used in emission calculations. Where engineering judgment is involved, DEQ does not consider the information provided by the application to be necessarily "false" information.

Port of Morrow

1. DEQ included novel conditions and requirements that are not based on regulations or historical practice, and may reflect or portend an unpredictable or inconsistent permitting process.

DEQ included operation and maintenance requirements in accordance with OAR 340-226-0120 to ensure that the facility will be built and operated as proposed in the application.

2. DEQ has avoided using the common standard for opacity, instead using a no visible emissions standard.

Because of the design of the facility (e.g., mostly enclosed), DEQ has included a visible emission action level (e.g., no visible emissions) in accordance with OAR 340-226-0120.

3. DEQ is using maximum wind speeds to calculate annual emissions.

DEQ is not using maximum wind speeds in the calculations. See response to Earthrise comment.

4. DEQ's estimate of uncontrolled emissions is based on the warehouses having no walls.

DEQ disagrees. The emission calculations are based on the building air venting through the wet scrubbers.

Brian Patterson

1. The permit conditions are not consistent with permits for other bulk commodities and are clearly excessive for at least two reasons.

The permit conditions are based on the design of the facility.

2. This facility will have some of the lowest actual emission of any bulk material handling facility in the state required to obtain an air quality permit.

The low emissions are due to enclosures. The permit will ensure that the facility will be built and operated as designed.

3. Coal is not exceptional bulk material for an air pollution perspective.

DEQ is concerned with the emissions and not necessarily the type of materials. The low emissions are due to enclosures. The permit will ensure that the facility will be built and operated as designed.

Laurie Dougherty

The capacity of the facility appears to be much higher than 8.8 million tons per year. How will the total tonnage be monitored? Who will monitor the actual tonnage?

The owner or operator is required to maintain records of the amount of coal handled at the facility (see condition 7.1).

Elizabeth Graser-Lindsey

The PSEL rules (OAR 340, Division 222) require DEQ to evaluate the facility with respect to the GHG airshed, which is the entire planet or could be local if the coal were to catch on fire at the facility.

The PSEL rules apply to stationary sources. This source, which is designed to handle coal, will not burn the coal so the emissions from the combustion of coal are not included in the PSEL. For any facility, there is the potential for an accidental fire, but DEQ does not set emission limits for "accidents". DEQ did provide an estimate of the GHG emissions due to the off-gassing of methane while the coal is on site. The emission estimates are included in the emission detail sheet provided in the review report for the draft permit. The emission estimates are below the level that would require a PSEL for the facility.

Confederated Tribes of the Umatilla Indian Reservations (CTUIR)

1. CTUIR believes the state and federal agencies with permitting authority over the proposed CIT should be analyzing the impacts of the project in a more coordinated manner.

DEQ understands this concern. DEQ has prepared a draft permit in accordance with the regulations that apply to the facility and DEQ.

2. DEQ needs to do more to analyze and address the coal dust emission associated with the CIT and should impose permit requirements designed to reduce such emissions.

DEQ has carefully reviewed the application and comments. The ACDP includes specific requirements for minimizing emissions.

3. Oregon must take a cumulative look at the impacts of this project rather than examining the footprint of only one element of the project in isolation.

DEQ understands this concern. DEQ has prepared a draft permit in accordance with the regulations that apply to the facility and DEQ.

Confederated Tribes and Bands of the Yakama Nation

1. Yakama Nation will not mitigate nor negotiate its Treaty rights or resources.

DEQ understands this concern. DEQ has prepared a draft permit in accordance with the regulations that apply to the facility and DEQ.

2. DEQ must require all coal to be 100% contained upon entering the proposed facility.

The permit, which ensures that the facility will be built and operated as proposed in the application, contains specific requirements for minimizing emissions mostly by preventing emissions. Most activities will be totally enclosed. However, it is not possible to fully contain the barge loading operation and there may be some emissions from the loaded rail cars. The permit includes monitoring and corrective action if emissions are observed from any activity at the site. If the preventive measures or corrective actions are not effective, DEQ may require the permittee to develop and implement a plan to further control the emissions from the railcars.

Nez Perce Tribal Executive Committee

The project's impacts on the Tribe's treaty-reserved rights need to be acknowledged by ODEQ.

DEQ understands this concern. DEQ has prepared a draft permit in accordance with the regulations that apply to the facility and DEQ.

Ambre Energy

As provided in OAR 340-209-0080(3), Ambre Energy submitted responses to the comments. DEQ acknowledges receipt of Amber Energy's response to the comments and will include the responses in the permit record. DEQ does not believe it is necessary to respond to Ambre Energy's response to the specific comments as they have been addressed in the response to comments provided above. DEQ does not necessarily agree or disagree with the responses. DEQ does take exception to the way in which the responses were written, as if speaking for DEQ. The responses are the opinion of the applicant.

V. SUMMARY OF CHANGES TO AIR CONTAMINANT DISCHARGE PERMIT

Final ACDP Condition #	Change	Reason
Cover page	The table identifying the permitted activities was revised to provide both a description of the permitted activity and the source category for which DEQ's regulations require a permit.	This change makes it clear what activity is permitted.
3.1	The requirement for best management practices plan was revised to make it clear that the permittee must implement the plan and have it available to the personnel responsible for the operation and maintenance of the facility.	This change was made in part in response to the comment provided by James D. Chase (review report section 22.c).
3.1.b	This condition was revised to remove reference to train emissions.	This change was made in response to the comments provided by The Morrow Pacific Project, Paul Langer and Chelsey L. Bivens. The permit does not regulate the emissions from train engines.
3.1.c	This condition was revised to remove reference to the Columbia River and public road system.	This change was made in response to the comments provided by Earthrise.
3.1.e	This condition was revised to correct a typographical error and include reference to scrubber operating parameters.	This change was made in response to comments provided by Oregon Physicians for Social Responsibility, Dr. Theodora Tsongas, and James D. Chase. DEQ agrees that the best management practices plan should identify the scrubber operating parameters that will be used to determine whether they are working properly.
3.1.i	This condition was revised to provide an exception for opening the resitain valve during maintenance and repair activities.	This change was made in response to comments provided by The Morrow Pacific Project and Paul Langer
3.1.j	This condition was revised by deleting reference to the Columbia River and public road system.	This change was made in response to comments provided by Oregon Physicians for Social Responsibility and Dr. Theodora Tsongas. DEQ agrees that the best management practices should be designed to prevent migration of coal material to anywhere off site.
4.2	This condition was revised to clarify that the Plant Site Emission Limits apply to <u>each</u> 12-consecutive month period, not any 12-consecutive month period.	This change was made in response to comments provided by Oregon Physicians for Social Responsibility and Dr. Theodora Tsongas. DEQ agrees that this change is necessary and that it is consistent with permit condition 8.2.c.
5.2.a and 5.2.b	These conditions were revised to clarify that the visible emissions surveys must be conducted during daylight hours.	These changes were made in response to the comments provided by Earthrise. DEQ agrees that visible emissions surveys required by the permit can only be done during daylight hours.

Final ACDP Condition #	Change	Reason
6.1.e	This condition was revised to clarify that the windblown erosion must be minimized <u>on site.</u>	This change was made in response to comments provided by The Morrow Pacific Project and Chelsey L. Bivens. DEQ agrees that the permittee has no control over windblown erosion from the railcars when they are off site.
6.1.h	This condition was revised to add a provision for implementing a control plan in accordance with a schedule approved by DEQ.	This change was made in response to comments provided by Earthrise.
7.1.a	This condition was added to ensure that the permittee will maintain records of the amount of coal handled at the facility.	This change was made in response to a comment provided by James D. Chase.
7.1.f	This condition was revised to clarify that the loading chute inspection records should include the resitain valve.	This change was made by DEQ for clarification.
8.2.b.iii	This condition was revised by deleting reference to windblown erosion during transport.	This change was made in response to comments provided by The Morrow Pacific Project and Chelsey L. Bivens.

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Attachment O

United States District Court
Northern District of California
Trial Exhibit 158
Case No. 3:16-cv-07014-VC
Date Entered
By
Deputy Clerk

DRAFT

Oakland Bulk and Oversize Terminal

Oakland, Alameda County, California

TLS
TERMINAL LOGISTICS SOLUTIONS

BASIS OF DESIGN

Volume 1
07/21/2015

CALIFORNIA CAPITAL & INVESTMENT GROUP

OAKLAND GLOBAL
PORT OF OAKLAND · CITY OF OAKLAND
"one vision, one team, one project"

HDR

OBOT
OAKLAND BULK AND OVERSIZED TERMINAL

ARCHITECTURAL DIMENSIONS

Lorrie L. Marchant, CSR# 10523, RMR, CRR, CCRR, CRC
EXHIBIT 13
WITNESS: Phillip Tagami
CASE: Oakland Bulk & Oversized Terminal, LLC, vs.
City of Oakland
CASE NO.: 3:16-cv-07014-VC
DATE: Friday, October 06, 2017

TERMINAL LOGISTICS SOLUTIONS

(TLS)

BASIS OF DESIGN

(BOD)

Terminal Logistics Solutions (TLS)
Basis of Design

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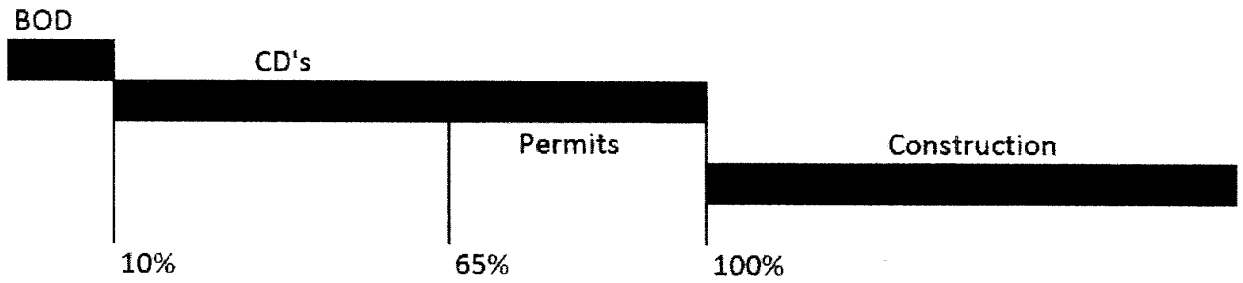
Basis of Design (BOD) Introduction

In general, a Basis of Design document is the first step in a project's design process. The BOD describes a project's operating environment and the desired project performance parameters. The operating environment includes the physical attributes and limitations of project location, available utilities, and regulatory constraints. The BOD leavens project purpose with environmental limitations and policy oversight. As illustrated in the graphic below, the BOD is the first step in the design process. The next phase in the design process will be design development (10% to 65%) which will be advised by and in coordination with the Terminal Logistics Solutions (TLS) operating plan which will be adopted by TLS prior to the final construction documents (as applicable) or prior to the award of any design build element or procurement package. Permitting/agency approvals to proceed to construction will be requested as the design progresses as proscribed by the permitting agencies. Permits to operate the project will be obtained before the project is put into operation.

In addition to the normal California regulatory regime of existing federal, state, and local regulations, the Terminal Logistics Solution (TLS) project must be designed, constructed, and operated within and in conformance to the Oakland Army Base Redevelopment program Standard Conditions of Approval /Mitigation Monitoring and Reporting Program (SCA/MMRP) requirements.



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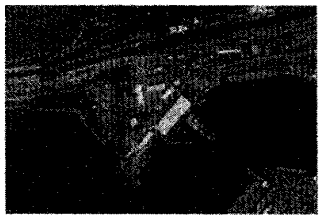

Basis of Design

Oakland Bulk and Oversized Terminal

California Capital Investment Group

Preliminary Engineering

Port of Oakland, California, CA

July 16, 2015

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TX0158.0006

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TX0158.0008

1 Basis of Design

This establishes the definition of elements of the preliminary engineering design to achieve the production capacities desired by the owner and defines the basic infrastructure needs to operate the plant in the manner desired by the owner with respect to safety and environmental goals.

2 Project Definition

2.1 Title of Project

Oakland Bulk and Oversize Terminal (OBOT).

2.2 Background

Oakland Bulk and Oversize Terminal (OBOT)OBOT intends to re-develop the Oakland Army Base located within the Port Authority Outer Harbor in Oakland, CA. OBOT is responding to a general shortfall in trans-shipment capacity for the marine export of bulk products from the West Coast.

The Oakland Army Base Property covers approximately 135 acres. The leasable area of OBOT covers 20.31 acres, consisting of 12.45 acres of land area and 7.86 acres of wharf. The project property consists of warehouse storage and mostly paved and impervious concrete. OBOT has entered into a 60-year lease agreement with the City of Oakland to develop the site. Subsequently, OBOT has entered into a development agreement with Trans Logistics Solutions (TLS) to develop the OBOT. OBOT is the long-term lease holder and TLS will be a tenant of OBOT.

OBOT will develop the marine terminal based on a staged implementation approach. Design capacity will be 9 million tonnes per annum (Mtpa), with a stabilized throughput of 75% of design, or 6.3 Mtpa. The first stage (Stage 1) will develop the terminal overall capacity to approximately 6.3 Mtpa and include trans-shipment of Bulk Material Products.

2.3 Project Objectives

OBOT's objectives for this phase of the project are to create a terminal for the receipt by rail, storage and shipment of Commodity A and Commodity B as follows:

- Commodity A with a desired throughput of 5.0Mtpa.
- Commodity B with a desired throughput of 1.5Mtpa.
- There is a requirement for segregated storage to blend Commodity A.
- No requirement for segregated storage or blending of Commodity B.
- To commission the new terminal by the 1st quarter of 2018.
- Utilize proven technologies and modern design standards.
- Utilize Best Control Technology (BCT) to control or eliminate emissions.
- No lost time injuries or environmental breaches.

3 General

3.1 Location

The property is located on the San Francisco Bay at the East end of the Bay Bridge in Oakland, California. The site can be found at 37.82°, -122.318° (Lat., Lon.).

3.2 Soils

There have been several geotechnical studies made available to HDR for review. These studies outline basic design data for a few different pile configurations, as well as slope stability under the existing wharves in non-seismic conditions. One of the documents identifies the potential seismic-induced liquefaction and lateral spreading hazards at this site and recommends further studies to determine the types of ground improvement methods necessary to mitigate these hazards, based on the configuration of the facility and tolerance to settlement and lateral displacement.

Reviewed studies are outlined below:

- Technical Memo – Dredged Slope Stability, Oct. 17, 2014, Kleinfelder: This memo summarizes the static stability of the slope beneath wharves 6, 6½, and 7 under proposed dredging to 50 ft. depth near the berth face. The report concludes that the stability of the existing slope can accommodate the proposed dredging, but specifically excludes the stability of the modified slope under seismic loading.
- Seismic Site Specific Horizontal Accelerations, Nov. 24, 2014, Kleinfelder: This memo provides site specific lateral seismic accelerations for CLE, DE and MCE earthquake hazard levels for Wharves 6, 6½ and 7. It does not provide information about liquefaction or lateral spreading potential of the site.
- West Gateway Terminal Preliminary Pile Capacity Geotechnical Memo, Oct. 28, 2014, Kleinfelder: This memorandum provides preliminary pile capacities for three different types of pile, based on a CPT performed on the upland side of the dock. These pile capacities are intended for preliminary design of the piled foundations supporting equipment and buildings on the upland side of the terminal. The pile capacities do not include any reductions for seismic induced liquefaction or lateral spreading.
- 65% Geotechnical Report, Oakland Army Base – Horizontal Development, Jun. 20, 2013, Berlogar Stevens & Associates: Memorandum with preliminary analysis and recommendations based on geotechnical explorations performed around the site. This memo identifies the liquefaction and lateral spreading hazards for the site and recommends further analysis to determine specific impacts on the proposed design of the facility.

3.2.1 Geotechnical Recommendations

Additional Geotechnical Recommendations to come.

OAK 0004716

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TX0158.0009

3.3 Units of Measurement

The Imperial system of units will be used and is assumed to be the system of units used for design, fabrication and construction.

Material capacities will be given in metric tons (tonnes).

3.4 Service Life

Design lives for the various elements of the terminal are provided in Table 3-1.

Table 3-1. Service Life

System	Design Life
Major Equipment Structures (Shiploaders, Stackers, Conveyors, Reclaimers, Railcar Dumper, etc.)	30 years
Mechanical Components (Reducers, bearings, pumps, etc.)	60,000 hours
Structural Components	50 years
Marine Fender System	25 years

The design service life of equipment and structures relies on inspection, maintenance and repairs at regularly scheduled intervals. Major equipment such as shiploaders, stackers, reclaimers and railcar dumper will also require periodic major refurbishment for repairs to coating systems and other component upgrades that cannot otherwise be conducted during normal maintenance windows.

3.5 Safety & Access

The design, manufacture and installation of the required equipment shall be designed to comply with the regulations of the local, state and federal authorities having jurisdiction, as well as Occupational Safety and Health Administration (OSHA).

All platforms, stairs, handrails, walkways, ladders and accesses shall be specified to comply with the requirements of the local, state and federal authorities having jurisdiction as well as OSHA.

Mechanical components will be selected and designed to facilitate safe access for inspection, maintenance, disassembly and replacement.

4 Scope of Work

The specific scope of work for the OBOT Preliminary Engineering includes design of facilities and systems as follows:

- Site preparation including clearing, grading and ground improvements to strengthen existing soils and mitigate seismic-induced liquefaction and lateral spreading.
- Utility services (potable and process water, sanitary sewer, natural gas, and electricity).
- Fire protection systems.

Basis of Design
Oakland Bulk and Oversized Terminal

- Access roads and equipment maintenance and circulation routes.
- Rail departure track from mainline railway, on-site operations and storage rail for unit train unloading and storage.
- Covered bulk material storage structures and foundations.
- Surfacing and structural design of storage pads, general site access and operations areas.
- Material handling equipment and foundations for railcar unloading, stacking, storage, reclaiming and ship loading.
- Administration, maintenance and operations buildings and associated foundations.
- Stormwater management facilities (retention/detention ponds, culverts, and ditches).
- Process water collection and treatment facilities.
- Marine structures, dock, mooring and fendering systems for loading ships.

5 Products

Products to be handled by the terminal are Commodity A and B. There is a requirement to blend Commodity A. The design for Commodity A blending is limited to two sources. The blending process is expected to be accomplished through reclaiming operations performed during ship loading. There are no requirements for the blending of the Commodity B, but each product handled will be required to have segregated storage.

The properties of materials handled at the facility are defined in Table 5-1.

Table 5-1. Material Properties

Properties	Commodity A	Commodity B
Bulk Density	48 lb/ft^3 (Volume Calculations) 55 lb/ft^3 (Mass Calculations)	59 lb/ft^3 (Volume Calculations) 78 lb/ft^3 (Mass Calculations)
Angle of Repose	35-38°	32-37°
Surcharge Angle	20-25°	20-25°
Moisture Content (Inherent)	12% (Inherent) 11% (Surface) 23% (Total)	0%
Maximum Lump Size	3 in	Granules
Corrosiveness	Not Corrosive	Not Corrosive
Abrasiveness	Extremely Abrasive	Abrasive
Special Handling Constraints	Very dusty, exhibits spontaneous combustion behavior, potentially explosive	Very dusty, hygroscopic

OAK 0004717

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TX0158.0010

6 Throughput

OBOT intends to develop the marine terminal based in phases per Table 6-1.

Table 6-1. Terminal Throughput

Properties	(Estimated)
Commodity A	5.0 MMTPA
Commodity B	1.5 MMTPA

A preliminary spreadsheet simulation has been developed as a separate document.

7 Hours of Operation

The terminal will operate three 8-hour shifts a day, 362 days a year.

8 Marine

8.1 General

A new mooring and berthing system will be constructed at the existing wharf (Wharf 7) capable of handling Capesize vessels. The proposed mooring and berthing system will be independent of the existing wharf, and will utilize breasting dolphins with fender panels and mooring dolphins with quick release mooring hooks. The dolphins will utilize steel pipe piles with cast-in-place concrete pile caps. There will also be two in-water arc shaped runways to support the quadrant loaders, founded on steel pipe piles. The pivot point supporting the tail end of the quadrant loaders will be supported on piles driven within the footprint of the existing wharf. The pivot support structure will have an independent pile supported foundation and be isolated from the existing timber wharf structure.

8.2 Design Vessels

Design vessel information is provided in Table 8-1.

Table 8-1. Design Vessels

Specification	Handysize/ Handymax	Panamax	Capesize
Deadweight tonnage	25,000-50,000 DWT	60,000-80,000 DWT	180,000 DWT[1]
Length Overall (LOA)	630 ft.	965 ft.	1020 ft.
Beam	105 ft.	106 ft.	148 ft.
Loaded Draft (Max.)	39 ft.	46 ft.	61 ft.[1]
Dredging Depth	No Dredging	No Dredging	No Dredging[1]

[1] Capesize ships, due to the existing 51 feet of draft with no plans for dredging, will be lightly loaded to an approximate maximum of 130,000 tonnes.

8.3 Mooring operations

No mooring operations studies are proposed at this stage of the project and it is assumed that Capesize vessels can be moved into position to moorage facilities that will be designed to accept the design vessel.

8.4 Dredging

No dredging is proposed to increase the design draft conditions. However, maintenance dredging will be required to maintain the design draft at the berth.

9 Mechanical

9.1 General

Mechanical equipment will be selected based on modern material handling systems utilizing automation where reasonable to increase efficiency. Conveyance systems will be designed to Conveyor Equipment Manufacturers Association (CEMA) standards.

The mechanical systems will include:

- Railcar unloading equipment.
- Stacking, reclaiming and storage equipment.
- Conveyors for feeding, stacking and reclaiming.
- Ship loading equipment.

9.2 Railcar Dumpers

Requirements for the railcar dumpers can be found in Table 9-1.

Table 9-1. Railcar Dumper Requirements

Properties	Commodity A	Commodity B
Type	Bottom Dump	Bottom Dump
Railcars	North American Covered Hopper Cars[1]	North American Closed Top Hopper Cars
Gross Weight	130 tonnes	130 tonnes
Net Capacity	110 tonnes	110 tonnes
Number of Dumpers:	1	1
Railcar Positioning Method	Switching Locomotive or Indexer	Switching Locomotive or Indexer
Design Dump Cycle Time	See Simulation	See Simulation

[1] Removable, fiberglass covers

OAK 0004718

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TX0158.0011

9.3 Conveyance

9.3.1 Troughed Belt Conveyors

Commodity A

Commodity A conveyors will be 48 or 84 in. equipped with 45° CEMA class C6 or E7 idlers, troughed fabric belts, electric drive units and remote gravity take-ups and a maximum angle of 15 degrees. Where practical, drive units will be located at ground level with vehicle access. All conveyors will be housed in fully-enclosed galleries with single sided walkways and designed with ample access to tail pulleys and other critical areas for maintenance.

Commodity B

Commodity B conveyors will be 48 in. equipped with 35° CEMA class C6 idlers, troughed fabric belts, electric drive units and remote gravity take-ups and a maximum angle of 15 degrees. Where practical, drive units will be located at ground level with vehicle access. All conveyors will be housed in fully-enclosed galleries with single sided walkways and designed with ample access to tail pulleys and other critical areas for maintenance.

9.3.2 Pipe Conveyors

Pipe conveyors will transport material from the railcar dumper to storage. The pipe conveyor will be ø23 in., equipped with electric drive units and gravity take-ups. The pipe conveyor will be of a self-carrying design that includes a single-sided walkway, top cover and expanded metal guarding along each side.

9.3.3 High-Angle Conveyors

High angle conveyors will be used to move material from the unloading pit to the pipe conveyors. The high-angle conveyors will be approximately 72 in. wide with 16 in. tall side walls equipped with electric drive units, automatic take-up and will be fully enclosed.

9.4 Contaminated Material

Contaminated product diverters will be included to remove material from the reclaim belts, between the storage buildings and shiploaders.

9.5 Storage

9.5.1 Commodity A

Material will be stored in a series of covered longitudinal stockpiles. Stacking to the longitudinal stockpiles will be accomplished by the use of an overhead conveyor and tripper.

The Commodity A storage capacities are:

1. Pile 1 105,000[1] tonnes total
   105,000[1] tonnes live

2. Pile 2 75,000[1] tonnes total
   75,000[1] tonnes live

Material will be manually reclaimed from the longitudinal stockpiles by dozers into a series of dozer traps.

[1] In the case of segregated storage piles within the storage building, storage building 1 will have an estimated capacity of 84,000 tonnes, building 2 will have an estimated capacity of 55,000 tonnes.

9.5.2 Commodity B

Material will be stored in a concrete storage dome(s). The storage dome(s) will be filled from the top and include a dust collection system.

The Commodity B storage capacities are:

1. Dome 1 60,000 tonnes total
   50,000 tonnes live

Material will be reclaimed from the storage dome(s) by gravity onto a series of reclaim conveyors in above ground tunnels underneath the dome(s).

9.6 Sampling

9.6.1 Commodity A

Three-stage automatic sampling will take place on the outgoing product flows at the East shiploader.

9.6.2 Commodity B

Automatic sampling is not required for the Commodity B system.

9.7 Shiploading

9.7.1 Commodity A

Shiploading will be accomplished with the use of dual telescoping quadrant shiploaders. Each shiploader will be equipped with loading spoons for hatch trimming. The shiploaders will be design to accommodate wash down of system between shipments.

9.7.2 Commodity B

Shiploading will be accomplished with the use of a fixed, shuttling, slewing shiploader, utilizing a cascade type loading chute.

9.7.3 Shiploader control

Shiploaders will be controlled by remote control boxes from the decks of the ships, with backup control stations located on the shiploaders.

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TX0158.0012

9.7.4 Shiploader Chute/Spout Maintenance

Over the dock access will be provided for cleaning and maintaining loading chutes and spouts.

9.8 Dust Control

9.8.1 Commodity A

Dust will be controlled by:

- Dry fog and/or water sprays at the covered railcar dumper building.
- Covered bulk material storage buildings.
- Enclosed transfers.
- Enclosed/Covered conveyors.
- Dry fog and/or water sprays at transfer points and stockpiles.

9.8.2 Commodity B

Dust will be controlled by cartridge style, pulse-jet, dust collectors or bin vents:

- Unloading boots, enclosed hopper and dust collection at the covered railcar dumper building.
- Enclosed storage domes with dust collection.
- Enclosed conveyor transfers.
- Covered conveyors.
- Dust Collection at transfer points and shiploader, as required.
- Dust collectors will be provided with rotary air locks.

10 Structural

10.1 General

Structural design and development of loads will be based on the California Building Code and ASCE 7. It is anticipated that soil conditions will require ground improvements and pile supported foundations for all major equipment and storage buildings to mitigate settlement and seismic hazards associated with liquefaction.

Design of the marine structures will be in accordance with ASCE/COPRI 61-14 and utilize non-linear seismic analysis methods in the detailed design phase. It is assumed that any construction activities utilizing or affecting the existing wharf will be further investigated, and may include the need for a structural condition assessment and analysis of the existing elements for the temporary loads associated with mobile crane outriggers and any other construction loads. It is also anticipated that some lighter structures may be supported directly by the existing wharves which could potentially require wharf repairs depending on the outcome of the condition assessment.

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10.2 Live Loads

The vehicular/access lanes of the dock and trestle will be designed to an HS20-44 highway load, or a 20T mobile crane (whichever controls based on span length). Conveyor galleries and access platforms will be designed for a 60psf live load.

10.3 Wind Loads

Design wind speed: V_{ult}=110 mph (Exp. C, Risk Category II) per Figure 1609A of the California Building Code.

10.4 Vessel Loads

Mooring and berthing loads for the dock and fender system will be based on Capesize vessels (Approximately 180,000 DWT) Mooring and spring line loads for detailed design will be based on specialized mooring analysis software (OPTIMOOR or similar).

Berthing loads for the fender system and breasting dolphins will assume a vessel approach speed of 0.50 fps (normal to the berth face) and 10 degree approach angle.

10.5 Seismic Loads

Seismic design of the upland structures and foundations will be based on the International Building Code (IBC) and ASCE 7. The following site-specific design parameters were included in the 65% geotechnical report by Berlogar Stevens & Associates listed in Section 3.2:

- S_s: 1.5
- S_1: 0.6
- S_{MS}: 1.35
- S_{M1}: 1.44
- S_{DS}: 0.9
- S_{D1}: 0.96

**Above seismic parameters based on Site Class 'E'*

Seismic design of the marine structures will be based on the performance-based analysis methods of ASCE/COPRI 61-14. The three seismic performance levels will be as follows:

- Operating Level Earthquake (OLE):
  - 1 in 72 year event (50% probability of exceedance in 50 years)
- Contingency Level Earthquake (CLE):
  - 1 in 475 year event (10% probability of exceedance in 50 years)
- Design Earthquake (DE):
  - 2/3 of Full Maximum Considered Earthquake (MCE); MCE defined as (2% probability of exceedance in 50 years) per ASCE 7

OAK 0004720

EXHIBIT I - 253

TX0158.0013

11 Electrical and Controls

11.1 Electrical

Utility electrical power will be delivered to the site by two independent 12.47kV three-phase systems owned by the Port of Oakland or PG&E. At the Point-of-Delivery on the site, utility power will be received at main service electrical room with metering and isolation/protection. Electrical power will be distributed on site at 12.47kV three-phase in an open-loop system (site electrical distribution loop) to area electrical rooms located throughout the site.

Each area electrical room will distribute electrical power to equipment, motors, lighting etc. through unit substation transformers that will step down the voltage to service voltages required.

Electrical Shore Power and Communications will be provided at a vault mounted on the wharf to interface with docked ships, allowing them to connect to the electrical grid (cold ironing).

Power and control cable will be jacketed armored cable suitable for heavy industrial environments. Non-armored cable may be used where installed in cable duct or other enclosed raceway. Cables will be distributed in cable tray where possible.

Uninterruptible Power Supplies (UPSs) will be used to power the Site Control System, select lighting and other services required to be in service after the loss of electrical power.

Drives for conveyors and selected other equipment will include AC motors controlled by Variable Frequency Drives (VFDs).

Generators will be used as the back-up or emergency power source for services that are required to be in service under loss of electrical power, which are too large for a UPS system.

LED lighting will be the primary technology used for lighting throughout the site.

11.2 Controls

The Site Control System will be based on a PLC/SCADA system. A dual-redundant hot backup processor system will be used for the PLC. The SCADA system will provide a graphical and data analysis interface for operation.

The PLC system will utilize remote input/output racks closed to the field instruments, devices and final control elements. The control system will communicate via Ethernet over fiber optic cables to remote racks.

Input/output (I/O) devices will be 4-20mA for analog signals, 24VDC or 120VAC for discrete (on/off) signals. Specialty devices such as RTDs to measure temperature will use RTD signal directly to the PLC I/O.

The SCADA system main Graphical User Interfaces (GUIs) will be located in a Central Control Room located at the Administration Building. Operator Interface Terminals (OITs) will be provided at site area locations where required.

Control will be either Remote or Local. Remote control is operational control through the PLC/SCADA system via the GIUs or OITs. Local control is manual control through Local Control Panels (LCPs) that may include pushbuttons, selector switches, pilot lights, drive interface terminals, etc.

Major equipment, for example shiploaders, may have on-board, stand-alone control systems. These control systems will be specified to be compatible with the Site Control System. Communications to stand-alone equipment will be Ethernet over fiber optic cable. The Site Control System will monitor and/or provide supervisory control through the communications link. Exceptions would be any emergency signals that would require hard-wiring.

The rail unloading facilities will have an independent control system. This system will be compatible with and linked to the downstream control system. Only when the downstream control system is configured for material transfers, and verified, will the rail unloading system be allowed to initiate transfers.

12 Infrastructure

12.1 Rail Systems

A rail system, designed to meet with BNSF and UP Industrial Track Standards will be used for receipt and processing of unit trains. There will be an arrival and departure spur from the mainline to the facility. Unit trains will be processed in approximately 26-car segments through discharging into a below grade dumping pit and conveyance system. The 26-car segments will be pulled or pushed through the dumping stations either by a switching locomotive or an indexer, which will be evaluated during preliminary engineering.

12.1.1 Train and Railcar Data

The design calls for incoming trains of 104 railcars to be split in and handled on 26 railcars "ladder type" storage tracks. Commodity A railcars are expected to be bottom dump aluminum construction, closed top hopper cars, with gross weight of 130 tonnes, cargo capacity of approximately 110 tonnes. Commodity B railcars are expected to be steel construction, closed top, bottom dump hopper cars, each with approximately 90 tonnes of cargo capacity.

Commodity A cars will be bottom hopper, rapid discharge style cars, with removable, fiberglass covers.

Commodity B cars will be 60 ft. long, closed top hopper cars. Variable configurations and numbers of hoppers are anticipated. The Commodity B cars will be unloaded in a stationary position. Pneumatic gate opening/closing devices will be used.

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12.2 Site Preparation

12.2.1 Clearing and Grubbing

Clearing, grubbing and top soil stripping is to be done only where required leaving as much of the existing vegetation as practicable. The design will:

- Establish vegetation clearing, grubbing, and over-stripping requirements.
- Determine the applicable regulations and restrictions for disposal of materials through discussions with appropriate authorities.

12.2.2 Temporary Spill Containment and Erosion Control

The design will:

- Establish the regulations surrounding the disposal of site runoff into off-site water courses through discussions with the appropriate authorities.
- Provide the necessary containment facilities for products of erosion and oil spills originating from construction activities and equipment operation, etc.
- Provide appropriate best management practices to treat site runoff and prevent siltation of natural water courses.

12.2.3 Ground Improvement

Ground improvements will be based on Geotechnical Engineers recommendations, it is assumed that some type of ground improvement will be required for the Commodity A storage building for support of the Commodity A stockpile. An appropriate recommendation for the type and extent of ground improvement will be determined, after additional geotechnical studies, during detail engineering.

12.2.4 Demolition

Demolition is being done by the Owner and is assumed to be completed prior to the start of site work

12.2.5 Earthworks

Re-grading of the site to create appropriate base grades for the new facilities. It is assumed that grading will be driven by the requirements of operations of the new facilities and other design constraints rather than trying to achieve an earthwork balance.

The design will establish the approximate extent of excavation, import and export required in accordance with the recommendations of the Owner's Geotechnical Engineer. Surplus material will be disposed of as directed by the Owner's representative. Disposal of contaminated soil is not anticipated.

12.2.6 Hazardous Materials

The site may contain toxic or hazardous materials. If present, these materials and subsequent mitigation strategies will be established by others, with a specific focus on

determining areas of potential soil contamination and establishing the nature and extent of remediation required.

The design will assume no hazardous materials findings.

12.3 Surfacing

The design will account for surfacing materials in and around the new facilities to allow for the movement of personnel and equipment, and to direct surface runoff water away from facilities to drains and ditches. In general, the surfacing will include:

- Pavement where vehicular or access ways warrant.
- Gravel for pedestrian paths and maintenance areas.
- Grass or vegetation for low use areas and landscaped areas.

12.4 Roads/Vehicular Access

The design will specify on-site access roads that connect buildings and maintained facilities. Roads will be designed in accordance with the following specifications:

- Maximum grade: 10%
- Minimum centerline radius: 50 ft.
- Minimum traffic (traveled way) width (2 lanes): 16.5 ft.
- Minimum vertical clearance: 16 ft.
- Cross slopes: 2%

Pavement thickness design is to be provided by Owner's Geotechnical Engineer. Additional turning radii accommodations for large delivery equipment and mobile maintenance equipment may be considered for access ways depending on operations requirements identified to the Engineer by the Owner.

12.5 Site Drainage

Site drainage for stormwater surface runoff will be facilitated through the use of stormwater management facilities that could include open channel and underground gravity conveyance systems, stormwater pump stations/force main systems, and stormwater detention/infiltration and treatment systems. The design will establish the appropriate methodologies for sizing stormwater management facilities based on local requirements for stormwater quality and flow control.

Low Impact Development (LID) techniques will be considered for accomplishing local stormwater quality and flow control standards. LID techniques may include reducing impervious surfaces where practical and utilizing infiltration where feasible as determined by the Owner's Geotechnical Engineer. Excess stormwater will discharge through an approved and permitted outlet. Opportunities for storing and reusing stormwater for process or dust suppression may be considered depending economic feasibility.

The drainage design will evaluate and select best management practices for site specific source controls where appropriate. Process water contacting bulk materials or used for facility maintenance will have drainage collection systems separate from stormwater runoff collection facilities. Bulk materials handled on site will be covered in storage buildings and enclosed/covered conveyors to provide environmental protection during material transfers.

12.6 Water Systems

The design will include water systems for Potable Water, Process Water, and Fire Water.

- Potable Water will be sourced by a metered connection from the local purveyor. All pipe and materials for the potable water system will conform to requirements of the local purveyor and health authority. Potable water supply and metering for arriving ships will be provided.
- Process Water will be sourced from potable water by an approved backflow prevention device. Process water may also include treated water from onsite recycling operations and from collected stormwater where connected internal to the process water system and protected by backflow prevention device.
- Fire Water will be sourced from potable water following an approved backflow prevention device.
- The design of all water mains, including those not designed to provide fire protection, will be subject to hydraulic analysis and sized based on flow demands and pressure requirements.

12.6.1 Materials

Pipe, fitting, valve and fire hydrant materials will conform to the latest industry standards and local requirements. Plastic pipe may not be used in locations with potential exposure to petroleum products.

Packing and jointing materials will meet applicable standards. Pipes having mechanical joints or slip-on joints with rubber gaskets are preferred. Normally:

- Cement mortar-lined, push-on joint, ductile iron will be used for areas subject to mostly truck traffic and heavier, off-road wheel loads, or where cover is less than 3 ft.
- C900 polyvinyl chloride pipe will be used elsewhere, to a maximum 12 in. diameter.
- Galvanized Steel Pipe Schedule 40 will be used for process water.

12.6.2 Valves

- The design will provide shut-off valves on water mains to provide appropriate shut down for maintenance and operations activities.
- The design will provide means of removing air, such as hydrants or air relief valves, where air can accumulate at high points within water mains.
- A combination air/vacuum relief valve will be provided at the crest (highest) point of the water main.

12.6.3 Cross-Connections and Inter-Connections

The design will not connect the water distribution system to any pipes, pumps, hydrants or tanks that may contain unsafe water or other contaminating materials and that may be discharged or drawn into the distribution system.

12.7 Vacuum Systems

Locations in the facility that handle Commodity B will be equipped with vacuum collection headers to allow for dry clean up of fugitive materials. These vacuum systems will consist of hose connections in process areas that connect to a main header leading to a vacuum-truck accessible location.

12.8 Fire Protection

12.8.1 General

The fire protection system will be designed, installed, tested and inspected to NFPA standards. Materials and equipment used in the fire protection system will meet Underwriters Laboratory and Factory Mutual requirements.

The local fire authority will approve the final design, equipment selection, and layout of the fire protection system.

12.8.2 Piping, Fire Hydrants and Hose Cabinets

Fire protection system water mains will conform to NFPA 24, with a minimum size of NPS 6, a minimum operating pressure of 55 psi, and a pressure drop as described in NFPA 24.

The design will specify approved fire hydrants where required by code. In accordance with NFPA 307, fire hydrants will be located no closer than 40 ft. from any major building, at intervals no greater than 300 ft., no less than 150 ft. from a dead head, and such that each facility is within reach of at least two hydrants. The hydrant opening size will be 2.5 in. and the most remote hydrant will have a minimum residue pressure of 20 psi with a minimum flow rate of 1000 gpm.

12.9 Wastewater Systems

The design will include water systems for Sanitary Waste Water and Process Waste Water.

- Sanitary Waste Water will be discharged to the sewer system operated by the local purveyor and will comply with the permit regulations associated with discharge. All pipe and materials for the Sanitary Waste Water system will conform to requirements of the local purveyor and health authority.
- Process Waste Water will be conveyed to an onsite treatment facility for either recirculation onsite as Process Water or for discharge as appropriate, either as stromwater or sanitary wastewater.

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- The design of all wastewater mains will be subject to hydraulic analysis and sized based on flow demands and pressure requirements.
- Underground wastewater pipelines will be designed with at least 3 ft. of cover.

12.9.1 Pipe Materials

The design will use the following pipe materials, which will be selected to suit the physical and chemical properties of the liquids they convey:

- Fiberglass reinforced plastic pipe: Pipe lengths will be joined using bell-and-spigot joints or a butt-and-strap technique. Bell-and-spigot pipe joint gaskets will be made of appropriate synthetic materials to suit the liquid being carried by the pipe.
- High-density polyethylene pipe: Pipe lengths will be joined using butt fusion methods or flanges.
- Polyvinyl chloride pipe: Pipe lengths will be joined using bell-and-spigot gasketed joints or solvent welds.
- Stainless steel (SAE grade 304) or epoxy-lined and coated mild steel pipe (for exposed pipelines): Pipe lengths will be welded or joined using flanged or Victaulic couplings.
- Sewer pipelines will be designed with at least 2 ft. of cover below sub-grade where they pass under heavily traveled roads.

12.9.2 Force Mains

Force mains will be designed to maintain a minimum fluid velocity of 3 ft/s and a maximum velocity of 11.5 ft/s. Force mains will aim to rise continuously toward an outlet without local high points. An automatic air relief valve will be provided at each high point in the force main to prevent air locks.

A combined air/vacuum relief valve will be provided at the crest (highest point) of each force main. Force mains will enter the gravity system at a point not higher than 2 ft. above the flow line of the receiving manhole.

12.9.3 Water Pumping

Pumps shall be provided for locations where pumping is required.

Submersible pumps shall be used where possible and designed to handle slurry flow with a solid weight concentration of up to 1%.

Pumps shall be controlled by level instruments and preference shall be given to pumps that can run dry.

12.10 Cable Trenches

It is assumed that duct banks will convey main underground systems outside of areas where they can be conveyed by above ground structures on cable trays.

12.11 Security and Fencing

To the west side of the facility is a public access area. There will be fencing and screening placed along this area to provide control access and provide visual separation.

12.11.1 Parking

Parking for ILWU, administrative staff and visitors will be provided outside of secure facility.

12.12 Office and Maintenance Facility

There will be an administration/maintenance building located between the entrance and the stockpile area. The administration/maintenance building will be approximately 7,500 ft^2.

12.13 Dock Office

An approximate 200 ft^2 dock office with Internet, Ethernet, HMI and phone access.

12.14 Gangway Access

Gangway access to provide safe access to all ships will be provided.

12.15 Operating and Maintenance Vehicles

Mobile equipment such as forklifts, wheel loaders, boom trucks, welders, service trucks, pickups, and light utility vehicles are assumed to be required, but will be specified and provided by the terminal.

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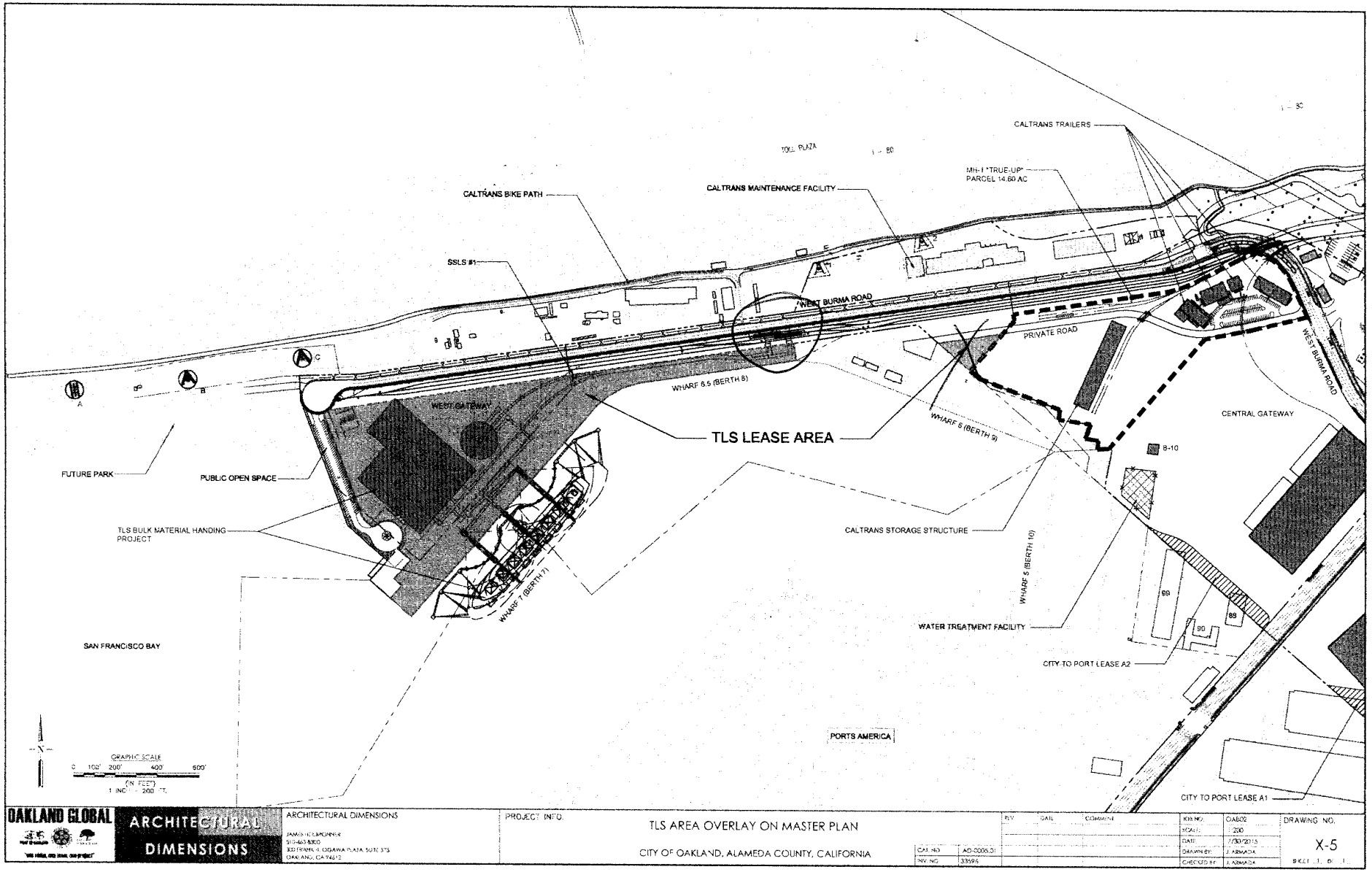

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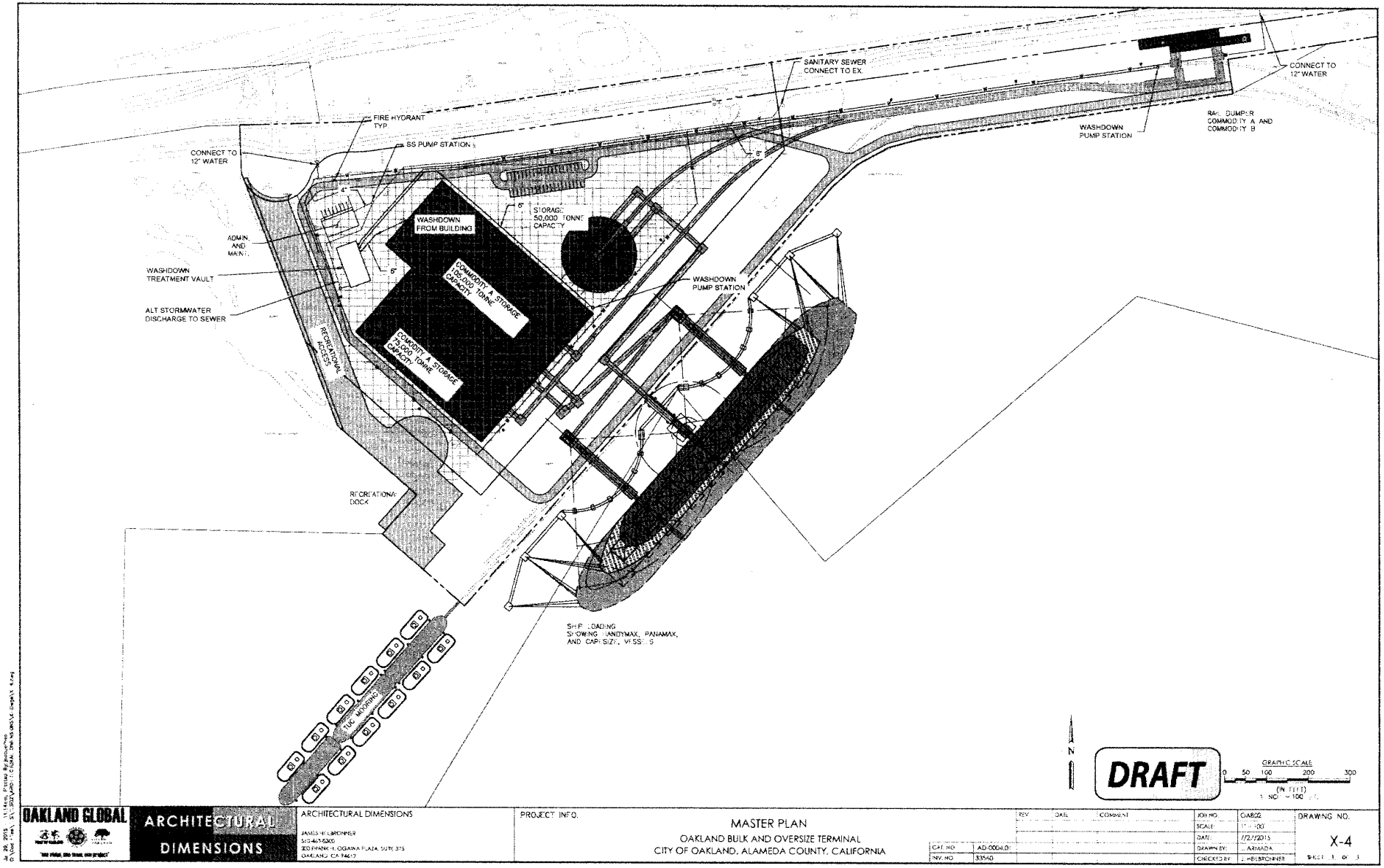

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PROJECT INFO.

MASTER PLAN
OAKLAND BULK AND OVERSIZE TERMINAL
CITY OF OAKLAND, ALAMEDA COUNTY, CALIFORNIA

REV	DATE	COMMENT

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CHECKED BY:	J. HELBRONNER

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X-4
SHEET 1 OF 1

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West Gateway Bulk Cargo Terminal
Basis of Design

United States District Court
Northern District of California
Trial Exhibit 820
Case No. 3:16-cv-07014-VC
Date Entered
By
Deputy Clerk

TERMINALS AND LOGISTICS SOLUTIONS, LLC

West Gateway Multi-commodity Bulk Terminal

Basis of Design

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West Gateway Bulk Cargo Terminal
Basis of Design

EXECUTIVE SUMMARY

The objective of this document is to present the preliminary basis of design used for planning purposes for review and comment, prior to finalizing the conceptual development of the proposed West Gateway multi-product bulk terminal. Once comments are received, Cardno will proceed with developing more detailed arrangements needed for developing an estimate of probable capital and operating cost. This report does not address the shiploader at this time because the arrangement on the wharf will very somewhat based on the decisions made on the storage structures. Wharf arrangement drawings will be made after we receive comments on this document.

The terminal will receive the following dry bulk materials by rail for export by ship. Seasonal variations in the supply of commodities are not expected and have not been planned for.

Commodities and Throughputs

Material	Throughput (tpy)
Borax	300,000
Soda Ash	700,000
Sodium Sulfate	300,000
Iron Ore Pellet	1,000,000
HBI	2,000,000
Pet Coke	1,000,000
Coal	4,000,000

The handling of Borax, Soda Ash, and Sodium Sulfate; i.e., "White Products" shall be completely segregated from the handling of all other products to prevent cross-contamination. Two completely segregated train unloading, conveying, storage, and shiploading systems are planned for to segregate the "White" from "Black" products.

The various commodities will be shipped in bulk carriers ranging from Handysize to Capesize vessels. Capesize vessels up to 180,000 DWT will be partially loaded to the available water depth at the berth.

It is assumed that the Union Pacific (UP) will deliver all products in unit trains consisting of 120 railcars to the rail storage yard near the facility. The unit train will be cut into two 60-car strings and stored on two storage tracks

The minimum storage required for the proposed throughput is principally dependent on the product delivery and shipment inter-arrival times and the largest shipment projected to be loaded onto vessels.

The minimum storage required for each product is assumed to be:

> The shipment volume required by the vessel at berth
>
> Plus (+)
>
> The shipment volume required by the next vessel scheduled to arrive at the berth
>
> Minus (-)
>
> The volume projected to be delivered by train between the two vessel calls.

Vessels and trains are assumed to arrive at the facility on a semi-scheduled pattern. A train/ship arrival variability factor of 0.75, 0.80, and 0.85 was applied to the average ship and train inter-arrival times to test the sensitivity of vessel and train arrival patterns on the minimum storage volume required for each product.

The minimum storage requirements are presented in the table below.

Minimum Storage Requirements

Material	Borax	Soda Ash	Sodium Sulfate	Iron Ore Pellets	HBI	Pet Coke	Coal
Min. Storage (tons)	46,200	100,100	46,200	100,100	100,100	90,600	215,600
% of Annual Volume	15.4%	14.3%	15.4%	10.0%	5.0%	9.1%	5.4%

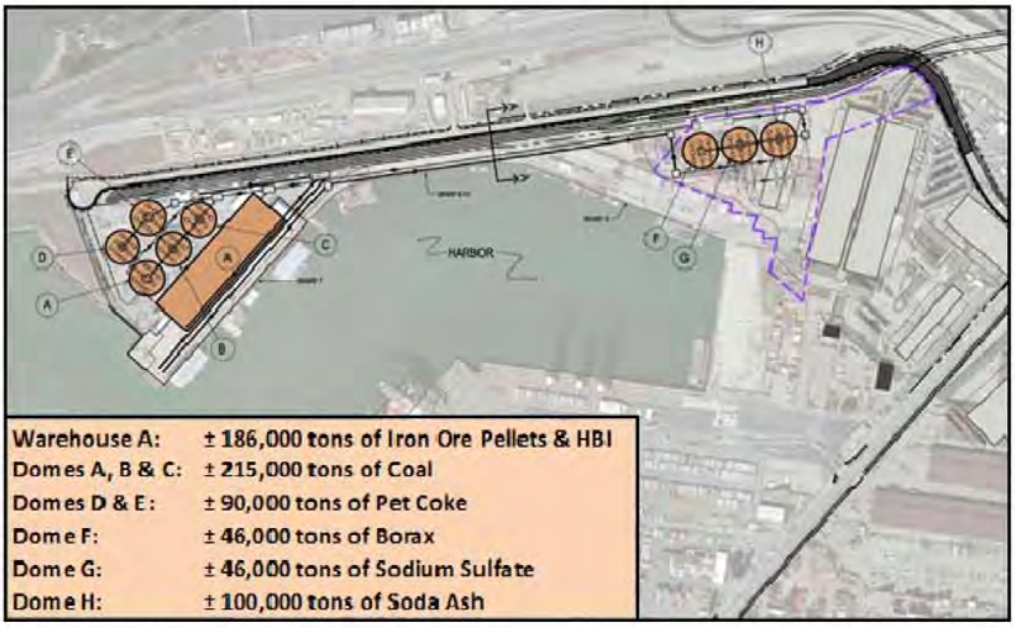
This method of calculation results in the products with the least annual throughput needing the most storage volume when compared to annual throughput on a percentage basis. This is mainly due to the variability in the train delivery cycle that is imposed by the calculation.

A discussion with the UPRR and the shippers of the low volume products should be had to better understand production and train delivery constraints. More control in the train inter-arrival times will

result in lowering the storage volume requirements for the "White Products" and increase the storage on site for the high volume products; such as coal.

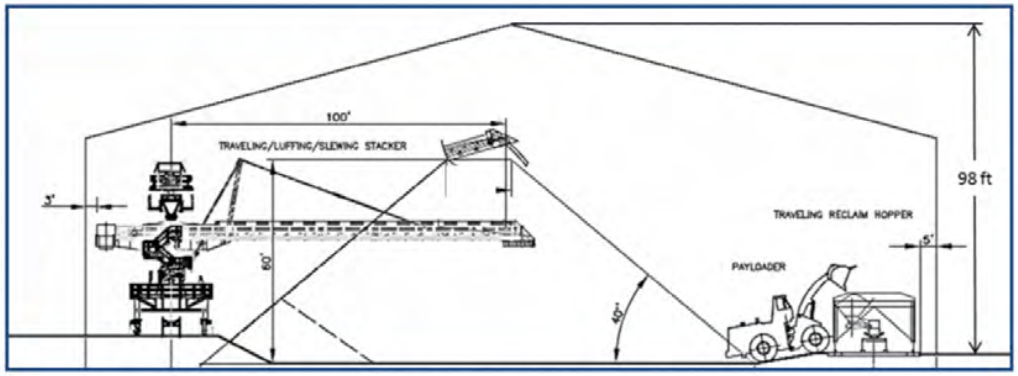
The project site is relatively small. The space available for constructing storage structures is only about 26 acres. The site is also of irregular shape and not contiguous. The need to accommodate seven (7) products and to separate "White" and "Black" products further complicates the potential storage schemes.

Several arrangements for storing the products were evaluated and two arrangements are proposed for consideration. The 1st arrangement provides one (1) warehouse to store iron ore pellets and HBI and eight (8) domes to store the other products. The warehouse will be equipped with a traveling stacker and reclaim will be by wheel loaders feeding traveling hoppers. Site Layout No.1 is shown below.



Site Layout Alternative No. 1

A typical cross-section of the proposed warehouse for storing the iron ore and HBI is shown below.



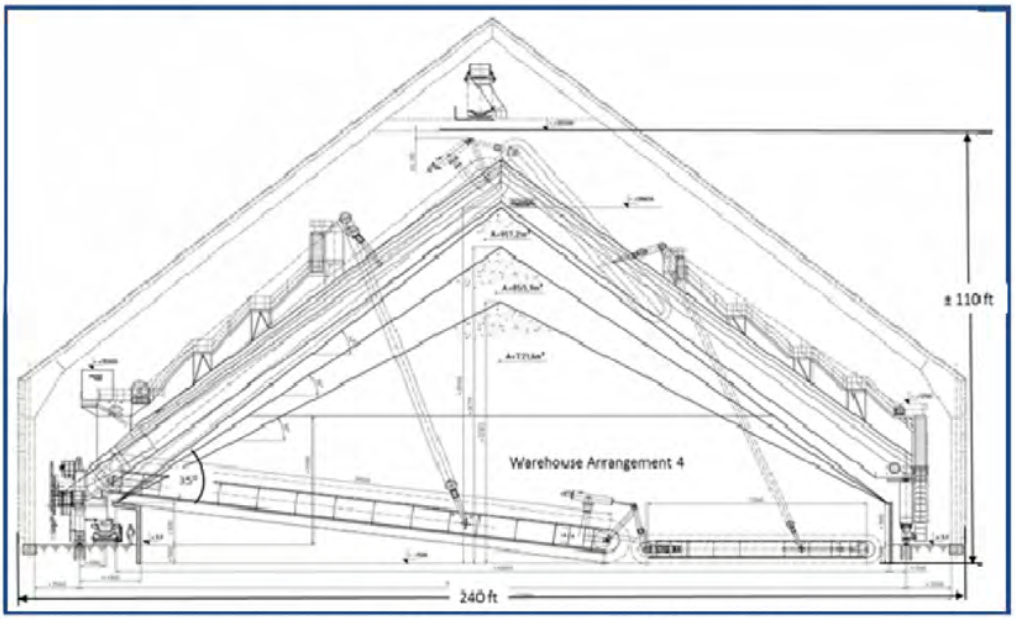
Cross section of proposed warehouse for storing iron ore pellets and HBI

The 2nd alternative site layout provides one (1) warehouse to store iron ore pellets and HBI, one (1) warehouse to store Soda Ash and seven (7) domes to store the other products. Site Layout No. 2 is shown below.



Site Layout Alternative No. 2

The warehouse for the iron ore and HBI is as shown above. The warehouse for the soda ash will have an overhead tripper to stockpile the material and a portal scraper reclaimer. A typical cross-section of the proposed warehouse for storing the soda ash is shown below.



Cross section of proposed warehouse for storing iron ore pellets and HBI

1.0 PROJECT OVERVIEW

The terminal will receive various dry bulk materials by rail for export by ship. The train unloading, conveying, storage and shiploading of the materials must be achieved in a manner to eliminate the generation of dust to the maximum extent possible. For this reason, the conveying system will be completely enclosed and the material will be stockpiled in warehouses, domes or silos.

Table 1 presents the projected annual throughput and Table 2 presents the projected growth in annual throughput.

Table 1 - Projected Throughput

Material	Throughput (tpy)
Borax	300,000
Soda Ash	700,000
Sodium Sulfate	300,000
Iron Ore Pellet	1,000,000
HBI	2,000,000
Pet Coke	1,000,000
Coal	4,000,000

Table 2 - Projected Growth in Throughput

YEAR	Borax (Mtpy)	Soda Ash (Mtpy)	Salt Cake (Mtpy)	Pet Coke (Mtpy)	Iron ore pellets (Mtpy)	HBI (Mtpy)	Coal (Mtpy)	Total (Mtpy)
1	0.30	0.30	0.30	0.00	0.00	1.00	2.00	3.90
2	0.30	0.50	0.30	0.20	0.20	1.20	4.00	6.70
3	0.30	0.70	0.30	0.40	0.40	1.20	4.00	7.30
4	0.30	0.70	0.30	0.50	0.60	1.60	4.00	8.00
5	0.30	0.70	0.30	1.00	1.00	2.00	4.00	9.30

Table 3 presents the typical material characteristics used for design of the material handling system.

Table 3 - Typical Material Characteristics

Material	Bulk Density lbs./cu. Ft.	Lump size (inch)	Flowability Flow Function	Moisture %	Angle of Repose (°)	Comments
Dehydrated Borax	72 - 82	Very Fine	Free Flowing	Dry	31	Mildly Abrasive
For storage use:	78	<0.016"	>4 but <10			Mildly Corrosive
Dense Soda Ash	55 - 65	Fine	Average	Dry	32	
For storage use:	60	< 0.0234"	>2 but <4			
Sodium Sulfate	80 - 103	Fine	Average	Dry	35	Mildly Corrosive
For storage use:	85	< 0.0331"	>2 but <4			Hygroscopic
Iron Ore Pellet	116 - 130	Granular (rgh round)	Average	3% - 5%	30-44°	Extremely Abrasive
For storage use:	123	0.3" - 0.7"	>2 but <4		37	
HBI	150 - 170	Briquette		<2%	38-40º	Extremely Abrasive
For storage use:	160	4.3" x 2.0" x 1.2"			40	
Pet Coke	35 - 45	Granular	Average	12% - 15%	30-44º	Extremely Abrasive
For storage use:	40	< 7"	>2 but <4		37	Explosive
Coal	45 - 55	Granular	Average	12% - 15%	27 - 40°	Mildly Abrasive
For storage use:	50	< 3"	>2 but <4		35	Explosive

The handling of Borax, Soda Ash, and Sodium Sulfate; i.e., "White Products" shall be completely segregated from the handling of all other products to prevent cross-contamination of "White" and "Black" products. This criterion results in two completely segregated train unloading, conveying, storage, and shiploading systems.

The various commodities will be shipped in bulk carriers ranging from Handysize to Capesize vessels. Capesize vessels up to 180,000 DWT will be partially loaded to the available water depth at the berth. Table 4 presents the projected ship size by commodity.

Table 4 - Projected Ship Size by Commodity

Borax	Handymax
Sodium Sulfate	Handymax
Soda Ash	Handymax to Panamax
Pet Coke	Handymax to Panamax
Iron Ore Pellet	Handymax to Panamax
HBI	Handymax to Panamax
Coal	Panamax to Capesize*

** Capesize vessels up to 180,000 DWT will be partially loaded to the available water depth at the berth*

Table 5 presents the vessel particulars for Handysize, Handymax, Panamax, and Capesize vessels that will be calling at the terminal.

Table 5 - Vessel Particulars

Vessel Type	DWT	LOA (ft)	Beam (ft)	Draft (ft)
Handysize	22,000 - 28,000	559	80	33
HandyMax	45,000 - 55,000	636	102	38
Panamax	65,000 - 80,000	749	106	44
Capesize	up to 180000	955	149	60

Capesize vessels can range from 110,000 DWT to 365,000 DWT; however, only Capesize vessels ranging up to 180,000 DWT are being considered for this project. These vessels will be partially loaded to a draft of 48 feet and carry about 140,000 metric tonnes of bulk material.

2.0 OPERATIONAL ANALYSIS

An operational analysis was performed to determine the capacity of the dry bulk material handling equipment and storage system. The operational analysis focuses on the three principal functions of the Port; i.e., vessel loading operations at the berth, train unloading operations at the railcar dump station, and storage of material.

2.1 Material handling

For initial planning purposes, all conveyor belts are assumed to be 72 inches wide supported by 35° troughing idlers on the carrying side of the belt. The belt speed shall vary from 400 fpm for HBI to 900 fpm for coal. Variable-frequency drives shall be used to control belt speed. The maximum conveyor inclination angle shall be 12°, which is the maximum allowable for iron ore pellets.

The conveying system characteristics used for initial planning purposes are presented in Table 6.

Table 6 - Conveying System Characteristics and Capacity

Material	Surcharge Angle	CEMA cross section (sf)	Bulk density (pcf)	Belt speed (fpm)	Capacity at horiz.loadg. (s.tph)	Conv.Slope angle	Recomm. Max Loading (%)	Capacity incl. % loadg. (s.tph)	94% Design Capacity (s.tph) *	% loaded at design capacity.
Borax	10 °	3.548	78	400	3,321	12 °	94%	3,109	3,100	93%
Soda Ash	20 °	4.197	60	600	4,533	12 °	94%	4,244	4,200	93%
Sodium Sulfate	15 °	3.869	85	600	5,920	12 °	94%	5,542	5,500	93%
Iron Ore Pellet	5 °	3.230	123	600	7,151	12 °	94%	6,695	6,600	92%
HBI	15 °	3.869	160	400	7,429	12 °	94%	6,955	6,900	93%
Pet Coke	20 °	4.197	40	700	3,525	12 °	94%	3,301	3,300	94%
Coal	20 °	4.197	50	900	5,666	12 °	94%	5,304	5,300	94%

2.2 Vessel loading operations

The operating capacity of the stockpile reclaim and vessel loading equipment must result in acceptable ship turnaround times and berth occupancy levels; i.e., the amount of time the berth is occupied by vessel operations.

Bulk terminals typically do not receive vessels on a regularly scheduled rotation. There will be occasions when a ship will arrive at the terminal but will have to wait outside the port before proceeding to the berth because the loading operation for the previous vessel is not finished.

Statistical equations based on Queuing Theory are used to estimate the amount of time that vessels may have to wait at port before berth operations can begin. Figure 1 shows the ratio of average waiting time (Tw) over average berthing time (Tb) of all vessels over one year as a function of the berth occupancy percentage. Figure 1 shows that the waiting time factor increases exponentially for both functions as the berth occupancy reaches values beyond 65% to 70%. This means that berth occupancies above 65% will result in significantly higher ship waiting times. A higher degree of scheduling of vessel arrivals will lead to less vessel waiting time, which would make higher berth occupancies possible at tolerable vessel waiting times.

The berth loading rate is defined as the volume in tons that is loaded into a vessel during the overall time period that the vessel occupies the berth. To calculate berth occupancy, various non-productive time elements are included in the period of time that a berth is said to be "occupied" by a vessel. These time elements include:

- Time to transfer from anchorage to the berth
- Time to attach mooring lines
- Time for draft checking
- Time for customs clearance
- Time to open hatches
- Time for shiploader moves from hatch to hatch
- Stoppages due to adverse weather
- Malfunctions of the conveying system
- Time to remove mooring lines
- Time to clear berth and channel.

Vessel fleet size has an impact on the berth loading rate. A higher number of smaller vessels (a maxi-fleet) requires more time at berth because the larger number of vessels result in more non-productive time elements. To calculate berth occupancy, vessels are assumed to arrive on a semi-scheduled pattern. Berth availability is reduced to account for days lost due to adverse weather, holidays and scheduled maintenance. To account for shift changes, one day is calculated as 22.5 hours. The occupancy, in percent, is calculated by dividing the number of days the berth is occupied by the number of available days.

Seasonal variations in the supply of commodities are not expected. While some randomness in vessel arrivals are expected, we assume that vessel waiting time can be adequately estimated by using an arrival pattern similar to a 40% scheduled arrival pattern [Tw/Tb is equal to 40% of random arrival values] that has been found at many other ports. The average waiting time in port per vessel can thus be estimated by using Figure 1.

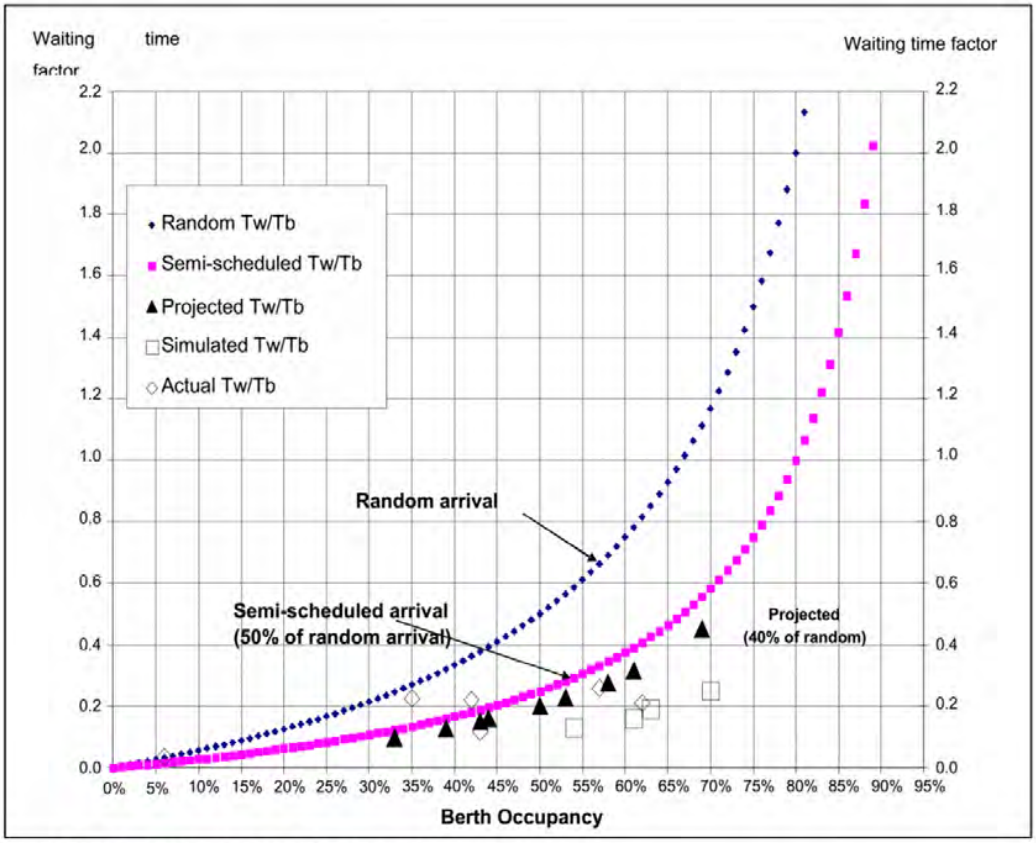


Figure 1 - Berth Occupancy vs Waiting Time

Berth occupancy calculations for the West Gateway Bulk Terminal are presented in Table 7 for a maxi-fleet and Table 8 for a mini-fleet. The calculations are based on using a shiploader with nominal capacities for each product shown in Table 6.

Using a maxi-fleet of smaller vessels will result in 211 ships calling on the bulk terminal annually. Ship turnaround time will vary from 0.5 to 1.1 days. Total berth occupancy for a maxi fleet will be 34.6 %. The annual waiting time is estimated to be 18 days per year and the average waiting time per vessel is estimated to be 0.09 days or about 2.2 hours.

Using a mini-fleet of larger vessels will result in 121 ships calling on the bulk terminal annually. Ship turnaround time will vary from 0.7 to 1.8 days. Total berth occupancy for a mini-fleet will be 29 %. The annual waiting time is estimated to be 12 days per year and the average waiting time per vessel is estimated to be 0.09 days or about 2.2 hours.

The capacity of the shiploader will determine the size requirements of the equipment upstream, which will have to be sized to feed the shiploader at the required capacity.

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Table 7 - Berth Occupancy and Vessel Waiting Time Calculation for Maxi-Fleet

ITEM No.	Product / INPUT DATA		Borax	Soda Ash	Sodium Sulfate	Iron Ore Pellet	HBI	Pet Coke	Coal		
			Handysize	Handysize	Handysize	Handymax	Handymax	Handymax	Panamax		
1	**Annual tonnage**	**Totals 9.300**	**0.300**	**0.700**	**0.300**	**1.000**	**2.000**	**1.000**	**4.000**	**mill.t**	**Input**
1a	Average size of cargo	**44,069**	20,000	20,000	20,000	45,000	45,000	45,000	70,000	tons	Input assumption
1b	Number of holds of vessel		5	5	5	5	5	5	7	holds	Input
4	Loader nominal rate		3,100	4,200	5,500	6,600	6,900	3,300	5,300	t/h	#2ex#3b
5a	Loader interference factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	-	No interf.for one crane
5b	Number of Loaders		1	1	1	1	1	1	1	-	Input
5c	Nominal rate for 1 shiploader **[average]**		3,100	4,200	5,500	6,600	6,900	3,300	5,300	t/h	#5ax#5bx#4
6a	Unavailable time at port (weather, maintenance)*		5.0	5.0	5.0	5.0	21.3	5.0	5.0	d/y	Input
6b	**Overall Port Availibility**		**99%**	**99%**	**99%**	**99%**	**94%**	**99%**	**99%**		**(365 d - #6a)/365**
	VESSEL TIME / EVENT										
7	Move to berth and dock		1.0	1.0	1.0	1.0	1.0	1.0	1.0	hours	Assumption
8	Customs and Paperwork		1.0	1.0	1.0	1.0	1.0	1.0	1.0	hours	Assumption
9	Vessel Problems	Load	1.0	1.0	1.0	1.0	1.0	1.0	1.0	hours	Assumption
10	Load cargo @ % nominal rate:	85%	7.6	5.6	4.3	8.0	7.7	16.0	15.5	hours	#1a/(%x#5c)
11	Hatch shifting 3 moves/hold [h]:	0.2	3.0	3.0	3.0	3.0	3.0	3.0	4.2	h/unl.	3movesx[h]x#1b/5b
16	Vessel time / draught survey		1.0	1.0	1.0	1.0	1.0	1.0	1.0	hours	Assumption
17	Vessel deberthing and transit time		1.0	1.0	1.0	1.0	1.0	1.0	1.0	hours	Assumption
18	Total berth time per vessel		15.6	13.6	12.3	16.0	15.7	24.0	24.7	hours	Sum#7 through #17
19	Average transfer rate @ berth time		1,283	1,470	1,629	2,809	2,871	1,872	2,830	t/h	#1a/#18
20	Average rate / nominal rate		41%	35%	30%	43%	42%	57%	53%		100x(#19/#5c)
21	Operating hours per day		22.5	22.5	22.5	22.5	22.5	22.5	22.5	hours	Input Assumption
	OUTPUT - DAILY PROJECTIONS:		**Borax**	**Soda Ash**	**Sodium Sulfate**	**Iron Ore Pellet**	**HBI**	**Pet Coke**	**Coal**		
22	**Berth occupancy per vessel: Tb**	**0.82**	**0.7**	**0.6**	**0.5**	**0.7**	**0.7**	**1.1**	**1.1**	**days**	**#18/#21**
22A	**Berth transfer rate**	**53,728**	**28,864**	**33,083**	**36,651**	**63,197**	**64,603**	**42,112**	**63,666**	**t/day**	**#1a/#22**
	OUTPUT - ANNUAL PROJECTIONS:		**Borax**	**Soda Ash**	**Sodium Sulfate**	**Iron Ore Pellet**	**HBI**	**Pet Coke**	**Coal**		
23	**Annual tonnage transferred**	**9.300**	**0.300**	**0.700**	**0.300**	**1.000**	**2.000**	**1.000**	**4.000**	**mill.t**	**Input**
24	Number of vessels loaded	211	15	35	15	22	44	22	57	vessels	#23/#1a
25	Berth occupancy - hours	4,154	249	508	196	380	743	570	1,508	h/y	24 hx#22x#24
26	Total Berth occupancy - days	173	10	21	8	16	31	24	63	d/y	#22x#24
27	Berth availability - days	501	360	360	360	360	344	360	360	d/y	365 - #6a
28	**Berth occupancy percent:**	**34.6%**	**2.9%**	**5.9%**	**2.3%**	**4.4%**	**9.0%**	**6.6%**	**17.5%**		100x(#26/#27)
29	Waiting time factor Tw/Tb assumed	0.106									40% of random
30	Annual waiting time Tw calculated [d/y]	18									#29x#26
31	**Avg. waiting time per vessel: Tw**	**0.09**									**#30/#24**
32	**Avg. Vessel Time in Port: Tb+Tw**	**0.91**									**#22 + #31**

* Weather delays are added to the handling of HBI because some vessel loading procedures require that vessel loading stop to close hatches when raining

Table 8 - Berth Occupancy and Vessel Waiting Time Calculation for Mini-Fleet

ITEM No.	Product / INPUT DATA		Borax Handysize	Soda Ash Panamax	Sodium Sulfate Handysize	Iron Ore Pellet Panamax	HBI Panamax	Pet Coke Panamax	Coal Capesize		
1	**Annual tone Totals**	**9.300**	**0.300**	**0.700**	**0.300**	**1.000**	**2.000**	**1.000**	**4.000**	**mill.t**	**Input**
1a	Average size of cargo		30,000	65,000	30,000	65,000	65,000	65,000	140,000	DWT	Input assumption
1b	Number of holds of vessel		5	7	7	7	7	7	9	holds	Input
4	Loader nominal rate		3,100	4,200	5,500	6,600	6,900	3,300	5,300	t/h	#2ex#3b
5a	Loader interference factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	-	No interf.for one crane
5b	Number of Loaders		1	1	1	1	1	1	1	-	Input
5c	Nominal rate for 1 shiploader **[average]**		3,100	4,200	5,500	6,600	6,900	3,300	5,300	t/h	#5ax#5bx#4
6a	Unavailable time at port (weather, maintenance)*		5.0	5.0	5.0	5.0	21.3	5.0	5.0	d/y	Input
6b	**Overall Port Availibility**		**99%**	**99%**	**99%**	**99%**	**94%**	**99%**	**99%**		**(365 d - #6a)/365**
	VESSEL TIME / EVENT										
7	Move to berth and dock		1.0	1.0	1.0	1.0	1.0	1.0	1.0	hours	Assumption
8	Customs and Paperwork		1.0	1.0	1.0	1.0	1.0	1.0	1.0	hours	Assumption
9	Vessel Problems	Load	1.0	1.0	1.0	1.0	1.0	1.0	1.0	hours	Assumption
10	Load cargo @ % nominal rate:	85%	11.4	18.2	6.4	11.6	11.1	23.2	31.1	hours	#1a/(%x#5c)
11	Hatch shifting 3 moves/hold [h]:	0.2	3.0	4.2	4.2	4.2	4.2	4.2	5.4	h/unl.	3movesx[h]x#1b/5b
16	Vessel time / draught survey		1.0	1.0	1.0	1.0	1.0	1.0	1.0	hours	Assumption
17	Vessel deberthing and transit time		1.0	1.0	1.0	1.0	1.0	1.0	1.0	hours	Assumption
18	Total berth time per vessel		19.4	27.4	15.6	20.8	20.3	32.4	41.5	hours	Sum#7 through #17
19	Average transfer rate @ berth time		1,548	2,372	1,921	3,127	3,205	2,008	3,375	t/h	#1a/#18
20	Average rate / nominal rate		50%	56%	35%	47%	46%	61%	64%		100x(#19/#5c)
21	Operating hours per day		22.5	22.5	22.5	22.5	22.5	22.5	22.5	hours	Input Assumption
	OUTPUT - DAILY PROJECTIONS:		**Borax**	**Soda Ash**	**Sodium Sulfate**	**Iron Ore Pellet**	**HBI**	**Pet Coke**	**Coal**		
22	**Berth occupancy per vessel: Tb**	**1.20**	**0.9**	**1.2**	**0.7**	**0.9**	**0.9**	**1.4**	**1.8**	**days**	**#18/#21**
22A	**Berth transfer rate**	**0**	**34,820**	**53,362**	**43,222**	**70,358**	**72,106**	**45,177**	**75,946**	**t/day**	**#1a/#22**
	OUTPUT - ANNUAL PROJECTIONS	**ALT 2**	**Borax**	**Soda Ash**	**Sodium Sulfate**	**Iron Ore Pellet**	**HBI**	**Pet Coke**	**Coal**		
23	**Annual tonnage transferred**	**9.300**	**0.300**	**0.700**	**0.300**	**1.000**	**2.000**	**1.000**	**4.000**	**mill.t**	**Input**
24	Number of vessels loaded	121	10	11	10	15	31	15	29	vessels	#23/#1a
25	Berth occupancy - hours	3,490	207	315	167	341	666	531	1,264	h/y	24 hx#22x#24
26	Total Berth occupancy - days	145	9	13	7	14	28	22	53	d/y	#22x#24
27	Berth availability - days	501	360	360	360	360	344	360	360	d/y	365 - #6a
28	**Berth occupancy percent:**	**29.0%**	**2.4%**	**3.6%**	**1.9%**	**3.9%**	**8.1%**	**6.1%**	**14.6%**		100x(#26/#27)
29	Waiting time factor Tw/Tb assumed	0.082									40% of random
30	Annual waiting time Tw calculated [d/	12									#29x#26
31	**Avg. waiting time per vessel: Tw**	**0.10**									**#30/#24**
32	**Total Vessel Time in Port: Tb+Tw**	**1.30**									**#22 + #31**

* Weather delays are added to the handling of HBI because some vessel loading procedures require that vessel loading stop to close hatches when raining

The capacity of the shiploader will determine the size requirements of the equipment upstream, which will have to be sized to feed the shiploader at the required capacity.

The above projected berth occupancies calculated in Tables 7 and 8 are relatively low. Reducing the conveyor belt width for shiploading of the "white products" from 72 inches to 48 inches would reduce cost and still provide relatively low berth occupancy and acceptable ship turnaround times.

The conveying system characteristics for "White Products" handled on 48-inch conveyor belts is presented in Table 9. The ship turnaround times using 48-inch conveyor belts for the "White" products are presented in Table 10. The berth occupancy calculations can be found in the Appendix.

Table 9 - Conveying Characteristics for "White Products" on 48-inch Conveyor Belts

Material	Belt Width (inch)	Troughing Angle	Surcharge Angle	CEMA cross section (sf)	Bulk density (pcf)	Belt speed (fpm)	Capacity at horiz.loadg. (s.tph)	Conv.Slope angle	Recomm. Max Loading (%)	Capacity incl. % loadg. (s.tph)	94% Design Capacity (s.tph) *	% loaded at design capacity.
Borax	48	35 °	10 °	1.523	78	400	1,426	12 °	94%	1,335	1,300	91%
Soda Ash	48	35 °	20 °	1.804	60	600	1,949	12 °	94%	1,824	1,800	92%
Sodium Sulfate	48	35 °	15 °	1.662	85	600	2,543	12 °	94%	2,381	2,300	90%

Table 10 - Ship Turnaround Time using 48-inch Belts

Fleet Size	Borax (days)	Soda Ash (days)	Sodium Sulfate (days)
Maxi-Fleet	1.2	0.9	0.8
Mini-Fleet	1.6	2.3	1.1

2.3 Train unloading operations

It is assumed that the Union Pacific Railroad (UP) will deliver all products in unit trains consisting of 120 railcars to the rail storage yard near the facility. The unit train will be cut into two 60-car strings and stored on two storage tracks. The details of the unit train makeup are shown in Table 11 and the number of trains per year by product is presented in Table 12.

Table 11 - Details of Unit Train Makeup

Railcar capacity (All matls except pet coke)	110	tons (US)
Railcar capacity pet coke	90	tons (US)
Railcar length	53.08	ft
Train length	120	railcars
Train Capacity (All matls except pet coke)	13,200	tons (US)
Train Capacity pet coke	10,800	tons (US)
Train length without locomotive	6,370	ft
Road locomotive length	73.17	ft
Train length with 3 locomotives	6,589	ft

Table 12 - Number of Trains per Year

Borax	25
Soda Ash	58
Sodium Sulfate	25
Iron Ore Pellet	84
HBI	167
Pet Coke	102
Coal	334
Total per year	**795**
Avg. No. of Trains per Day	**2.18**

An operational analysis of coal train unloading was carried out to determine the average train residency time at the facility and the amount of time that the two road crossings will be blocked by train activity. Figure 2 presents a train switching time diagram showing a typical two train per day operation. This schedule provides some float in the train arrival and departure times. Figure 3 presents a train switching time diagram that shows that three trains can be unloaded in one day, providing that there is continuous 24-hr operations and no delay in train arrivals or departures.

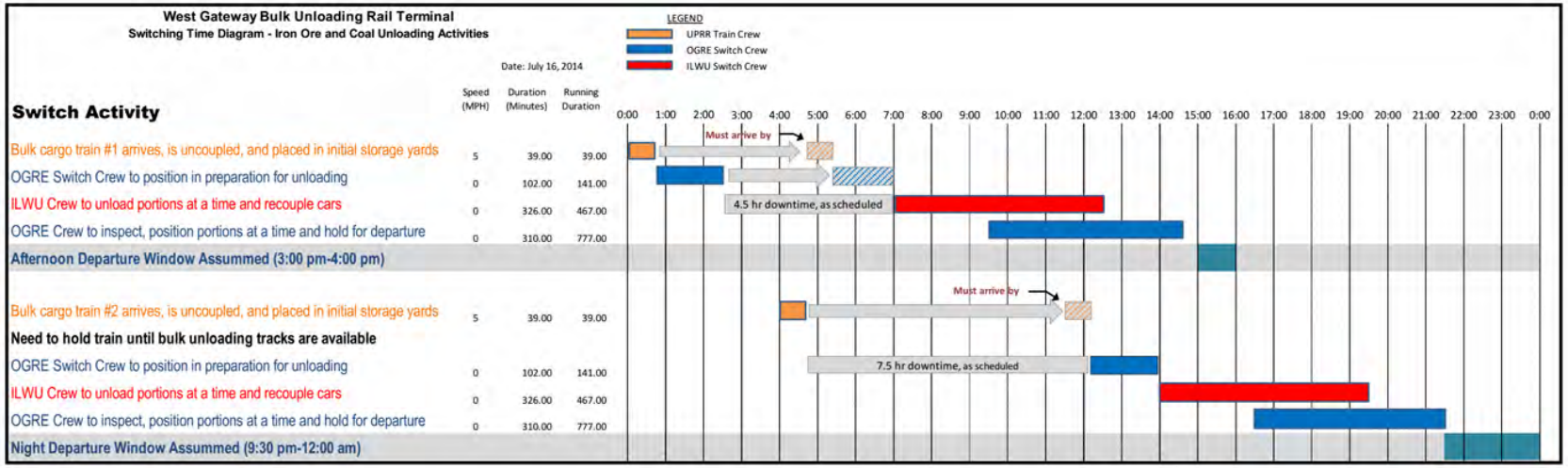


Figure 2 - Train switching time diagram for two trains per day

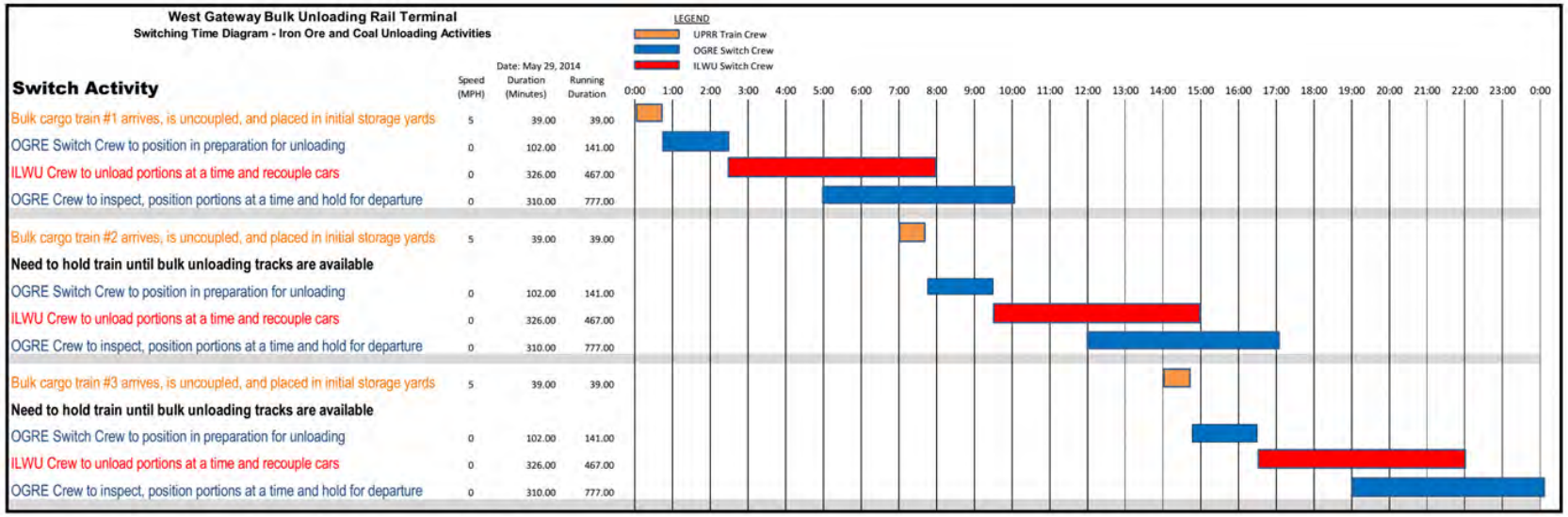


Figure 3 - Train switching diagram for three trains per day

2.4 Storage requirements

The minimum storage required for the proposed throughput is principally dependent on the product delivery and shipment inter-arrival times and the largest shipment projected to be loaded onto vessels. The minimum storage required for each product is assumed to be:

The shipment volume required by the vessel at berth
Plus (+)
The shipment volume required by the next vessel scheduled to arrive at the berth
Minus (-)
The volume projected to be delivered by train between the two vessel calls.

Vessels and trains are assumed to arrive at the facility on a semi-scheduled pattern. A train/ship arrival variability factor of 0.75, 0.80, and 0.85 was applied to the average ship and train inter-arrival times to test the sensitivity of vessel and train arrival patterns on the minimum storage volume required for each product. Table 13 presents the calculation for determining the minimum storage required for each product when the delivery and shipment inter-arrival times vary by a factor of 0.75. The calculation for factors 0.80 and 0.85 are presented in the Appendix.

Table 13 - Min. Storage When Delivery and Shipment Inter-arrival Times Vary by Factor of 0.75

Item No.	Minimum Storage Requirement for Mini-Fleet									Comments
1	Material	Borax	Soda Ash	Sodium Sulfate	Iron Ore Pellet	HBI	Pet Coke	Coal	unit	
2	Shipment	**30,000**	**65,000**	**30,000**	**65,000**	**65,000**	**65,000**	**140,000**	m.tons	Assumed
3	Number of ships per year	10.0	10.8	10.0	15.4	30.8	15.4	28.6		Throughput/vessel size
4	Average ship arrival time	36.5	33.9	36.5	23.7	11.9	23.7	12.8	(days)	365/#3
5	**Ship arrival variability factor**	**0.75**	**0.75**	**0.75**	**0.75**	**0.75**	**0.75**	**0.75**		Assumed
6	Variability in ship arrival time (Avg ship arrival time ± X days)	9.1	8.5	9.1	5.9	3.0	5.9	3.2	(days)	#4 - (#5 x #4)
7	Shortest ship arrival time	27.4	25.4	27.4	17.8	8.9	17.8	9.6	(days)	#4 - #6
8	No. of trains per year	25.1	58.5	25.1	83.5	167.0	102.1	334.1		Troughput/train capacity
9	Average train arrival time	14.6	6.2	14.6	4.4	2.2	3.6	1.1	(days)	365/#8
10	**Train arrival variability factor**	**0.75**	**0.75**	**0.75**	**0.75**	**0.75**	**0.75**	**0.75**		Assumed
11	Variability in train arrival time (Avg train arrival time ± X days)	3.6	1.6	3.6	1.1	0.5	0.9	0.3	(days)	#8 - (#9 x #8)
12	Longest train arrival time	18.2	7.8	18.2	5.5	2.7	4.5	1.4	(days)	#9 + #11
13	Shipment	30,000	65,000	30,000	65,000	65,000	65,000	140,000	m. ton	Assumed
14	Least No. of Trains between ships	1.50	3.26	1.50	3.26	3.26	3.98	7.02		#7 / #12
15	Delivery by train between ships	18,000	39,000	18,000	39,000	39,000	47,667	84,000	m.ton	#14 x train capacity
16	Minimum Storage Requirements	42,000	91,000	42,000	91,000	91,000	82,333	196,000	m. ton	#13 = (#13 - #15)
17	**Minimum Storage Requirements**	**46,200**	**100,100**	**46,200**	**100,100**	**100,100**	**90,566**	**215,600**	**ton (US)**	#13x1.1
18	**Ratio of storage to annual throughput**	**15.4%**	**14.3%**	**15.4%**	**10.0%**	**5.0%**	**9.1%**	**5.4%**		#17/#2x1000000

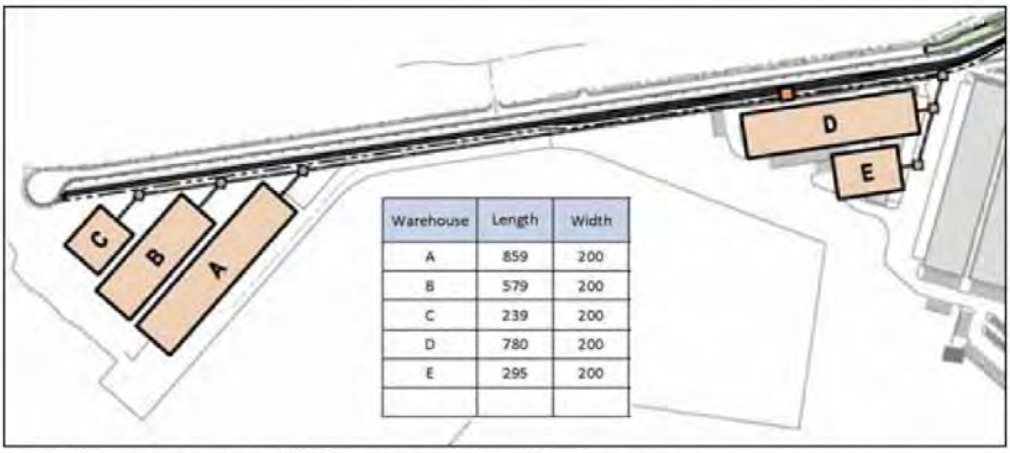
This method of calculation results in the products with the least annual throughput needing the most storage volume when compared to annual throughput on a percentage basis. This is mainly due to the variability in the train delivery cycle that is imposed by the calculation.

A discussion with the railroad and the shippers of the low volume products should be had to better understand production and train delivery constraints. More control in the train inter-arrival times will result in less storage required and make it easier to increase the storage on site for the high volume products.

2.4.1 Area available for storage structures

The project site is relatively small (26 acres of useable area), of irregular shape and not contiguous. The need to accommodate seven (7) products and to separate "White" and "Black" products further complicates the potential storage schemes.

A preliminary conceptual layout was made to determine the maximum length of warehouse that could practically fit on the available property (see Figure 2). A building width of 200 feet was assumed for this preliminary analysis. The maximum total length for this arrangement is 2,752 feet.



Warehouse	Length	Width
A	859	200
B	579	200
C	239	200
D	780	200
E	295	200

Figure 4 - Potential layout that maximizes the use of warehouses

Several warehouse arrangements were evaluated. Each arrangement has its advantages and disadvantages and not all arrangements are suitable for all products. The width of the warehouses evaluated was selected to maximize storage density for each arrangement. Comparing the length of buildings required to meet the storage requirements for each arrangement with the lengths shown in Figure 2 allows a quick evaluation of the suitability of each arrangement.

2.4.2 Warehouse arrangement No. 1

Warehouse arrangement 1 consists of a travelling stacker and traveling bucketwheel reclaimer. This arrangement is suitable for all products and would be the preferred arrangement if space were not an issue. Its primary disadvantage is a low storage density, which is 16.0 ft³ per square foot of building for a typical stockpile cross-section with a 35° angle of repose.

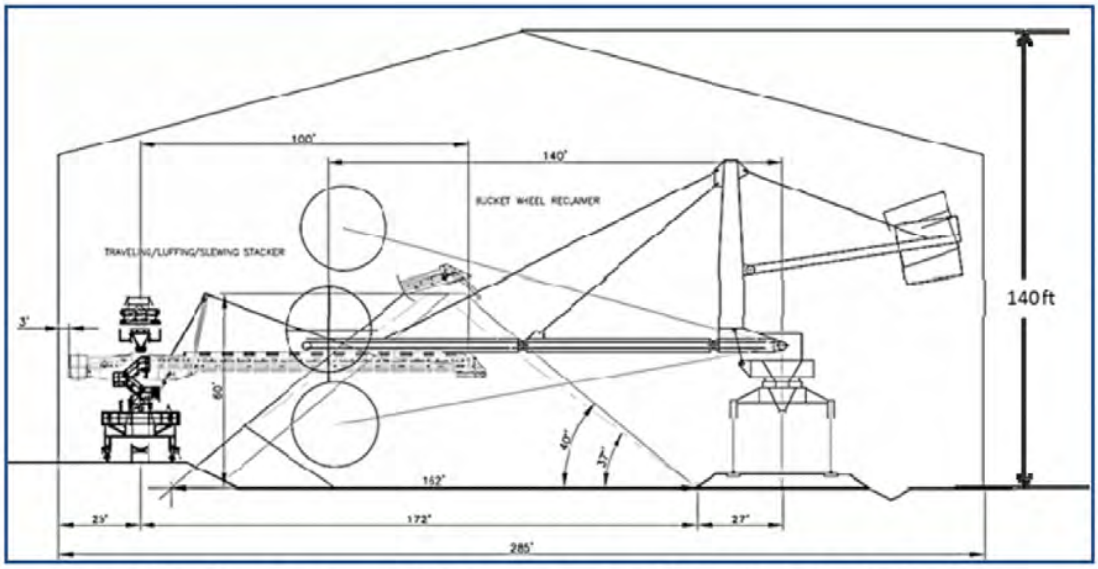


Figure 5 - Warehouse Arrangement No. 1 - Traveling Stacker with Traveling Bucketwheel Reclaimer

2.4.3 Warehouse arrangement No. 2

Warehouse arrangement 2 consists of a travelling stacker with reclaim of material by wheel loader feeding a traveling hopper. One disadvantage of using wheel loaders is that they cannot provide a constant feed to the belt. The reclaim capacity should be reduced by 25% to 30% when using wheel loaders. The use of wheel loaders as the primary reclaim method for "White Products" is not recommended because of the concern of contaminating the product with hydraulic fluid leaks. It is suitable for all of the "Black Products". The storage density for a typical stockpile cross-section with a 35° angle of repose is 18.2 ft³ per square foot of building.

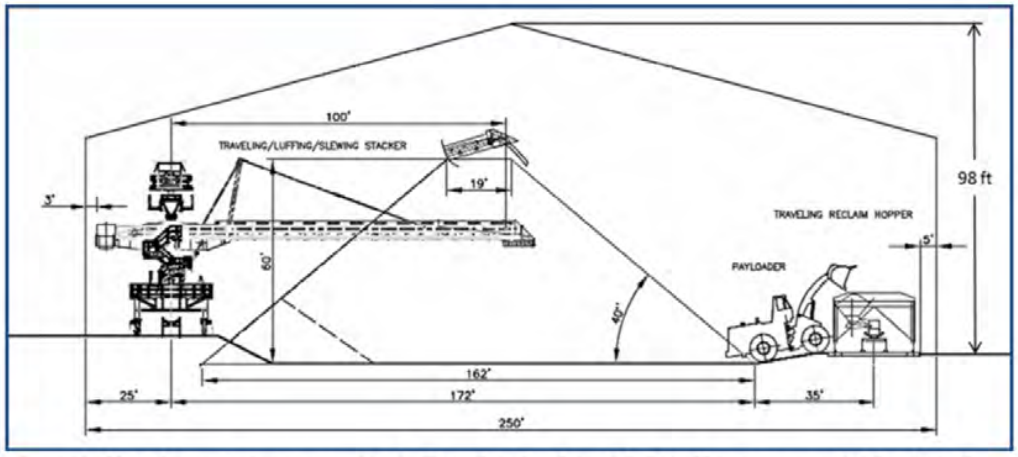


Figure 6 - Warehouse Arrangement No. 2 - Traveling Stacker with Traveling Hopper and Wheel Loader

2.4.4 Warehouse arrangement No. 3

Warehouse arrangement 3 consists of a travelling stacker and traveling portal scraper reclaimer. The use of portal scraper reclaimers is not suitable for HBI. The storage density for a typical stockpile cross-section with a 35° angle of repose is 14.7 ft³ per square foot of building.

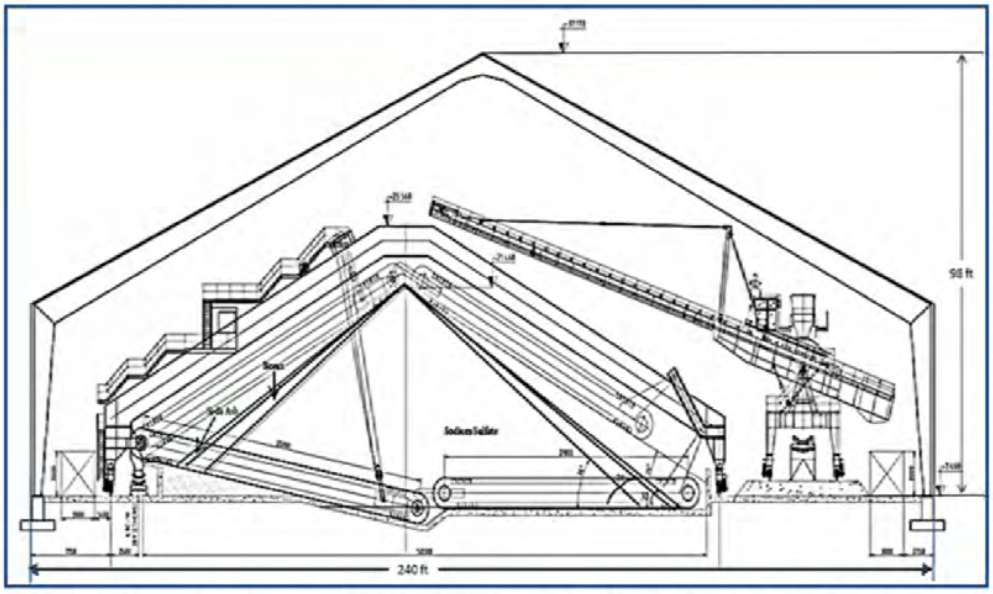


Figure 7 - Warehouse Arrangement 3 - Traveling Stacker with Traveling Portal Scraper Reclaimer

2.4.5 Warehouse arrangement 4

Warehouse arrangement 4 consists of a travelling overhead tripper for material stockpiling and a traveling portal scraper reclaimer. This arrangement is not suitable for HBI. The storage density for a typical stockpile cross-section with a 35° angle of repose is 37.4 ft³ per sq ft of building.

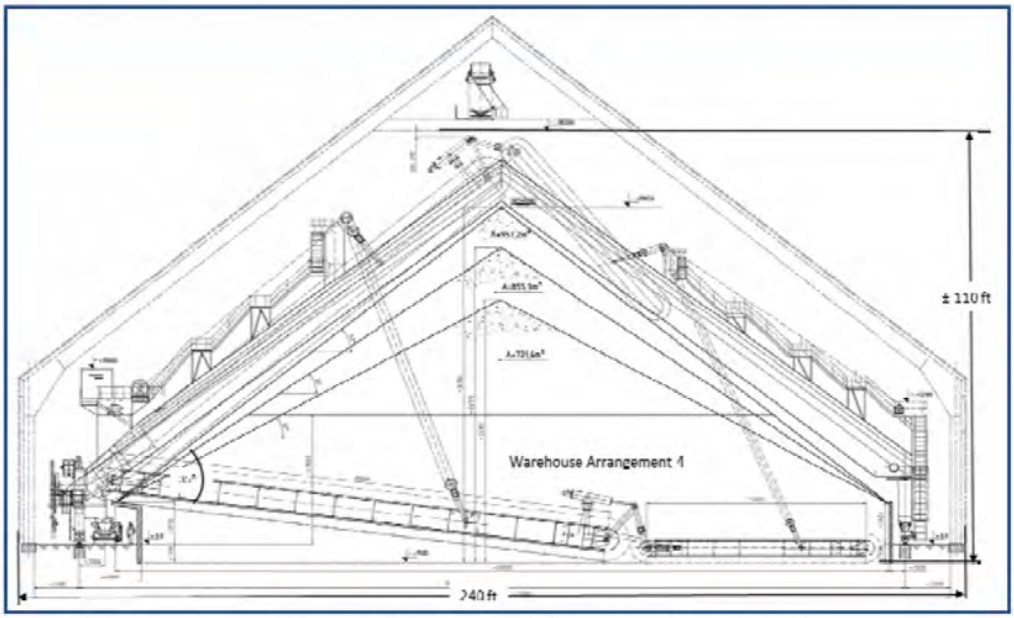


Figure 8 - Traveling overhead tripper with traveling portal scraper reclaimer

Table 16 presents the minimum building lengths by warehouse arrangement for each product.

Table 14 - Minimum Building Length by Warehouse Arrangement

White Product Handling	Avg ship inter-arrival (days)	Ship arrival (± days)	Avg train inter-arrival (days)	Train arrival (± days)	Storage Required (S.Tons)	Whse Argmt 1 ST/BW Pile Length (ft)	Whse Argmt 2 ST/WL Pile Length (ft)	Whse Argmt 3 ST/SC Pile Length (ft)	Whse Argmt 4 TR/SC Pile Length (ft)
Borax	36.5	9.1	14.6	3.6	46,200	380	NA	397	267
Soda Ash	33.9	8.5	6.2	1.6	100,100	895	NA	1,005	523
Sodium Sulfate	36.5	9.1	14.6	3.6	46,200	215	NA	381	236
Iron Ore Pellet	23.7	5.9	4.4	1.1	100,100	393	496	598	284
HBI	11.9	3.0	2.2	0.5	100,100	318	360	NA	NA
Pet Coke	23.7	5.9	3.6	0.9	90,566	982	982	1,555	590
Coal	12.8	3.2	1.1	0.3	215,600	1,969	1,969	2,521	1,077
Total					698,866	5,150	3,806	6,457	2,978

All of the warehouse arrangements studied fall short of the minimum storage volume needed for effective operations of the bulk terminal. Only warehouse arrangement No. 4 comes near to what is needed. However, this arrangement is not suitable for the handling of HBI. Also, portal scraper reclaimers of the size shown for warehouse arrangement No. 4 are relatively expensive, which makes this arrangement a less desirable solution for buildings C and E that are relatively short; less than 300 feet. It is apparent that a denser storage arrangement is required to make the site capable of stockpiling the volume of material needed.

Domes can hold more material per square foot of land compared to warehouses. Two types of dome arrangements were considered. The first arrangement consists of a relatively small dome, ± 200 feet in diameter. In this arrangement, the material is conveyed to the top of the dome where it is transferred to the inside of the dome. Gates are located at the bottom of the dome where material is transferred by gravity feed to take-away conveyors located in tunnels below ground.

This arrangement has several disadvantages. A disadvantage of this arrangement is that there will be some dead storage inside the dome. Material from the dead storage piles will have to be pushed by dozer to the gravity feed gates. The amount of dead storage can be reduced by adding more gates and more reclaim conveyors. Another disadvantage is that the underground reclaim conveyor tunnels will likely be located below the water table. While this is not uncommon, careful supervision will be required during construction to make sure that the tunnels are watertight. Also, this arrangement requires multiple short conveyors under the domes that tend to need more maintenance because of the wear on the belt.

Spontaneous combustion of coal can occur in any storage arrangement but may be more difficult to manage inside dome structures. The management of "hot spots" will have to be addressed in the terminal operation plan. Monitoring the temperature of the coal inside the dome will be required.

A ± 200-foot diameter dome about 150 feet high can store about 75,000 tons of coal. This arrangement can be adjusted to meet the storage needed by adjusting the diameter and height of the dome. Figure 7 depicts a schematic of this arrangement.

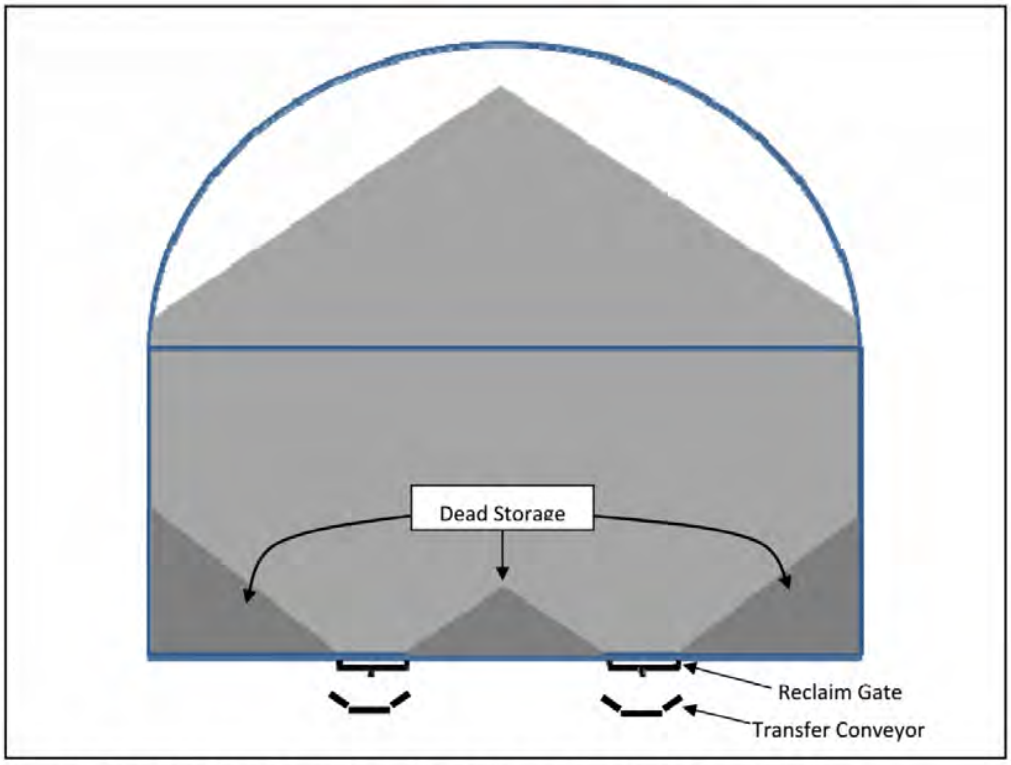


Figure 9 - Schematic of dome arrangement No. 1 with overhead feed and gravity reclaim

The second arrangement consists of a much larger dome with a diameter of ± 400 feet. Material stacking and reclaiming is by a mechanical rotating, luffing stacker and rotating scraper reclaimer. The advantage of this arrangement is that there is 100% live reclaim of material and fewer stacking and reclaim conveyors. A dome about 410 feet in diameter and 220 feet high can store about 220,000 tons of coal. Multiple products that are similar in type can be stored in the large domes by forming segregated kidney shaped piles; however, the volume stored is reduced considerably. A schematic of this arrangement is depicted in Figure 8.

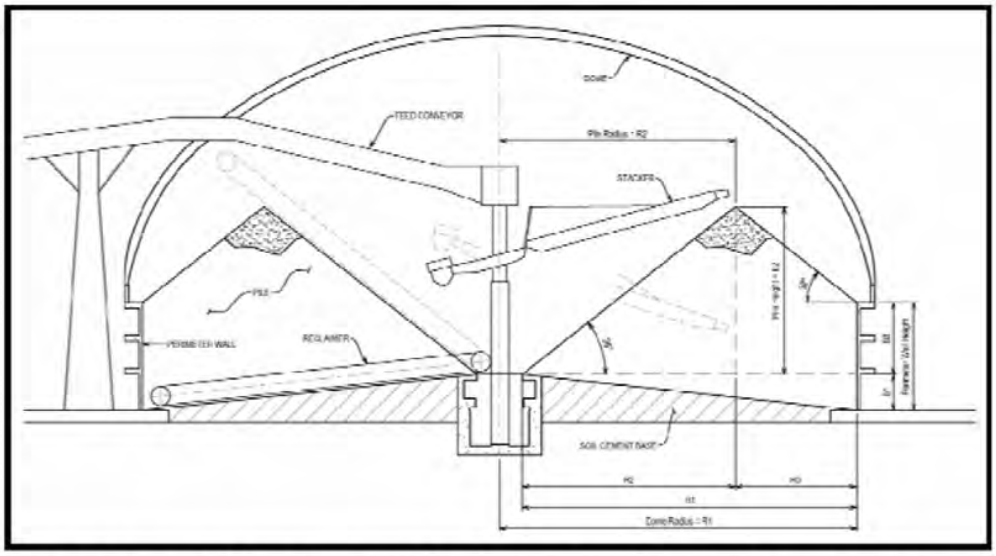


Figure 10 - Schematic of dome arrangement No. 2 with mechanical stacker and scraper reclaimer

While both dome arrangements can be used to store coal, which is the product that requires the most storage volume, dome arrangement No. 1 is preferable from an operational point of view because this arrangement allows for the mixing of multiple types of coal.

Two layouts that combine the use of domes and warehouses were evaluated. Site layout Alternative No. 1 provides one (1) warehouse to store iron ore pellets and HBI and eight (8) domes to store the other products. Warehouse arrangement No. 2 is selected to store iron ore pellets and HBI because stockpiling by traveling luffing stacker will minimize product degradation and reclaim by wheel loader, while not optimal, minimizes the building footprint and allows room for the other storage structures. Figure 9 depicts Site Layout Alternative No. 1.

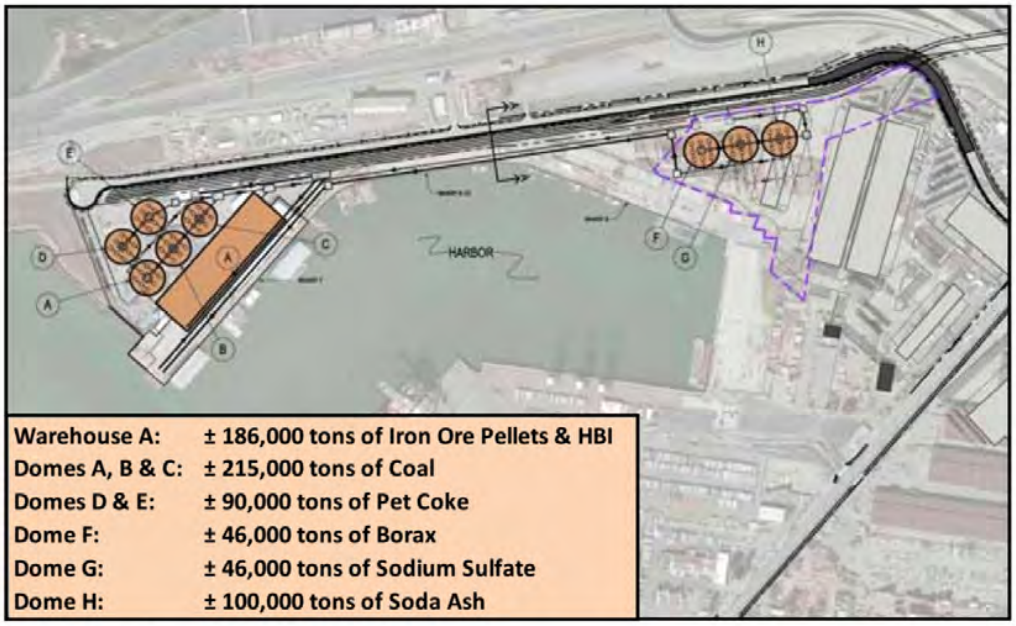


Figure 11 - Site Layout Alternative No. 1

Site layout Alternative No. 2 consists of one (1) warehouse to store iron ore pellets and HBI, one (1) warehouse to store Soda Ash and seven (7) domes to store the other products. Warehouse arrangement No. 4 is selected for Warehouse B because it provides the maximum storage density. Figure 10

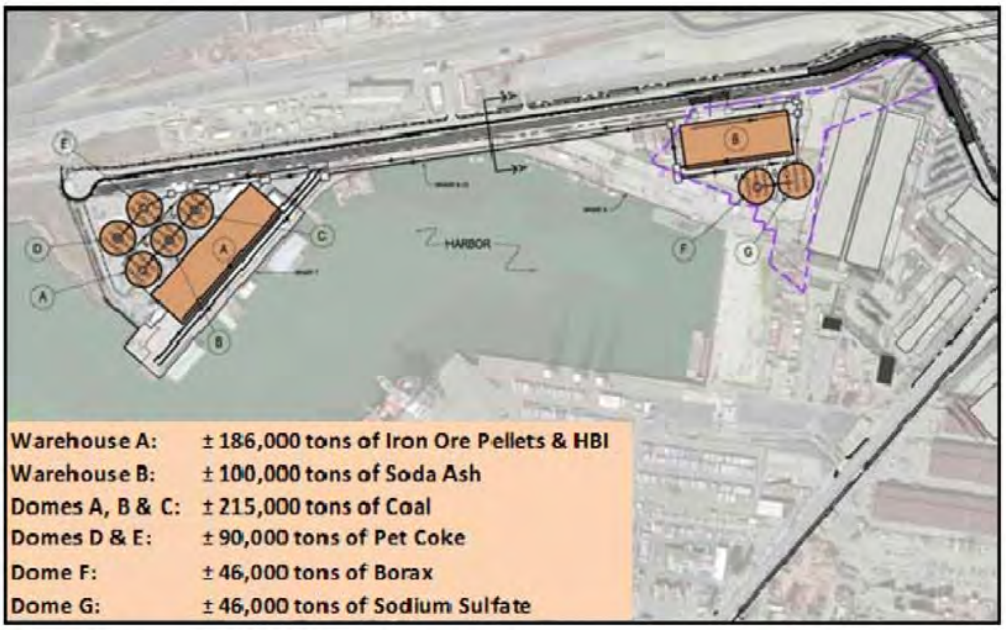


Figure 12 - Site Layout Alternative No. 2

Site layout option No. 2 uses warehouse arrangement No. 4 for soda ash in lieu of a dome. This arrangement consists of an overhead tripper to stockpile the material and traveling portal scraper reclaimer. The advantage of using a warehouse over a dome for storing soda ash is that all equipment and operations are above ground and fewer reclaim conveyors are required.

3.0 SHIPLOADING

[Later]

Attachment P

EA Engineering, Science, and Technology, Inc., PBC

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Hunt Valley, MD 21031
Telephone: 410-584-7000
Fax: 443-646-8067
www.eaest.com

5 December 2024

TO: Marsha Wills-Karp, Ph.D, Johns Hopkins University, Chair, Department of Environmental Health and Engineering

FROM: Geoff Tizard, PE, EA Engineering, Science, and Technology, Inc, PBC, Project Manager

SUBJECT: Conceptual Rough Order of Magnitude Cost for CSX Coal Terminal Enclosure, Baltimore, Maryland

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In collaboration with Johns Hopkins University and the communities adjacent to the CSX Coal Terminal, we are pleased to submit conceptual cost estimates for full enclosure options for the terminal. This work was undertaken to address the community's goal of providing technical comments for Maryland Department of Environment's draft permit, focusing on reducing coal dust migration offsite. The attached documents include:

- Attachment A: Plan view of the proposed conceptual enclosure designs.
- Attachment B: Summary cost estimates for both "hard cover" and "soft cover" enclosure options.

Scope and Methodology

The scope of this work focused on providing high-level conceptual cost estimates for full enclosure options. The estimates are based on a combination of industry-standard resources (e.g., RSMeans, MDOT-SHA Price Index), prior reports (e.g., the GHD post-explosion report, 2022), and assumptions necessitated by the absence of direct site access.

Key Assumptions

Several assumptions underlie the enclosed cost estimates:

- Existing conditions such as ground preparation, foundation requirements, and structural loading were estimated without a detailed geotechnical investigation.
- The designs assume the feasibility of constructing structures to accommodate conveyor systems and subsurface reclaim tunnels without substantial modifications.
- Utility connections, fire suppression systems, and other ancillary infrastructure upgrades are excluded.
- Planning, design, permitting, and construction oversight costs are excluded.
- Operational changes, such as those related to coal handling and terminal throughput, were not evaluated.

Additional Considerations

The following items are not included in the estimates but will likely influence final project feasibility, costs, and timelines:

- Site Preparation: Foundation stabilization, ground improvements, and road modifications to accommodate construction and operations.
- Stormwater Management: Compliance with state regulations and integration with existing systems.
- Utility Upgrades: New electrical and mechanical connections for lighting, ventilation, and fire suppression.
- Construction Impacts: Temporary disruptions to terminal operations and the logistics of maintaining coal throughput during construction.

Summary of Results

- Hard Cover Option: Estimated cost is approximately $12.6M, including contingency. This option entails the construction of two pre-engineered steel buildings, each supported by reinforced concrete foundations, and includes lighting, and ventilation.
- Soft Cover Option: Estimated cost is approximately $16.9M, including contingency. This option entails the construction of two tensioned fabric structures on steel frames, similarly supported by reinforced concrete foundations, with lighting and ventilation.

These estimates include a 40% contingency to account for market conditions and risk associated with conceptual design assumptions.

Next Steps

These conceptual estimates aim to bridge the critical information gap identified by MDE and the community regarding enclosure costs. However, additional feasibility studies, including detailed engineering evaluations and site access, will be necessary to refine these estimates and address the noted exclusions and assumptions.

We appreciate the opportunity to contribute to this important initiative and remain available to support the next steps in the review process. Should you have any questions or require further information, please do not hesitate to contact us.

GT,BJ/CLO

Attachment

A	Conceptual Hard and Soft Cover Enclosures
B	Conceptual Cost Estimates

Attachment A

Conceptual Hard and Soft Cover Enclosures



FILE PATH: C:\USERS\JBEAR\DESKTOP\EA\CSX COAL TERMINAL\CSX COAL TERMINAL.DWG [FIGURE 1] BEAR, JACOB 12/4/2024 3:33 PM

EA Engineering, Science, and Technology, Inc., PBC

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0 ? ?
GRAPHIC SCALE IN FEET

DATE: DECEMBER 2024

NOTE:

AERIAL IMAGERY ACQUIRED FROM MD IMAP.

PROJECT NAME
CONCEPT FOR FULL ENCLOSURE OF CSX COAL TERMINAL

PROJECT ADDRESS
CSX COAL TERMINAL, BALTIMORE, MARYLAND

FIGURE TITLE
CONCEPTUAL HARD AND SOFT COVER ENCLOSURES

FIGURE NO.
1

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Attachment B

Conceptual Cost Estimates

Full Enclosure of CSX Coal Terminal - Hard Cover
Conceptual Cost Estimate

Phase/Component	Quantity	Unit	Unit Price	Estimated Total	Cost Estimate Narrative
A. North Building - Hard Cover				**$ 5,795,500.00**	
Pre-Engineered Steel Building	1	LS	N/A	$ 4,500,000.00	RSMeans. 200' x 800' Pre-Engineered Steel Building.
Reinforced Concrete Columns	80	EA	$ 550.00	$ 44,000.00	RSMeans. 30" square reinforced concrete columns on footer. 2.33' column height.
Reinforced Concrete Footers	80	EA	$ 1,830.00	$ 146,400.00	RSMeans. 6' x 6' x 2' reinforced concrete footer.
Reinforced Concrete Spread Footing	1480	LF	$ 150.00	$ 222,000.00	RSMeans. 6' wide, 1' tall reinforced concrete spread footers between footers.
Reinforced Concrete Grade Wall	1760	LF	$ 50.00	$ 88,000.00	RSMeans. 1' wide, 2' tall reinforced concrete grade wall between columns.
Excavation	2980	CY	$ 70.00	$ 208,600.00	SHA Price Index. Excavation for building foundation.
AASHTO #57	150	CY	$ 90.00	$ 13,500.00	SHA Price Index. Backfill around building foundation.
Lighting	1	LS	N/A	$ 310,000.00	RSMeans. Interior lighting to provide 30 foot-candles.
Ventilation	1	LS	N/A	$ 220,000.00	RSMeans. Fans to provide 6 ACH.
Erosion and Sediment Control and Site Restoration	1	LS	N/A	$ 43,000.00	6% of Excavation and Concrete Costs, Rounded
B. South Building - Hard Cover				**$ 3,014,600.00**	
Pre-Engineered Steel Building	1	LS	N/A	$ 2,300,000.00	RSMeans. 200' x 400' Pre-Engineered Steel Building.
Reinforced Concrete Columns	40	EA	$ 550.00	$ 22,000.00	RSMeans. 30" square reinforced concrete columns on footer. 2.33' column height.
Reinforced Concrete Footers	40	EA	$ 1,830.00	$ 73,200.00	RSMeans. 6' x 6' x 2' reinforced concrete footer.
Reinforced Concrete Spread Footing	920	LF	$ 150.00	$ 138,000.00	RSMeans. 6' wide, 1' tall reinforced concrete spread footers between footers.
Reinforced Concrete Grade Wall	1060	LF	$ 50.00	$ 53,000.00	RSMeans. 1' wide, 2' tall reinforced concrete grade wall between columns.
Excavation	1790	CY	$ 70.00	$ 125,300.00	SHA Price Index. Excavation for building foundation.
AASHTO #57	90	CY	$ 90.00	$ 8,100.00	SHA Price Index. Backfill around building foundation.
Lighting	1	LS	N/A	$ 160,000.00	RSMeans. Interior lighting to provide 30 foot-candles.
Ventilation	1	LS	N/A	$ 110,000.00	RSMeans. Fans to provide 6 ACH.
Erosion and Sediment Control and Site Restoration	1	LS	N/A	$ 25,000.00	6% of Excavation and Concrete Costs, Rounded
C. Mobilization, Demobilization, and Bonding				**$ 181,000.00**	
Mobilization, Demobilization, and Bonding	1	LS	N/A	$ 181,000.00	6% of Construction Costs, Rounded
Subtotal Construction Cost				**$ 8,991,100.00**	
Contingency				$ 3,597,000.00	40% Contingency, Rounded
Grand Total Estimated Construction Cost				**$ 12,588,100.00**	

Additional Notes/Assumptions

This estimate is based on many assumptions and sources deemed reliable including the MDOT-SHA Price Index, available historic bid data, and RS Means.

A 40% contingency is included to account for market conditons and risk.

DATE: 12/05/2024

Full Enclosure of CSX Coal Terminal - Soft Cover
Conceptual Cost Estimate

Phase/Component	Quantity	Unit	Unit Price	Estimated Total	Cost Estimate Narrative
A. North Building - Soft Cover				**$ 7,795,500.00**	
Tensioned Fabric Structure	1	LS	N/A	$ 6,500,000.00	RSMeans. 200' x 800' tensioned fabric structure.
Reinforced Concrete Columns	80	EA	$ 550.00	$ 44,000.00	RSMeans. 30" square reinforced concrete columns on footer. 2.33' column height.
Reinforced Concrete Footers	80	EA	$ 1,830.00	$ 146,400.00	RSMeans. 6' x 6' x 2' reinforced concrete footer.
Reinforced Concrete Spread Footing	1480	LF	$ 150.00	$ 222,000.00	RSMeans. 6' wide, 1' tall reinforced concrete spread footers between footers.
Reinforced Concrete Grade Wall	1760	LF	$ 50.00	$ 88,000.00	RSMeans. 1' wide, 2' tall reinforced concrete grade wall between columns.
Excavation	2980	CY	$ 70.00	$ 208,600.00	SHA Price Index. Excavation for building foundation.
AASHTO #57	150	CY	$ 90.00	$ 13,500.00	SHA Price Index. Backfill around building foundation.
Lighting	1	LS	N/A	$ 310,000.00	RSMeans. Interior lighting to provide 30 foot-candles.
Ventilation	1	LS	N/A	$ 220,000.00	RSMeans. Fans to provide 6 ACH.
Erosion and Sediment Control and Site Restoration	1	LS	N/A	$ 43,000.00	6% of Excavation and Concrete Costs, Rounded
B. South Building - Soft Cover				**$ 4,014,600.00**	
Tensioned Fabric Structure	1	LS	N/A	$ 3,300,000.00	RSMeans. 200' x 800' tensioned fabric structure.
Reinforced Concrete Columns	40	EA	$ 550.00	$ 22,000.00	RSMeans. 30" square reinforced concrete columns on footer. 2.33' column height.
Reinforced Concrete Footers	40	EA	$ 1,830.00	$ 73,200.00	RSMeans. 6' x 6' x 2' reinforced concrete footer.
Reinforced Concrete Spread Footing	920	LF	$ 150.00	$ 138,000.00	RSMeans. 6' wide, 1' tall reinforced concrete spread footers between footers.
Reinforced Concrete Grade Wall	1060	LF	$ 50.00	$ 53,000.00	RSMeans. 1' wide, 2' tall reinforced concrete grade wall between columns.
Excavation	1790	CY	$ 70.00	$ 125,300.00	SHA Price Index. Excavation for building foundation.
AASHTO #57	90	CY	$ 90.00	$ 8,100.00	SHA Price Index. Backfill around building foundation.
Lighting	1	LS	N/A	$ 160,000.00	RSMeans. Interior lighting to provide 30 foot-candles.
Ventilation	1	LS	N/A	$ 110,000.00	RSMeans. Fans to provide 6 ACH.
Erosion and Sediment Control and Site Restoration	1	LS	N/A	$ 25,000.00	6% of Excavation and Concrete Costs, Rounded
C. Mobilization, Demobilization, and Bonding				**$ 241,000.00**	
Mobilization, Demobilization, and Bonding	1	LS	N/A	$ 241,000.00	6% of Construction Costs, Rounded
Subtotal Construction Cost				**$ 12,051,100.00**	
Contingency				$ 4,821,000.00	40% Contingency, Rounded
Grand Total Estimated Construction Cost				**$ 16,872,100.00**	

Additional Notes/Assumptions

This estimate is based on many assumptions and sources deemed reliable including the MDOT-SHA Price Index, available historic bid data, and RS Means.

A 40% contingency is included to account for market conditons and risk.

DATE: 12/05/2024

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Attachment Q

ENVIRONMENTAL INTEGRITY PROJECT

1000 Vermont Avenue, NW
Suite 1100
Washington, DC 20005
Main: 202-296-8800
Fax: 202-296-8822
www.environmentalintegrity.org

January 20, 2023

Via e-mail
Chris Hoagland
Director, Air and Radiation Administration
Maryland Department of the Environment
chris.hoagland@maryland.gov

RE: Comments on CSX Transportation, Inc. Draft Fenceline Monitoring Plan and Draft Fugitive Dust Plan for Curtis Bay Piers Terminal (Permit No. 510-2263)

Dear Mr. Hoagland:

The South Baltimore Community Land Trust ("SBCLT"), Community of Curtis Bay Association ("CCBA"), and the Environmental Integrity Project ("EIP") (collectively, "Commenters") respectfully submit the following comments to the Maryand Department of the Environment ("MDE") on the Draft Fugitive Dust Control Plan and Draft Fenceline Monitoring Plan for the Curtis Bay Piers coal terminal owned by CSX Transportation, Inc. ("CSX") located at 1910 Benhill Ave. in Curtis Bay, Baltimore City, MD 21226 ("CSX Terminal"). We appreciate the opportunity to submit these comments.

These plans fall far short of what is necessary to ensure that air pollution from the CSX Terminal is adequately controlled. Multiple substantial improvements are needed to add detail and specificity to these plans as well as stronger pollution controls, reporting, and public notification requirements. It is particularly important that MDE include specific and enforceable requirements in CSX's permit to operate and associated plans given that the U.S. EPA has objected to multiple Title V permits over their failure to include sufficiently specific requirements for the control of fugitive dust.

Lastly, Commenters are limiting their comments to the issue of particulate matter ("PM") control because that is what is addressed in the draft CSX plans. However, these comments should not be interpreted as Commenters' agreement that monitoring for only PM and proxies, such as visible emissions, is appropriate. Commenters may submit additional comments in the future on the need to monitor other pollutants at the CSX Terminal.

EXHIBIT I - 304

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Background
Comments

I. MDE Must Ensure Continuous Compliance with Pollution Control Standards for the CSX Terminal
   - A. MDE Should Treat Title V Standards as the Floor for Ensuring Compliance
   - B. Current Standards Requiring Control of PM
     - i. Visible Emissions
     - ii. Particulate Matter from Unconfined Sources and EPA's Title V Objections
     - iii. Particulate Matter from Confined Sources
     - iv. Nuisance/Air Pollution
   - C. CSX's Proposed Plans Fail to Ensure Continuous Compliance
     - i. Visible Emissions
   - D. MDE's Obligations Under Title VI of the Civil Rights Act
   - E. Part I Conclusion

II. Specific Comments on Draft Fenceline Monitoring Plan
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   - B. Annual Evaluations and Regular Data Reporting
   - C. MDE Should Establish Action Levels and Set Associated Corrective Action and Public Notification Requirements
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III. Specific Comments on Draft Fugitive Dust Control Plan
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   - B. Dust Suppression System and Existing Wind Screen
   - C. MDE Should Incorporate and Require Best Practices from Other Jurisdictions
     - i. Full Enclosure of Storage Piles and Transfer Points
     - ii. Venting Enclosed Emissions Sources to Baghouses
     - iii. Operation of Dust Suppression System
     - iv. Paved and Unpaved Roadways
     - v. Minimum Moisture Content
     - vi. Recordkeeping and Reporting

Background

The current comment periods are occurring in the context of a historical failure to set meaningful air pollution control and monitoring requirements for the CSX Terminal. In 2013, forty residents of the Curtis Bay and Brooklyn submitted comments to MDE noting the dust problems from the CSX Terminal and requesting that MDE impose stronger permit conditions on CSX.[1] Many additional complaints have been documented since then. It is important that MDE rectify this failure and help to protect nearby residents by setting the strongest possible standards now.

Comments

IV. MDE Must Ensure Continuous Compliance with Pollution Control Standards for the CSX Terminal

MDE must substantially improve the pollution control and monitoring requirements for the CSX Terminal. MDE has broad authority to establish such conditions in CSX's permit. COMAR 26.11.02.02(H) states that MDE may include "terms and conditions in any permit [to operate] to ensure continuous compliance with" Subtitle 11 (Air Quality) of Title 26 of COMAR. Further, as a recipient of federal funding MDE must ensure compliance in all decisions with the requirements of Title VI of the Civil Rights Act.

Among the requirements to which the CSX Terminal is subject are (1) a federally enforceable limit for visible emissions; (2) federally enforceable limits for particulate matter; and (3) a state-only enforceable prohibition on operation in such a manner that a nuisance or air pollution is created." At bare minimum, MDE must ensure that the Fenceline Monitoring Plan, the Fugitive Dust Plan, and any additional monitoring requirements that are added during the upcoming renewal of the air operating permit meet the standards that the EPA has prescribed for assuring compliance under its Title V regulations.

A. MDE Should Treat Title V Standards as the Floor for Ensuring Compliance

For facilities that must obtain Title V operating permits (often referred to in Maryland as Part 70 permits), EPA has issued standards governing the minimum stringency of the monitoring, testing, recordkeeping and reporting requirements that must be set forth in these permits.[2] While the CSX Terminal's permit is not a Title V permit, MDE has the authority to require that CSX meet the same standards. In fact, Title VI of the Civil Rights Act imposes additional obligations on MDE given the environmental justice concerns at issue in the Curtis Bay community.

It is a fundamental requirement of the Title V program that a permit must "assure[] compliance by the source with all applicable requirements."[3] Among other things, Title V permits must include the following:

[1] Resident Permit Petition submitted by Chesapeake Climate Action Network to MDE in 2013 (Attachment A).
[2] Maryland's rules implementing the Title V program are set forth in Chapter 3 of Subtitle 11, Title 26 of COMAR.
[3] 40 C.F.R § 70.1(b).

With respect to standards: "[e]missions limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of permit issuance."[4]

(i) . . . with respect to monitoring . . .

(A) All monitoring and analysis procedures or test methods required under applicable monitoring and testing requirements, including [the Compliance Assurance Monitoring Plan requirements] . . . . If more than one monitoring or testing requirement applies, the permit may specify a streamlined set of monitoring or testing provisions provided the specified monitoring or testing is adequate to assure compliance at least to the same extent as the monitoring or testing applicable requirements that are not included in the permit as a result of such streamlining;

(B) Where the applicable requirement does not require periodic testing or instrumental or noninstrumental monitoring (which may consist of recordkeeping designed to serve as monitoring), periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit . . . . Such monitoring requirements shall assure use of terms, test methods, units, averaging periods, and other statistical conventions consistent with the applicable requirement. Recordkeeping provisions may be sufficient to meet the requirements of this paragraph (a)(3)(i)(B) of this section; and

(C) As necessary, requirements concerning the use, maintenance, and, where appropriate, installation of monitoring equipment or methods.[5]

. . .

(iii) With respect to reporting . . .

(A) Submittal of reports of any required monitoring at least every 6 months. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with § 70.5(d) of this part.

(B) Prompt reporting of deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. The permitting authority shall define "prompt" in relation to the degree and type of deviation likely to occur and the applicable requirements.[6]

(ii) With respect to recordkeeping . . .

[4] 40 C.F.R. § 70.6(a)(l).
[5] 40 C.F.R. § 70.6 (a)(3)(i).
[6] 40 C.F.R. § 70.6 (a)(3)(iii).

(A) Records of required monitoring information that include the following:

(1) The date, place as defined in the permit, and time of sampling or measurements;

(2) The date(s) analyses were performed;

(3) The company or entity that performed the analyses;

(4) The analytical techniques or methods used;

(5) The results of such analyses; and

(6) The operating conditions as existing at the time of sampling or measurement;

(B) Retention of records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.[7]

B. Current Standards Requiring Control of PM

At minimum, CSX's permit must be revised to ensure compliance with the following existing standards for the control of PM.

i. Visible Emissions

CSX must comply with the following federally enforceable standard for visible emissions:

> In [Baltimore City] a person may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is visible to human observers.[8]
> except that
>
> [This standard] do[es} not apply to emissions during start-up and process modifications or adjustments, or occasional cleaning of control equipment, if:
> (a) The visible emissions are not greater than 40 percent opacity; and
> (b) The visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period.[9]

ii. Particulate Matter from Unconfined Sources and EPA's Title V Objections

CSX must comply with the following federally enforceable standard for PM:

[7] 40 C.F.R. 70.6 (a)(3)(ii).
[8] COMAR 26.11.06.02(C)(2) (C)(2)(C)(2).
[9] COMAR 26.11.06.02(A)(2).

D. 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.[10]

The EPA has found that, without permit-specific supplementation, this regulatory approach runs afoul of Title V requirements. In a 2014 Title V order, EPA objected to permits for five Georgia power plants because the permits did not mandate specific actions that could assure compliance with the fugitive dust reasonable precautions standard or the opacity/visible emissions standard. [11] EPA grounded its decision in 40 C.F.R. 70.6(a)(1), which requires that Title V permits set forth "emissions limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of permit issuance."[12] Specifically, EPA stated that:

> While the SIP regulation identifies various fugitive dust control methods that may constitute 'reasonable precautions,' it does not mandate the use of any of these methods. For a title V permit to assure a particular source's compliance with this requirement, consistent with 40 C.F.R. § 70.6(a)(l) and the approved Georgia title V program at Georgia Air Quality Rule 3913-l-.03(1 0), the permit terms must

[10] COMAR 26.11.06.02.
[11] In the Matter of Scherer Steam-Electric Generating Plant Juliette, et. al., EPA Order pp. 18-19 (April 14, 2014), available at https://www.epa.gov/sites/default/files/2015-08/documents/ga_power_plants_response2012.pdf; (hereinafter "Scherer Order): *see also* In the Matter of Alabama Power Company, Barry Generating Plant, EPA Order, pp. 15-16 (June 14, 2022), at https://www.epa.gov/system/files/documents/2022-06/APC%20Barry%20Order_6-14-22.pdf (EPA again objecting to insufficiently specific "reasonable precaution" requirements for the control of fugitive dust in a Title V permit).
[12] *See* 40 C.F.R. § 70.6(a)(1).

> specify the emissions limitations and standards, including those operational requirements and limitations that assure compliance with the applicable requirement in Georgia SIP Rule 391-3-1-.02(2)(n)l.

EPA furthered ordered the Georgia permitting agency to "take action to include in the" five power plant permits "emissions limitations and standards, including those operational requirements and limitations that assure compliance with" the relevant regulation.

iii. Particulate Matter from Confined Sources

CSX must comply with the following federally enforceable standard for PM.

> A person may not cause or permit to be discharged into the outdoor atmosphere from any other installation, particulate matter in excess of 0.03 gr/SCFD (68.7 mg/dscm).[13]

iv. Nuisance/Air Pollution

CSX must comply with the following state-only requirement prohibiting creation of air pollution or nuisance:

> "An installation or premises may not be operated or maintained in such a manner that a nuisance or air pollution is created."[14]

> "[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."[15]

> "Air pollution," as defined in Environment Article § 2-101, means "the presence in the outdoor atmosphere of substances in quantities, having characteristics, and being of a duration which, from any single source or in combination with other sources, are, or may be predicted with reasonable certainty to be, injurious to human . . . life . . ., or which unreasonably interfere with the proper enjoyment of the property of others by reason of the emission of odors, solids, vapors, liquids, or gases. . . ." [16]

C. CSX's Proposed Plans Fail to Ensure Continuous Compliance

CSX's Draft Fugitive Dust Control Plan and Fenceline Monitoring Plan must be substantially improved as they cannot ensure continuous compliance with state and federal air quality laws. The bulk of the deficiencies in these plans is described in sections II and III below. However, the issue of the visible emissions limit is particularly troubling.

i. Visible Emissions

[13] COMAR 26.11.06.02(b)(2)(a).
[14] COMAR 26.11.06.08
[15] COMAR 26.11.06.09
[16] COMAR 26.11.01.01(B)(2).

As stated above, CSX is subject to a stringent visible emissions limit (no visible emissions) – which is synonymous with opacity - that applies at all times with limited exceptions. However, there are no specific monitoring requirements for demonstrating compliance with this limit in CSX's permit, which would certainly result in an EPA objection to a Title V permit.

CSX's Draft Fugitive Dust Plan includes a plan for a "six month monitoring test for opacity at the facility fence line."[17] Without delving into the fairly sparse details of this section of the plan, it is entirely unclear how a six-month project could ensure continuing compliance with a federally enforceable emissions limit that applies at all times. Typically in Maryland, compliance with visible emissions requirements is demonstrated using Method 9 observations conducted at regular and prescribed intervals or by continuous opacity monitors (COMS). For an example of how another facility handling dry bulk materials tests for visible emissions, please see the extensive protocol set forth in the Fugitive Dust Plan for the S.H. Bell Facility in Chicago, which combines observations performed by trained personnel using Method 9, Method 22, and other observation techniques.[18]

While it is possible that CSX's proposed opacity monitoring program will produce useful information, MDE must also establish monitoring, testing, and reporting requirements that will ensure continuous compliance with CSX's visible emissions limit and will extend for longer than a six-month period.

D. MDE's Obligations under Title VI of the Civil Rights Act

In addition to the standards described elsewhere in these comments, as a recipient of federal funding, MDE has an obligation to ensure that its actions meet EPA's requirements for compliance with Title VI of the Civil Rights Act. Those regulations prohibit a recipient from:

> Us[ig] criteria or methods of administering its program or activity which have the effect of subjecting individuals to discrimination because of their race, color, national origin, or sex, or have the effect of defeating or substantially impairing accomplishment of the objectives of the program or activity with respect to individuals of a particular race, color, national origin, or sex.[19]

EPA has stated that, if a screening analysis raises civil rights and/or environmental justice concerns, a permitting agency, among other things, may "[e]xercis[e] relevant statutory and regulatory authority and discretion under federal, state, and local environmental laws, as well as applicable environmental justice and civil rights laws, to prevent or mitigate any adverse disproportionate impacts that would otherwise violate Title VI."[20]

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[17] CSX Draft Fugitive Dust Control Plan at 7.
[18] SH Bell Plan pp. 50-52, https://www.chicago.gov/content/dam/city/depts/cdph/environmental_health_and_food/SH_BellFugitiveDustPlan_Nov2017.pdf
[19] 40 C.F.R. § 7.35.
[20] EPA, Interim Environmental Justice and Civil Rights in Permitting, Frequently Asked Questions, p. 10, August 2022, https://www.epa.gov/system/files/documents/2022-08/EJ%20and%20CR%20in%20PERMITTING%20FAQs%20508%20compliant.pdf.

E. Part I Conclusion

MDE must require substantial revisions to improve the CSX permit and the Draft Fenceline Monitoring Plan and Draft Fugitive Dust Control Plan. Specific and enforceable conditions must be established that allow for clear measurement of whether CSX is in compliance or in noncompliance. If such conditions are set forth in either or both of the plans, then the permit must clearly require compliance with terms of the relevant plan. The deficiencies in the current drafts of the two plans are addressed in more detail in Sections II and III below. MDE must require improvements in order to "ensure continuous compliance with" Subtitle 11 of Title 26 of COMAR[21] and to meet its obligations as a recipient of federal funding under Title VI of the Civil Rights Act.

V. Specific Comments on the Draft Fenceline Monitoring Plan

CSX's Draft Fenceline Monitoring needs substantial improvement. While CSX's September 2022 permit to construct sets forth certain minimum criteria for this plan, those criteria constitute the floor in terms of requirements for environmental protection. MDE's authority to require improvements to this plan is not limited by the terms of the permit to construct. Our specific recommendations for improving this plan are below.

A. Expeditious Project Schedule and Progress Reports

MDE should require expeditious implementation of the fenceline monitoring project. CSX states that "projected implementation is estimated to be 12-24 months to achieve full capabilities."[22] The outside of this range - 24 months – appears unreasonably protracted, especially as it appears to be measured from the date of installation of the monitors. By comparison, Markwest proposed a time period of 12 months for commencing operations of the monitoring plan at its cryogenics plant in Pennsylvania, and this time period included purchasing of the equipment.[23]

> Upon approval, MarkWest anticipates three months will be required to purchase equipment, six months to install and integrate, and three months to finalize site and power logistics, acceptance test all instrumentation, and begin operation.

CSX should also be required to submit quarterly progress reports to MDE during the initial phase of the project to ensure timely progress through the stages of the process preceding full operations. EIP has seen progress reports required as part of compliance schedules in multiple National Pollutant Discharge Elimination System ("NPDES") permits, and MDE required Energy Answers Baltimore, LLC to submit quarterly construction reports to determine whether it was meeting Clean Air Act requirements relating to the pace of construction.[24]

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[21] COMAR 26.11.02.02(H).
[22] Draft CSX Fenceline Monitoring Plan at 4, 14.
[23] Monitoring and Quality Management Plan/Quality Assurance Project Plan for MarkWest's Harmon Creek Processing Plant Air Toxics Stations, Nov. 2018, p. 2-23 (Attachment B) (hereinafter "Harmon Creek Plan").
[24] *See e.g.* Energy Answers March 31, 2014 construction report cover letter (Attachment C).

B. Annual Evaluations and Regular Data Reporting

The fenceline monitoring program is a new – and long overdue -program for CSX. It is also starting with the use of using low-cost sensors rather than than regulatory grade monitors as required in Chicago. CSX's program require periodic evaluation to ensure that it is providing information that is useful in ensuring the effective control of PM. With infrequent or nonexistent oversight, anticipated improvements will be delayed. Therefore, a schedule for regular assessments by MDE, with an opportunity for public comment, should be part of the plan.

It is likely that this program will require improvements as it proceeds. For example, it may be necessary to install additional federal equivalent method (FEM) monitors, which is essentially EPA's silver-standard tier of monitors, or even federal reference method (FRM) monitors, EPA's gold standard. CSX has already forecasted potential future concerns that may require the use of additional monitors. Specifically:

- If the initial data indicates a hotspot but there is a genuine concern regarding the reliability of the data from the low cost sensors, more advanced equipment may be needed.
- CSX references that other pollution sources may be contributing to the particulate levels measured at its own site. If CSX objects to taking corrective action on this basis, it may be necessary to require filter-based FRM monitors capable of speciating for coal constituents. The City of Chicago requires filter-based FRM monitors capable of monitoring for manganese at manganese-bearing bulk material facilities.[25]
- CSX states that most particles from coal dust are larger than 10 microns in diameter (PM10). While CSX has not substantiated this claim,[26] the claim itself indicates that monitors capable of measuring total PM may be needed in the future.

To ensure that the project is functioning effectively and that any needed corrections or improvements are made promptly, the fenceline monitoring plan should evaluated on an annual basis. This is consistent with requirements for dry bulk terminals, including coal terminals, issued by the City of Chicago Department of Public Health ("CDPH"). CDPH mandates that fugitive dust plans, which include fenceline monitoring requirements, "shall be updated on an annual basis and submitted to the Department for review and approval on or before January 31 every year, provided that the first Fugitive Dust Plan shall be due within ninety (90) days of the issuance of these Rules."[27]

[25] City of Chicago Rules, Control of Emissions from Handling and Storing Bulk Materials (hereinafter "Chicago Rule"), Effective January 25, 2019, Section 6.0, available at https://www.chicago.gov/content/dam/city/depts/cdph/InspectionsandPermitting/Control_EmissionsfromHandling&StoringBulkMaterials_January2019.pdf.

[26] ATSDR indicates the opposite for PM, stating "PM10 concentrations . . . generally reflect the contribution of larger particles attributable to local sources." ATSDR." ATSDR PM Guidance p. 3.

[27] Chicago Rule 3.0(3).

In addition, MDE should plan to incorporate this process into CSX's operating permit during its upcoming renewal to make it a permanent air quality requirement for the life of the next permit.

Once monitors are operational, CSX should also be required to report data on a monthly basis. Monitoring reports should be required on at least a quarterly basis. Quarterly reports are part of the Harmon Creek monitoring plan.[28]

C. MDE Should Establish Action Levels and Set Associated Corrective Action and Public Notification Requirements

In the Draft Fenceline Monitoring Plan, CSX contemplates that pollution levels triggering action will eventually be established but describes no specific process or timetable for this assessment, stating:

> Monitoring requirements will be established during FLMP implementation. As the project progresses actionable data will be defined with reliable, repeatable, reproducible data at specific time increments. Data alert levels and subsequent actions will be defined to sustain operations. See Table 9.0 for an example of data alert levels.[29]

This is insufficient. MDE should establish PM values that require corrective actions and trigger the duty to notify the community.

i. Action Levels

Table 9.0 of the Draft CSX Fenceline Monitoring Plan which is titled "Potential Data Checks," identifies alert levels equal to the primary 24-hour National Ambient Air Quality Standards ("NAAQS") for PM2.5 and PM10 (over 35 mcg/m3 for PM2.5 and 150 mcg/m3 for PM10). While it's clear that CSX is identifying these as examples of possible action level alerts, rather than proposing them as such, action levels set at the level of the NAAQS are insufficient.

MDE should establish action levels based on the most protective thresholds that have been established for PM2.5 and PM10. The State of California has a 24-hour air quality standard for PM10 that is far below EPA's. California's daily PM10 standard is 50 mcg/m3.[30] In addition, the federal Agency for Toxic Substances and Disease Registry ("ATSDR")[31] has recommended the following screening values triggering additional action when conducting PM monitoring.[32]

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[28] Harmon Creek Plan p. A-24 (Att. B).
[29] CSX Draft Fenceline Monitoring Plan at 9-10.
[30] California Air Resources Board, Inhalable Particulate Matter and Health (PM2.5 and PM10), https://ww2.arb.ca.gov/resources/inhalable-particulate-matter-and-health
[31] ATSDR, Guidance for Inhalation Exposures to Particulate Matter, April 2022, at 9, https://www.atsdr.cdc.gov/pha-guidance/resources/ATSDR-Particulate-Matter-Guidance-508.pdf ("ATSDR PM Guidance") (Attachment D).
[32] ATSDR PM Guidance at 9.

Table 1. ATSDR PM Screening Values

World Health Organization Particulate Matter Air Quality Guidelines (AQGs)*		
PM Air Pollutant Metric	**WHO**	**ATSDR CV**
PM_{10}	45 µg/m³ (24-hour)[a] 15 µg/m³ (annual)	NA
$PM_{2.5}$	15 µg/m³ (24-hour)[a] 5 µg/m³(annual)	NA

CV - Comparison value; µg/m³ – micrograms per cubic meter; PM – particulate matter.
NA – Not Available: ATSDR does not have CV for PM.
*WHO 2021
[a] These screening levels reflect the numeric value of the WHO AQGs for 24-hours

These values are particularly appropriate in the context of fenceline monitoring for a source that is located adjacent to an environmental justice community. ATSDR states that:

> Perimeter or fenceline monitors are generally considered a proxy for the highest exposure estimate for a nearby community from fugitive or short stack emissions. With increasing stack height, combined with atmospheric transport and chemical reactions, health assessors should keep in mind that the area of maximum impact may be further within the adjacent community, not at the fence line.[33]

Given that emissions at the CSX Terminal is located close to a residential area and emissions can be expected from both ground-level sources (e.g. rail unloading and bulldozing) as well as sources at elevated height (e.g. high coal piles and conveyors), use of ATSDR's recommended screening values is appropriate to set action levels for the CSX Terminal. With respect to these values, ATSDR explains that:

> While regulatory values exist, such as U.S. EPA's National Ambient Air Quality Standards (NAAQS) for PM, their purpose is to set regulatory limits for six criteria pollutants, including PM, for ambient air in the United States. However, as a general practice, ATSDR uses the most health-protective comparison value available for screening purposes. For PM, the most health-protective screening valuesestablished are the Air Quality Guidelines(AQGs) from the World Health Organization (WHO) in Geneva.[34]

It is particularly important to set meaningful action levels for the CSX Terminal that correspond with its permit to operate, which prohibits <u>any</u> visible emissions with very limited (6-minute) exceptions and states that the reasonable precautions requirements are to "<u>prevent</u> particulate matter from becoming airborne."

ii. Corrective Actions

[33] ATSDR PM Guidance at 4.
[34] ATSDR PM Guidance at 8.

Exceedance of the action levels, if they are set using protective values, must trigger the duty to take corrective action and to notify the public and MDE.

With respect to which corrective actions to require, this will depend in part on what is already required under the final Fugitive Dust Control Plan. The current plan is in need of significant improvement. However, MDE can look to the corrective actions required for the S.H. Bell Facility[35] in Chicago, which is discussed in more detail in Section III below. Exceedances and corrective actions must be documented and reported to MDE.

Failure to follow the take actions, including corrective action, in accordance with the requirements of the final Fenceline Monitoring Plan should constitute violations. The permit lacks provisions to ensure continuous compliance and the Fenceline Monitoring Plan is one one way that MDE can establish a method for measuring compliance with standards requiring no visible emissions with limited exceptions and prevention of particulate matter from becoming airborne.

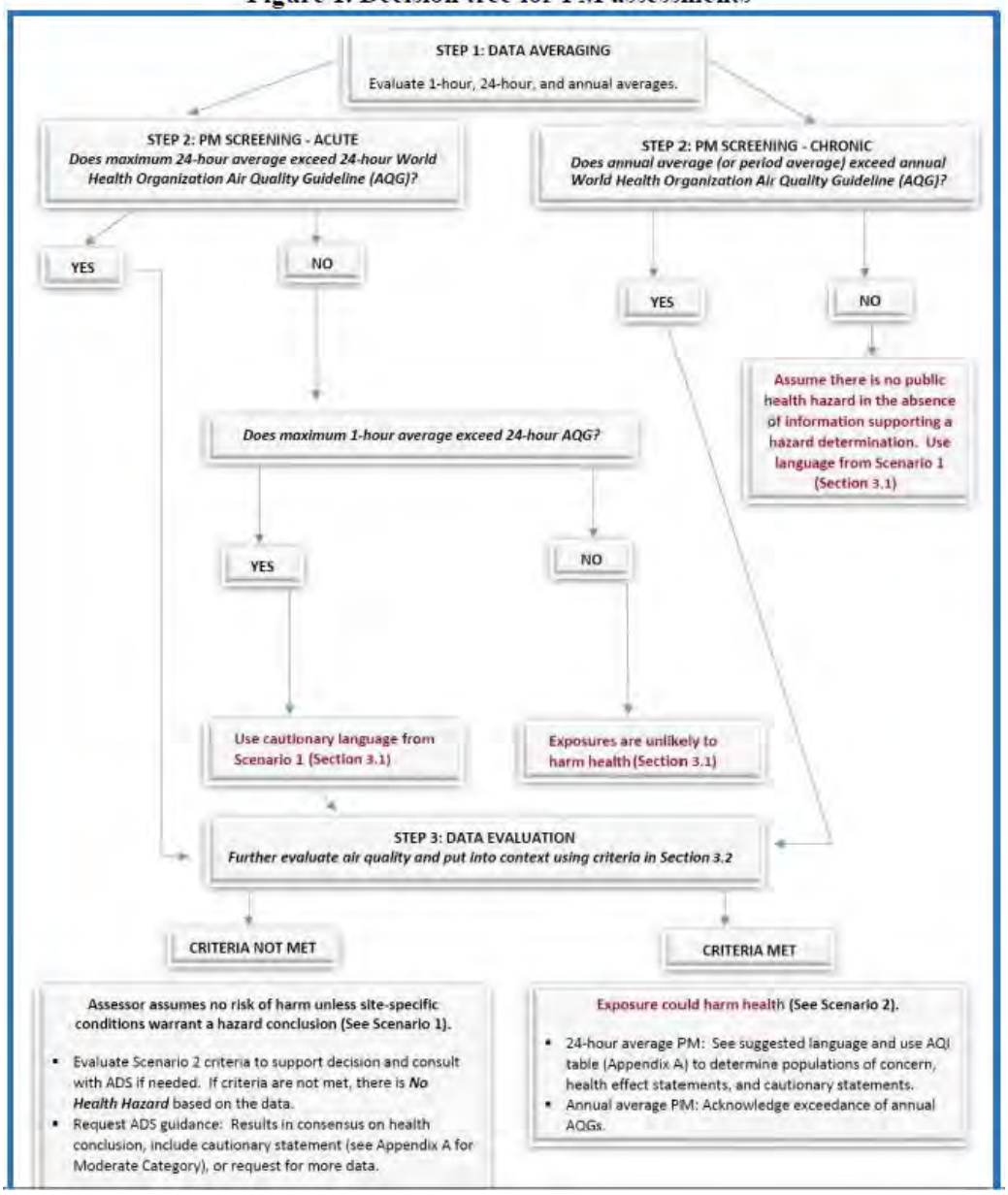
MDE may also find ATSDR's decision-making tree below instructive with respect to interpreting the screening values that ATSDR recommends for PM monitoring. One of the criteria referenced in the tree for consideration when an exceedance is measured is whether the nearby community is especially vulnerable to air pollution.[36] That criterion is already met in the case of the CSX Terminal as Curtis Bay and Brooklyn, which have historically had rates of severe asthma that are even high within Baltimore City and much higher than state and national rates.[37]

[35] S.H. Bell Fugitive Dust Control Plan, pp. 54-55, https://www.chicago.gov/content/dam/city/depts/cdph/environmental_health_and_food/SH_BellFugitiveDustPlan_Nov2017.pdf.

[36] ATSDR PM Guidance, Section 3.2, p. 15 (Assessor to consider whether "[s]ensitive individuals have an increased likelihood of experiencing health effects as a result of exposures (e.g., persons with severe asthma, COPD, and pre-existing respiratory or cardiovascular disease)").

[37] *See, e.g.,* EIP, Air Pollution and Asthma in Baltimore City, p. ix, https://environmentalintegrity.org/wp-content/uploads/2017/12/Baltimore-Asthma.pdf.

Figure 1. Decision tree for PM assessments[¶]



iii. *Public Notification*

In addition to corrective actions, exceedances measured at the fenceline monitors must trigger the duty to notify the public. MDE already has some examples of source-specific public notice requirements for pollution exceedances in its blowdown notification plans for natural gas facilities.[38]

[38] MDE Air Regulation Stakeholder Meetings, Methane Emissions at Natural Gas Compressor Stations Blowdown Notification Plan Public Feedback Period, https://mde.maryland.gov/programs/regulations/air/pages/armaregulationsstakeholders.aspx.

Commenters request that CSX's plan include the following requirements with respect to public notification:

- SBCLT and CCBA request that they and the Councilperson for Baltimore City's District 10 receive email notice each time an exceedance is measured and that individual residents have the option to opt in to receive notices via email or phone.
- SBCLT and CCBA request that CSX also be required to provide notice of measured exceedances via other types of media, which can include on social media, online, and/or in hard copy via regular mail.
- Commenters request that data from the fenceline monitoring project be made available on a website, either maintained by CSX or on a separate webpage on MDE's site. Once the project is fully operational, the data should be available in real time or as close thereto as possible with exceedances clearly identified. There are numerous examples of other companies making monitored pollution data available online.

D. Identification of Responsible Personnel

CSX's plan should identify the specific personnel responsible for carrying out key compliance obligations under both the Fenceline Monitoring Plan and the Fugitive Dust Plan, as is done in the Harmon Creek Plan and both the S.H. Bell and KCBX plans cited in the section below.

III. Specific Comments on Draft Fugitive Dust Control Plan

The Draft Fugitive Dust Control Plan also needs substantial improvement. MDE should require stronger pollution control and reporting requirements.

B. MDE Must Establish Strong and Specific Fugitive Dust Control Requirements that Allow Measurement of Noncompliance

The EPA has stated that Title V of the Clean Air Act requires that specific actions must be mandated for the control of fugitive dust. To ensure continuous compliance with pollution control requirements, the combination of CSX's permit and the fugitive dust plan must identify specific actions that CSX must take to control fugitive dust in a way that can be monitored to clearly identify noncompliance. The permit must also state that failure to comply with a requirements of the fugitive dust control plan constitutes a violation.

CSX's current permit states:

(3) The Permittee shall comply with the following operational requirements of the currently approved Fugitive Dust Plan:

(a) Unpaved roadways:
(i) Watering as required; and
(ii) Posted speed limits.

(b) Paved roadways and parking areas:
(i) Sweeping as required;
(ii) Flushing with water as required; and
(iii) Posted speed limits.

(c) Railcar unloading:
(i) Partial enclosure; and
(ii) Water spray as required.

(d) Material storage piles:
(i) Tower water sprays; and
(ii) Water sprays at grade around the entire storage pile perimeter

(e) Material conveying:
(i) Covered conveyors; and
(ii) Enclosed transfer points.

(f) Ship/barge loadout:
(i) Telescoping chute; and
(ii) Water sprays as required.

By contrast, even a recently issued Title V permit for a municipal waste landfill in Alabama includes more specificity regarding fugitive dust control. The Jefferson County Health Department ("JCHD") recently renewed the permit for the New Georgia Landfill, which includes the following requirements[39]:

[39] JCHD, Title V Operating Permit for New Georgia Landfill, pp. 22-23, Nov. 28, 2022, https://www.jcdh.org/SitePages/Misc/PdfViewer?AdminUploadId=2562.

	accepted.	
6.	**Fugitive Dust** The permittee shall take reasonable precautions to prevent dust from any operation, process, handling, storage, or transportation activity, including from dust from paved and unpaved roads and landfill areas from becoming airborne. The permittee shall not cause or allow the discharge of visible emissions which travel beyond the property line of the landfill. Specific dust control measures for this emission unit include: A. Use vegetative cover to minimize fugitive dust from closed landfill cells. B. Plant roads may be paved to minimize fugitive dust. C. Use wet suppression to minimize fugitive dust from roads, active landfill areas and any area or activity observed or expected to cause fugitive dust. Wet suppression shall not be required during natural wet conditions. Wet suppression means using water trucks or any other means of spraying or applying water. Mixing of water with material during handling also constitutes wet suppression. 1. The indicator that water application is required is the visual observation of fugitive dust from vehicle traffic and/or act of wind. 2. Wet suppression is effective when the application of water prevents visible fugitive dust from crossing property lines. 3. Inspect the water truck on each day of use prior to operation and initiate corrective action with 24 hours of the inspection if any condition observed prevents the water truck from being used to apply sufficient water to prevent fugitive dust. 4. On a daily log (which may be in the form of a checklist), record the results of the water truck inspection, the amount of water applied, and the areas to which the water was applied, or, if the water truck was not used on a given day, the reason it was not used. 5. For the semi-annual report, maintain a record of the days when the water truck was not able to be used effectively for wet suppression, including the reason it was not used. It is not necessary to list wet days in the report. D. Use compaction of daily cover materials and minimize material drop heights for active landfilling operations. 1. Train employees who participate or supervise daily cover activities in work practices to minimize material drop heights and to attain and maintain adequate compaction to prevent fugitive dust. 2. Maintain records of training in fugitive dust management techniques.	6.2.1 6.2.2 18.2.4
	3. For the semi-annual report, maintain a record of the date and a brief description of each time when a work practice was not properly performed and the corrective action(s) taken.	

CSX's Draft Fugitive Dust Control Plan adds very little to the vague list of practices in its permit. The repetition of "as required" in the permit implies that the Fugitive Dust Control Plan fleshes out what is required by establishing a frequency or objective standard for performing many of these practices, which it does not do.

In addition, CSX's permit requires it to include in the Fugitive Dust Control Plan:

> (1) A log of actions implemented to mitigate fugitive dust for each source of fugitive emissions that includes the date, time, and action taken; and (2) An evaluation of measures that could be utilized to further ensure dust is controlled. At a minimum, the evaluation should consider the possible use of screens or tree plantings at strategic locations within CSX's facility, lowering the wind speed set point currently used to activate the spray nozzles, and minimizing coal pile height.[40]

The Draft Plan does not address these requirements in a meaningful way. The Draft Plan lacks information about how frequently information will be logged, who is in charge of logging or verifying information, or how frequently information logs must be submitted. [41] The Draft Plan also fails to distinguish between current measures and measures being evaluated for additional dust control and does not appear to address at all the possibility of installing more wind screens. At minimum, this evaluation should be clearly identified in the plan. It should also

[40] CSX Permit pp. 9-10.
[41] See Draft Fugitive Dust Control Plan at 8.

be far more thorough. As a point of comparison, MDE may want to review again the much more comprehensive feasibility study for additional NOx pollution controls that Wheelabrator Technologies, Inc. submitted in 2020 for its Baltimore waste incinerator.[42]

The Fugitive Dust Control Plan must establish objective standards allowing clear measurement of compliance and noncompliance, and the permit must be revised to state that deviation from the practices identified in the Fugitive Dust Control Plan constitute violations.

C. Dust Suppression System and Existing Wind Screen

There is some specificity in the Draft Fugitive Dust Control Plan regarding operation of the dust suppression system and operation of a wind screen. CSX states that it operates a wind screen on the south side of the facility and that standard operating mode for the wet suppression system is operation of sprays once every four hours with frequency increasing to once per hour when winds are above 12 miles per hour.

This part of the Fugitive Dust Control Plan can be improved with even greater specificity, as explained below. Commenters expect to submit additional information on whether 12 miles per hour is an appropriate threshold for increasing the frequency of sprays. When MDE has determined the operational practices that CSX must implement, MDE should require CSX to describe those practices with specificity and incorporate the entirety of the Fugitive Dust Control Plan into the permit by reference as part of the compliance demonstration method so it is clear that the practices therein are what is "required" as referenced in the permit. Currently, the wind screen is not mentioned in the permit and the Draft Fugitive Dust Control Plan does not state that the frequency of water sprays described is "required."

D. MDE Should Incorporate and Require Best Practice from Other Jurisdictions

MDE should require CSX to follow best practices for fugitive dust control at dry bulk materials terminals that have been established in other jurisdictions. Many of these requirements were developed by the South Coast Air Quality Management District ("SCAQMD") and/or the City of Chicago Department of Public Health ("CDPH"). The sections on specific practices below discuss requirements established by SCAQMD and CDPH. Two specific Dust Control Plans that MDE may find useful to review are for dry bulk terminals located in Chicago: the KCBX Terminal and the S.H. Bell Facility Links to materials relating to these terminals are below:

[42] *See* Babcock Power Environmental, Waste to Energy NOx Feasibility Study, Prepared for Wheelabrator Technologies Baltimore Waste to Energy Facility Baltimore, Feb. 20, 2020, available at Attachment C to EIP and Earthjustice 2022 Comments to EPA on Proposed Rule for Cross-State Air Pollution Federal Implementation Plan, at https://environmentalintegrity.org/wp-content/uploads/2022/06/FINAL-Group-MWC-Ozone-Transport-FIP-Comments-w-attachments.pdf.

- S.H. Bell Facility
  - Fugitive Dust Control Plan - https://www.chicago.gov/content/dam/city/depts/cdph/environmental_health_and_food/SH_BellFugitiveDustPlan_Nov2017.pdf
  - EPA Region 5 Facility Page - https://www.epa.gov/il/sh-bell-chicago-facility
- KCBX Terminal
  - Fugitive Dust Control Plan - https://www.chicago.gov/content/dam/city/depts/cdph/environmental_health_and_food/KCBXFugitiveDustPlan_10730SBurleyAve_May182016.pdf

i. Full Enclosure of Storage Piles and Transfer Points

For coal shipment terminals, SCAQMD and the CDPH require enclosure of piles of coal and transfer points within the terminal unless the facility operator obtains a variance.

In Chicago:

> Fully enclosed structures or buildings [are required} for all . . . Coal handling, storage, and transfer operations must meet the following requirements:
>
> a) They shall be completely roofed and walled, entirely surround . . . Coal Bulk Materials, and be designed, permitted, and constructed in accordance with applicable Building Code requirements.
>
> b) They shall be properly maintained.
>
> c) They shall use a permitted air pollution control system and/or have the ability to apply water to materials within the structure or building in order to control Fugitive Dust emissions sufficiently at designed vents and at any other openings, including entrances and exits; and
>
> d) Any entrances or exits for material or Vehicles shall have overlapping flaps or sliding doors, which shall remain closed except to allow material or Vehicles to enter and leave or to allow people to enter and exit. Devices other than overlapping flaps or sliding doors may be used instead if the Fugitive Dust Plan demonstrates that the performance for dust control at the openings will be equivalent or superior to that of overlapping flaps and sliding doors.[43]

Facility operators may petition for a variance from any of of Chicago's bulk materials rules, including the enclosure requirement for coal facilities. In 2015, CDPH denied a variance submitted by KCBX seeking to extend the deadline for its enclosure of coal and petcoke piles at its terminal, finding that KCBX did not establish that more time was necessary or that interim measures were adequately protecting the nearby community.[44]

[43] Chicago Rule 4.0(2).
[44] CDPH letter denying KCBX variance request (Feb. 13, 2015) at https://www.chicago.gov/content/dam/city/depts/cdph/environmental_health_and_food/CDPHResLtrKCBXReqExt_2132015.pdf.

In California, SCAQMD requires the following for coal piles:

> The facility operator shall maintain all piles in enclosed storage.
> (ii) Structures or buildings used for enclosed storage shall be properly maintained, equipped with and use as needed, a water spray system or permitted air pollution control equipment sufficient to control fugitive dust emissions at designed vents and at entrances or exits for material or vehicles so as not to violate the provisions of paragraph (d)(1).
> (B) Any entrance or exits for material or vehicles shall have overlapping flaps, sliding doors or other devices(s) approved by the Executive Officer, which shall remain closed except to allow material or vehicles to enter and leave or when people are inside. Plan, pursuant to subdivision (f).[45]

SCAQMD allows a variance for coal piles existing before June 11, 1999 if the facility operator submits and obtains approval of an open pile control plan. [46] An open coal storage pile control plan is to be disapproved unless the facility operator makes certain demonstrations, including that that the plan requires the facility operator to implement best available control measures on the pile(s)"

For rail unloading, SCAQMD requires that:

> (4) The facility operator shall only conduct railcar material unloading in an enclosed structure that is either equipped with a water spray system operated to prevent visible dust emissions, or vented to permitted air pollution control equipment that is operated during unloading activities. <u>The ends of the structure shall have overlapping flaps, sliding doors or other equally effective devices as approved by the Executive Officer, which shall remain closed except to allow the railcars to enter and leave</u>.[47]

CSX's plan falls short of these requirements. Its coal piles are not even partially enclosed and its railcar dumpers are open at either end of the building without flaps or devices that remain closed except as the railcars enter and leave.[48]

ii. <u>Venting Enclosed Emissions Sources to Baghouses</u>

Both SCAQMD and CPHD's regulations recognize that, not only can sources of fugitive dust at dry bulk material terminals be enclosed but they can also be vented to pollution controls. Baghouses are also required as a fugitive dust control measure in a 2019 permit issued by the Indiana Department of Environmental Management ("IDEM") to Riverview Energy Corporation ("Riverview") for the construction and operation of a stationary direct coal hydrogenation

[45] SCAQMD Rule 1158(d)(2).
[46] SCAQMD Rule 1158(d)(2)(C)
[47] SCAQMD Rule 1158(d)(3) (emphasis added).
[48] Draft CSX Fugitive Dust Control Plan at 4.

facility to convert coal to liquid fuels.[49] Riverview's fugitive dust control plan is appended hereto as Attachment E.[50] That plan states that baghouses are used to control emissions from multiple transfer points within the facility, including enclosed rail unloading facilities and gravity chutes.

In addition, Watco Companies, which owns a bulk materials company in Chicago, submitted a fugitive dust control plan to CDPH as part of a variance request. That plan identifies the use of baghouses at the following points in the facility:

- Conducting outbound loading of trucks inside of Building F which contains a 60,000 CFM dust collector equipped with two hoods used to control dust during loading activities. The hoods are connected to a Camfil Farr Model GS72 baghouse . . .

- The use of dust collectors and baghouses for packaging and bagging operations in Buildings E and H. Building E is equipped with a Camfil Farr Model GS24 baghouse which is rated at 18,000 CFM. Building H is equipped with an Amtech Model ATY-24 which is rated at 18,000 CFM.[51]

iii. Operation of Dust Suppression System

CPHD requires the following for dust suppression systems:

> (5) Dust Suppressant System. The Facility Owner or Operator must apply Chemical Stabilizers and/or maintain and operate water spray bars, a misting system, water spray systems and/or water trucks to prevent Fugitive Dust emissions in violation of 3.0(2), in accordance with the following requirements:
> a) Except pursuant to 7.0(5)(c) below, the dust suppressant system shall be operable and able to dispense water, water-based solutions, and/or Chemical Stabilizers at all times unless all bulk storage material piles are covered.
>
> b) When the temperature falls below 32 degrees Fahrenheit, the Facility must use Chemical Stabilizers and/or water heating systems to ensure that dust suppression continues.
>
> c) If any part of the dust suppressant system is undergoing maintenance or otherwise becomes inoperable, the Facility Owner or Operator must suspend disturbance of Bulk Material piles that would be controlled by the inoperable portion of the dust suppressant system until such time as the system becomes operable again.[52]

As described above, there are no hard and fast requirements established for the operation of CSX's dust suppression system.

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[49] IDEM Title V/New Source Constriction Permit for Riverview Energy Corporation, Permit No. 147-39554-00065, June 11, 2019, available at https://permits.air.idem.in.gov/39554f.pdf (hereinafter "Riverview Permit").
[50] Riverview Fugitive Dust Control Plan, Attachment A to Riverview Permit (Attachment D).
[51] Watco Fugitive Dust Control Plan, Section 5.0, pdf p. 24 https://www.chicago.gov/content/dam/city/depts/cdph/InspectionsandPermitting/CDPH.Determination.VarianceRequest_Watco.Transloading_Aug32020.pdf.
[52] Chicago Rule 3.00.

iv. Paved and Unpaved Roadways

In California, SCAQMD requires that certain types of roadways within a coal terminal's boundaries must be paved, specifically:

> (iii) All ground surfaces within the facility where material accumulations routinely occur; and, (B) All roads and vehicle movement areas within the facility that are used for transporting or moving material excluding. . . permitted material enclosures and areas approved by the Executive Officer for material storage pursuant to other sections of this Rule.

To reduce particulate accumulation on roadways, the following numerical silt loading values are established

> A silt loading value, for all silt particles, of 0.05 grams/meter2 for any trackout road, excluding freeways and railroad tracks; and (ii) A silt loading value, for all silt particles, of 0.25 grams/meter2 for all roads and vehicle movement areas excluding railroad tracks within the facility that are used for transporting or moving material.

Street sweeping must be conducted at a minimum frequency and there are associated record keeping requirements:

> (i)The street sweeping shall be sufficient so that not more than 4 hours elapses between each street sweeper cleaning or after every 100 truck material receipts or dispatches, but not less than one time daily when the facility is open for business.
> (ii) Each 24-hr. day, the day beginning at 12:01 A.M., the facility operator shall designate and record whether for that day the facility operator is street sweeping every four hours or every 100 trucks. The record shall show the date and time when street sweeping was performed and the truck count.[53]

In Chicago, CDPH has an almost identical set of requirements for paving all of internal roadways, and minimum street sweeping frequency and recording thereof.[54] Chicago does not have a numerical silt accumulation standard but does require a speed limit of 8 miles per hour within the facility for vehicles transporting bulk materials.[55]

Conversely, CSX's plan does not require roadway paving, lacks numerical standards for silt accumulation and the frequency of roadway sweeping, and does not require recordkeeping or reporting of any related information. In addition, CSX's speed limit within the facility is 15 miles per hour, higher than Chicago's 8 mile/hour limit.

[53] SCAQMD Rule 1158.
[54] Chicago Rule 3.00(15)(16).
[55] Chicago Rule 3.00(9)(a).

v. Minimum Moisture Content

Both SCAQMD and CPHD establish a minimum moisture content that can be used as a mechanism for compliance. SCAQMD's minimum moisture content for coal is 7.6% and CDPH's for all materials is 3% by weight. MDE should require periodic testing of minimum moisture content at all transfer points and piles at the CSX Terminal, with results to be reported biannually.

vi. Recordkeeping and Reporting

MDE must drastically improve the recordkeeping and reporting requirements for the CSX Terminal. Its permit currently requires minimal information under either category, especially reporting. Given the history of dust problems reported by the nearby community coupled with the terminal's location in an environmental justice area, MDE must require CSX to submit on a regular and frequent basis information that can be used to assess its compliance with air quality standards. Logs of corrective action and dust control measures should be submitted quarterly at minimum. Additional reporting requirements are addressed above. Finally, MDE should look to CDPH's recordkeeping requirements, noting that, for CSX, keeping records on site is not sufficient. CSX must be required to submit important information to MDE.

In Chicago, all facilities subject to CDPH's regulations for dry bulk material terminals must:

> keep and maintain Facility logs as follows:
> a) Record daily, all cleaning and street sweeping;
> b) Record daily, the weather conditions, including wind speed and direction, documented by the weather station or other device installed pursuant to 3.0(6);
> c) Record the application of water and/or Chemical Stabilizer pursuant to paragraphs 3.0(7), 3.0(9), 3.0(11), 3.0(12), 3.0(13), and/or 5.0(7), as applicable, and note any instances when such application is suspended for any reason, including but not limited to, weather conditions;
> d) Record any instances when activities are suspended due to high winds as required by paragraph 7.0(4), as applicable;
> e) Record the results of the continuous monitoring for Fugitive Dust as required in paragraph 3.0(4), indicate any instances when a monitor detects Fugitive Dust that exceeds the Reportable Action Level set forth in the Fugitive Dust Plan, and record the action taken to respond to the detection of Fugitive Dust;
> f) Record quarterly, the results of the tests of visual Fugitive Dust and opacity as required in paragraph 3.0(2)(d);
> g) Record the results of the filter-based metals monitoring as required in paragraph 3.0(5) or 6.0, as applicable;
> h) Maintain a schedule for routine inspection, maintenance, and testing of all control measures, devices, and technologies, including a schedule for inspection of Bulk Solid Material piles, inspection of all monitors, and inspection of off-site areas for the presence of dust; and identify the person or persons responsible for such inspections, maintenance, and testing;

i) All records required to be kept pursuant to these Rules shall be kept and maintained at the Facility and be available for inspection for a minimum of three (3) years from the date the record is created.[56]

Thank you for considering these comments.

Respectfully submitted,

Leah Kelly
Senior Attorney
Environmental Integrity Project
1000 Vermont Ave. NW, Suite 1100
Washington, D.C. 20005
Email: lkelly@environmentalintegrity.org
Phone: 202-263-4448

Meleny Thomas
Executive Director, Development without Displacement
South Baltimore Community Land Trust

Ray Conaway and Greg Sawtell, Co-Presidents
Community of Curtis Bay Association

[56] Chicago Rule 3.0(18);

Attachment R

Bryan W. Shaw, Ph.D., *Chairman*
Carlos Rubinstein, *Commissioner*
Toby Baker, *Commissioner*
Zak Covar, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

August 24, 2012

MR ERNIE D COCKRELL
MANAGING DIRECTOR
P-L JACINTOPORT I LLC
1000 MAIN ST STE 3250
HOUSTON TX 77002-6338

Re: Permit Application
Permit Number: 99217
Coal Handling Facility
Houston, Harris County
Regulated Entity Number: RN106256951
Customer Reference Number: CN603976960

Dear Mr. Cockrell:

This is in response to your Form PI-1 (General Application for Air Preconstruction Permits and Amendments) concerning the above-referenced facility.

A permit for your new facility is enclosed. The permit contains several general and special conditions that define the level of operation and a maximum allowable emission rates table. We appreciate your careful review of the special conditions of the permit and assuring that all requirements are consistently met. In addition, the construction and operation of the facilities must be as represented in the application.

No planned maintenance, startup, and shutdown emissions have been reviewed or represented in this application and none are authorized by this permit.

This permit will be automatically void upon the occurrence of any of the following, as indicated in Title 30 Texas Administrative Code § 116.120(a) [30 TAC § 116.120(a)]:

1. Failure to begin construction within 18 months of the date of issuance,

2. Discontinuance of construction for more than 18 months prior to completion, or

3. Failure to complete construction within a reasonable time.

Upon request, the executive director may grant extensions as allowed in 30 TAC § 116.120(b).

This permit is effective as of the date of this letter and will be in effect for ten years from the date of approval.

You may file a **motion to overturn** with the Chief Clerk. A motion to overturn is a request for the commission to review the executive director's decision. Any motion must explain why the commission should review the executive director's decision. According to 30 TAC § 50.139, an

action by the executive director is not affected by a motion to overturn filed under this section unless expressly ordered by the commission.

A motion to overturn must be received by the Chief Clerk within 23 days after the date of this letter. An original and 11 copies of a motion must be filed with the Chief Clerk in person, or by mail to the Chief Clerk's address on the attached mailing list. On the same day the motion is transmitted to the Chief Clerk, please provide copies to the applicant, the executive director's attorney, and the Public Interest Counsel at the addresses listed on the attached mailing list. If a motion to overturn is not acted on by the commission within 45 days after the date of this letter, then the motion shall be deemed overruled.

You may also request judicial review of the executive director's approval. According to Texas Health and Safety Code § 382.032, a person affected by the executive director's approval must file a petition appealing the executive director's approval in Travis County district court within 30 days after the effective date of the approval. Even if you request judicial review, you still must exhaust your administrative remedies, which includes filing a motion to overturn in accordance with the previous paragraphs.

Thank you for your cooperation and interest in air pollution control. If you need further information or have any questions, please contact Ms. Kititke Cook at (512) 239-0613 or write to the Texas Commission on Environmental Quality, Office of Air, Air Permits Division, MC-163, P.O. Box 13087, Austin, Texas 78711-3087.

This action is taken under authority delegated by the Executive Director of the TCEQ.

Sincerely,

Fax

Michael Wilson, P.E., Director
Air Permits Division
Office of Air
Texas Commission on Environmental Quality

MPW/KJC/kjc

Enclosure

cc: Josh Reddoch, Consultant, RPS JDC Inc, Houston
Bureau Chief Pollution Control & Prevention, Environmental Health Division, Houston Department of Health and Human Services, Houston
Director, Harris County, Pollution Control Services, Pasadena
Air Section Manager, Region 12 - Houston

Project Number: 171079

TEXAS CO MISSION ON ENVIRONMEI AL QUALITY
AIR QUALITY PERMIT

A PERMIT IS HEREBY ISSUED TO
P-L Jacintoport I, LLC
AUTHORIZING THE CONSTRUCTION AND OPERATION OF
Coal Handling Facility
LOCATED AT **Houston, Harris County, Texas**
LATITUDE 29° 44' 40" LONGITUDE 095° 09' 02"

1. **Facilities** covered by this permit shall be constructed and operated as specified in the application for the permit. All representations regarding construction plans and operation procedures contained in the permit application shall be conditions upon which the permit is issued. Variations from these representations shall be unlawful unless the permit holder first makes application to the Texas Commission on Environmental Quality (commission) Executive Director to amend this permit in that regard and such amendment is approved. [Title 30 Texas Administrative Code § 116.116 (30 TAC § 116.116)]

2. **Voiding of Permit.** A permit or permit amendment is automatically void if the holder fails to begin construction within 18 months of the date of issuance, discontinues construction for more than 18 months prior to completion, or fails to complete construction within a reasonable time. Upon request, the executive director may grant an 18-month extension. Before the extension is granted the permit may be subject to revision based on best available control technology, lowest achievable emission rate, and netting or offsets as applicable. One additional extension of up to 18 months may be granted if the permit holder demonstrates that emissions from the facility will comply with all rules and regulations of the commission, the intent of the Texas Clean Air Act (TCAA), including protection of the public's health and physical property; and (b)(1)the permit holder is a party to litigation not of the permit holder's initiation regarding the issuance of the permit; or (b)(2) the permit holder has spent, or committed to spend, at least10 percent of the estimated total cost of the project up to a maximum of $5 million. A permit holder granted an extension under subsection (b)(1) of this section may receive one subsequent extension if the permit holder meets the conditions of subsection (b)(2) of this section. [30 TAC § 116.120(a), (b) and (e)]

3. **Construction Progress.** Start of construction, construction interruptions exceeding 45 days, and completion of construction shall be reported to the appropriate regional office of the commission not later than 15 working days after occurrence of the event. [30 TAC § 116.115(b)(2)(A)]

4. **Start-up Notification.** The appropriate air program regional office shall be notified prior to the commencement of operations of the facilities authorized by the permit in such a manner that a representative of the commission may be present. The permit holder shall provide a separate notification for the commencement of operations for each unit of phased construction, which may involve a series of units commencing operations at different times. Prior to operation of the facilities authorized by the permit, the permit holder shall identify to the Chief Engineer's Office the source or sources of allowances to be utilized for compliance with Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program).

5. **Sampling Requirements.** If sampling is required, the permit holder shall contact the commission's Office of Compliance and Enforcement prior to sampling to obtain the proper data forms and procedures. All sampling and testing procedures must be approved by the executive director and coordinated with the regional representatives of the commission. The permit holder is also responsible for providing sampling facilities and conducting the sampling operations or contracting with an independent sampling consultant. [30 TAC § 116.115(b)(2)(C)]

6. **Equivalency of Methods.** The permit holder must demonstrate or otherwise justify the equivalency of emission control methods, sampling or other emission testing methods, and monitoring methods proposed as alternatives to methods indicated in the conditions of the permit. Alternative methods shall be applied for in writing and must be reviewed and approved by the executive director prior to their use in fulfilling any requirements of the permit. [30 TAC § 116.115(b)(2)(D)]

7. **Recordkeeping.** The permit holder shall maintain a copy of the permit along with records containing the information and data sufficient to demonstrate compliance with the permit, including production records and operating hours; keep all required records in a file at the plant site. If, however, the facility normally operates unattended, records shall be maintained at the nearest staffed location within Texas specified in the application; make the records available at the request of personnel from the commission or any air pollution control program having jurisdiction; comply with any additional recordkeeping requirements specified in special conditions attached to the permit; and retain information in the file for at least two years following the date that the information or data is obtained. [30 TAC § 116.115(b)(2)(B)]

8. **Maximum Allowable Emission Rates.** The total emissions of air contaminants from any of the sources of emissions must not exceed the values stated on the table attached to the permit entitled "Emission Sources--Maximum Allowable Emission Rates." [30 TAC § 116.115(b)(2)(F)]

9. **Maintenance of Emission Control.** The permitted facilities shall not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations. The permit holder shall provide notification for upsets and maintenance in accordance with §§ 101.201, 101.211, and 101.221 of this title (relating to Emissions Event Reporting and Recordkeeping Requirements; Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements; and Operational Requirements). [30 TAC § 116.115(b)(2)(G)]

10. **Compliance with Rules.** Acceptance of a permit by an applicant constitutes an acknowledgment and agreement that the permit holder will comply with all rules, regulations, and orders of the commission issued in conformity with the TCAA and the conditions precedent to the granting of the permit. If more than one state or federal rule or regulation or permit condition is applicable, the most stringent limit or condition shall govern and be the standard by which compliance shall be demonstrated. Acceptance includes consent to the entrance of commission employees and agents into the permitted premises at reasonable times to investigate conditions relating to the emission or concentration of air contaminants, including compliance with the permit. [30 TAC § 116.115(b)(2)(H)]

11. This permit may be appealed pursuant to 30 TAC § 50.139.

12. This permit may not be transferred, assigned, or conveyed by the holder except as provided by rule. [30 TAC § 116.110(e)]

13. There may be additional special conditions attached to a permit upon issuance or modification of the permit. Such conditions in a permit may be more restrictive than the requirements of Title 30 of the Texas Administrative Code. [30 TAC § 116.115(c)]

14. Emissions from this facility must not cause or contribute to a condition of "air pollution" as defined in TCAA § 382.003(3) or violate TCAA § 382.085, as codified in the Texas Health and Safety Code. If the executive director determines that such a condition or violation occurs, the holder shall implement additional abatement measures as necessary to control or prevent the condition or violation.

PERMIT 99217

Date: August 24, 2012

For the Commission

EXHIBIT I - 331



Special Conditions

Permit Number 99217

Emission Limitations

1. This permit authorizes only those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates," and those sources are limited to the emission rates and other conditions specified in the table.

Federal Applicability

2. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources in Title 40 Code of Federal Regulations (40 CFR) Part 60, specifically the following:

   A. Subpart A - General Provisions; and

   B. Subpart Y - Standards of Performance for Coal Preparation Plants and Processing Plants.

Opacity/Visible Emission Limitations

3. Opacity of particulate matter emissions from all point sources (Hopper 1A, Hopper 1B, Belt Conveyor 1A, Surge Bin 1, and Surge Bin 2 Dust Collectors) shall not exceed 5 percent averaged over a six minute period. Determination of compliance with this requirement shall be made by first observing for visible emissions during normal plant operations. Observations shall be made at least 15 feet and no more than 0.25 miles from the emission point. If visible emissions are observed from the emission point, opacity shall be determined using the EPA 40 CFR Part 60, Appendix A, Test Method (TM) 9. Contributions from uncombined water vapor shall not be included in determining compliance with this condition. Determination of compliance with this requirement shall be performed quarterly and the results recorded quarterly.

4. Opacity of particulate matter emissions from all the fugitive emission points (material transfer points, hoppers, loading, unloading, stockpiles, internal roads and work areas) shall not exceed 10 percent averaged over a six minute period. Opacity shall be determined using the EPA 40 CFR Part 60, Appendix A, TM 9. Contributions from uncombined water vapor shall not be included in determining compliance with this condition.

5. There shall be no visible fugitive emissions leaving the property. Observations for visible emissions shall be performed and recorded quarterly. The visible emissions determination shall be made during normal plant operations. Observations shall be made on the downwind property line for a minimum of six minutes. If visible emissions are observed, an evaluation must be accomplished in accordance with the EPA 40 CFR Part 60,

Appendix A, TM 22, using the criteria that visible emissions shall not exceed a cumulative 30 seconds in duration in any six-minute period. If visible emissions exceed the TM 22 criteria, corrective action to eliminate the source of excessive visible emissions shall be taken promptly and documented within 24 business hours of first observing the visible emissions.

Operational Limitations, Work Practices, and Plant Design

6. Emission rates are based on and the facilities shall be limited to a maximum hourly throughput of 5,000 tons per hour for receiving operations and 4,000 tons per hour for shipping operations with the total annual throughput not to exceed 15,000,000 tons per year.

7. The facilities are authorized to operate up to 8,760 hours per year.

8. The handling of anthracite coal is not authorized for this facility.

9. Fabric filter baghouses designed to meet an outlet grain loading of not more than 0.01 grain per dry standard cubic foot of exhaust each, properly installed and in good working order, shall control particulate matter from material transfer from railcars into receiving hoppers (UC-1A and UC-1B), from belt conveyor BC-01A to belt conveyor BC-03A (TR-2A), and into surge bins (SB-1 and SB-2).

10. All hooding, duct, and collection systems shall be effective in capturing emissions from the intended equipment. The hooding and duct systems shall be maintained free of holes, cracks, and other conditions that would reduce the collection efficiency of the emission capture system.

11. Emission points TR-1A, TR-1B, TR-2B, and TR-2C shall be located inside a building. Openings on the building shall be equipped with flexible curtains to minimize fugitive emissions. The flexible curtains shall be maintained free of holes, cracks, and other conditions that would reduce effectiveness.

12. All material transfer points not controlled by a fabric filter baghouse shall be controlled by permanently mounted water spray systems operated as necessary to maintain a material moisture content of at least eight percent and maintain compliance with all applicable TCEQ rules and regulations.

13. The following emission points shall be enclosed with a roof and at least two sides (semi-cylindrical cover) to be below the belt:

TR-3A	TR-5A	DT-1A	TR-7A	TR-9A
TR-3B	TR-5B	DT-1B	TR-7B	TR-9B
TR-4A	TR-6	DT-2A	TR-8A	TR-10A
TR-4B		DT-2B	TR-8B	TR-10B

14. The following emission points shall be controlled by permanently mounted chemical dust suppressant and water spray systems:

TR-2B	TR-6	DT-1A	TR-9A
TR-2C	SR-1	DT-1B	TR-9B
TR-3A	SR-2	DT-2A	BC-10A
TR-3B	BC-7A	DT-2B	BC-10B
TR-4A	BC-7B	TR-7A	TR-10A
TR-4B	BW-1	TR-7B	TR-10B
TR-5A	BW-2	TR-8A	SL-1
TR-5B		TR-8B	SL-2

15. The chemical dust suppressant spray system shall meet the following conditions:

    A. The chemical being sprayed shall be an aqueous detergent or an aqueous surfactant;

    B. Aqueous detergents and aqueous surfactants shall not contain more than one percent of any organic compound by weight or more than five percent or any organic compound with a vapor pressure less than 0.002 pounds per square inch absolute (0.01 mm Hg); and

    C. Application of aqueous detergents and aqueous surfactants for the chemical dust control wetting process shall maintain compliance with all applicable TCEQ rules and regulations.

16. All in-plant roads, stockpiles, loading and unloading areas, parking areas, and other traffic areas shall be sprinkled with water, and/or be treated with an authorized dust suppressant(s), and/or be paved (with a cohesive hard surface) and cleaned as necessary to maintain compliance with all applicable TCEQ rules and regulations.

Demonstration of Continuous Compliance

17. Upon request by the TCEQ Executive Director or the TCEQ Regional Director having jurisdiction, the holder of this permit shall perform stack sampling and/or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere to demonstrate compliance with the maximum allowable emission rates table and with emission performance levels as specified in the special conditions and/or otherwise prove satisfactory equipment performance. Sampling must be conducted in accordance with the TCEQ Sampling Procedures Manual or in accordance with the applicable EPA 40 CFR procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director or the appropriate TCEQ Regional Director prior to conducting sampling.

Sampling Requirements

18. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at their own expense. Sampling ports and platforms shall be incorporated into the design of the stacks according to the specifications set forth in the attachment entitled "Chapter 2, Stack Sampling Facilities" prior to stack sampling. Alternate sampling facility designs may be submitted for approval by the TCEQ Regional Office with jurisdiction.

19. A pretest meeting shall be held with personnel from the TCEQ before the required tests are performed. The TCEQ Regional Office with jurisdiction shall be notified not less than 45 days prior to sampling to schedule a pretest meeting. The notice shall include:

A. Date for pretest meeting;

B. Date sampling will occur;

C. Points or sources to be sampled;

D. Name of firm conducting sampling;

E. Type of sampling equipment to be used; and

F. Method or procedure to be used in sampling.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports.

20. Alternate sampling methods and representative unit testing may be proposed by the permit holder. A written proposed description of any deviation from sampling procedures or emission sources specified in permit conditions or TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. Such a proposal must be approved, in writing, by the TCEQ Regional Office with jurisdiction and the TCEQ Office of Air, Air Permits Division in Austin at least two weeks prior to sampling.

21. Requests to waive testing for any pollutant specified shall be submitted, in writing, for approval to the TCEQ Office of Air, Air Permits Division in Austin.

22. During sampling emission testing, the facilities shall operate at maximum represented throughput rates. Primary operating parameters that enable determination of throughputs shall be monitored and recorded during the stack test. These parameters are to be determined at the pretest meeting.

If the plant is unable to operate at the maximum represented production/throughput rates during testing, then additional stack testing shall be required when the throughput exceeds

the previous stack test throughput by +10 percent unless otherwise determined, in writing, by the TCEQ Executive Director.

23. Requests for additional time to perform sampling shall be submitted to the TCEQ Regional Office with jurisdiction. Additional time to comply with the applicable federal requirements requires EPA approval, and requests shall be submitted to the TCEQ Regional Office with jurisdiction.

24. Copies of the final sampling report shall be forwarded to the TCEQ within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

    One copy to the TCEQ Regional Office with jurisdiction.
    One copy to each appropriate local air pollution control program with jurisdiction.

25. If, as a result of sampling, compliance with the permitted emission rates cannot be demonstrated, the holder of this permit shall adjust any operating parameters so as to comply with Special Condition No. 1 and the permitted emission rates.

26. If the holder of this permit is required to adjust any operating parameters for compliance, then beginning no later than 60 days after the date of the test conducted, the holder of this permit shall submit to the TCEQ, on a monthly basis, a record of adjusted operating parameters and daily records of material throughputs sufficient to demonstrate compliance with the permitted emission rates. Daily records of material throughputs and operating parameters shall be distributed as follows:

    One copy to the TCEQ Regional Office with jurisdiction.
    One copy to the TCEQ Office of Air, Air Permits Division in Austin.

Recordkeeping Requirements

27. Records shall be maintained at this facility site and made available at the request of personnel from the TCEQ or any other air pollution control program having jurisdiction to demonstrate compliance with permit limitations. These records shall be totaled for each calendar month, retained for a rolling 24-month period, and include the following:

    A. Quarterly observations for visible emissions and/or opacity required by the Opacity/Visible Emissions Limitations;

    B. Hourly and annual throughputs summarized in tons per hour, tons per month, and tons per year;

    C. All malfunctions, repairs, and maintenance of abatement systems, which includes bag replacement and the manufacturer's suggested cleaning and maintenance schedule; and

D. Type of chemical used and material safety data sheets for each chemical dust suppressant.

Dated August 24, 2012

Emission Sources - Maximum Allowable Emission Rates

Permit Number 99217

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rate	
			lbs/hour	TPY (4)
UC-1A	Hopper 1A Dust Collector	PM	0.06	0.05
		PM_{10}	0.03	0.02
		$PM_{2.5}$	<0.01	<0.01
UC-1B	Hopper 1B Dust Collector	PM	0.06	0.05
		PM_{10}	0.03	0.02
		$PM_{2.5}$	<0.01	<0.01
TR-2A	Belt Conveyor 1A Dust Collector	PM	0.06	0.05
		PM_{10}	0.03	0.02
		$PM_{2.5}$	<0.01	<0.01
BLDG FUG	Receiving Bldg. Fugitives (5, 6)	PM	0.68	0.51
		PM_{10}	0.32	0.24
		$PM_{2.5}$	0.05	0.04
MTL HNDL	Material Handling Fugitives (5, 7)	PM	6.82	6.33
		PM_{10}	3.23	2.99
		$PM_{2.5}$	0.49	0.45
SB-1	Surge Bin 1 Dust Collector	PM	0.05	0.05
		PM_{10}	0.02	0.02
		$PM_{2.5}$	<0.01	<0.01

Emission Sources - Maximum Allowable Emission Rates

Emission Point (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rate	
			lb/hour	TPY (4)
SB-2	Surge Bin 2 Dust Collector	PM	0.05	0.05
		PM_{10}	0.02	0.02
		$PM_{2.5}$	<0.01	<0.01
ACT STK	Active Stockpiles (5)	PM	---	7.23
		PM_{10}	---	3.61
		$PM_{2.5}$	---	0.54
LNG STK	Inactive Stockpiles (5)	PM	---	1.34
		PM_{10}	---	0.67
		$PM_{2.5}$	---	0.10

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.
(2) Specific point source name. For fugitive sources, use area name or fugitive source name.
(3) PM - total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$, as represented
PM_{10} - total particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$, as represented
$PM_{2.5}$ - particulate matter equal to or less than 2.5 microns in diameter.
(4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
(5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
(6) Receiving Building Fugitives (BLDG FUG) include all material transfer points inside the receiving building that are not captured by a baghouse.
(7) Material Handling Fugitives (MTL HNDL) include all material transfer points outside the receiving building and not captured by a baghouse or included with stockpiles.

Dated: August 24, 2012

Attachment S

Bryan W. Shaw, Ph.D., *Chairman*
Carlos Rubinstein, *Commissioner*
Toby Baker, *Commissioner*
Zak Covar, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
Protecting Texas by Reducing and Preventing Pollution

May 7, 2012

MR JIM WILSON
EHS MANAGER
KINDER MORGAN PETCOKE LP
405 CLINTON DR BUILDING D
GALENA PARK TX 77547-3468

Re: Permit Amendment Application
Permit Number: 95307
Deepwater Terminal
Pasadena, Harris County
Regulated Entity Number: RN102860194
Customer Reference Number: CN602846735
Account Number: HX-2730-L

Dear Mr. Wilson:

This is in response to your letter received April 16, 2012 and your Form PI-1 (General Application for Air Preconstruction Permits and Amendments) concerning the proposed amendment to Permit Number 95307. We understand that you propose to incorporate the ship loader currently authorized by registration number 81933 and 85443 into the NSR permit. The incorporated ship loader would be authorized to handle coal in addition to petroleum coke. The operations would be divided into Phase I and Phase II; the primary purpose of the Phase I operations is to utilize the existing ship loader (previously authorized by registrations 81933 and 85443) to load coal or petroleum coke until the loader described in Phase II is operational. The Phase II operations are analogous to what was initially authorized by the NSR permit (before this amendment). The PBR registrations 81933 and 85443 are being incorporated into the permit and voided.

As indicated in Title 30 Texas Administrative Code § 116.116(b) and § 116.160 [30 TAC § 116.116(b) and § 116.160], and based on our review, Permit Number 95307 is hereby amended. This information will be incorporated into the existing permit file. Enclosed are revised special conditions pages and a maximum allowable emission rates table to replace those currently attached to your permit. We appreciate your careful review of the special conditions of the permit and assuring that all requirements are consistently met.

No planned maintenance, startup, and shutdown emissions have been reviewed or represented in this application and none are authorized by this permit.

Re: Permit Number: 95307

This amendment will be automatically void upon the occurrence of any of the following, as indicated in 30 TAC § 116.120(a):

1. Failure to begin construction of the changes authorized by this amendment within 18 months from the date of this authorization.
2. Discontinuance of construction of the changes authorized by this amendment for a period of 18 consecutive months or more.
3. Failure to complete the changes authorized by this amendment within a reasonable time.

Upon request, the executive director may grant extensions as allowed in 30 TAC § 116.120(b).

You may file a **motion to overturn** with the Chief Clerk. A motion to overturn is a request for the commission to review the executive director's decision. Any motion must explain why the commission should review the executive director's decision. According to 30 TAC § 50.139, an action by the executive director is not affected by a motion to overturn filed under this section unless expressly ordered by the commission.

A motion to overturn must be received by the Chief Clerk within 23 days after the date of this letter. An original and 11 copies of a motion must be filed with the Chief Clerk in person, or by mail to the Chief Clerk's address on the attached mailing list. On the same day the motion is transmitted to the Chief Clerk, please provide copies to the applicant, the executive director's attorney, and the Public Interest Counsel at the addresses listed on the attached mailing list. If a motion to overturn is not acted on by the commission within 45 days after the date of this letter, then the motion shall be deemed overruled.

You may also request **judicial review** of the executive director's approval. According to Texas Health and Safety Code § 382.032, a person affected by the executive director's approval must file a petition appealing the executive director's approval in Travis County district court within 30 days after the effective date of the approval. Even if you request judicial review, you still must exhaust your administrative remedies, which includes filing a motion to overturn in accordance with the previous paragraphs.

Your cooperation in this matter is appreciated. If you need further information or have any questions, please contact Mr. Dustin Jennings at (512) 239-1268 or write to the Texas Commission on Environmental Quality, Office of Air, Air Permits Division, MC-163, P.O. Box 13087, Austin, Texas 78711-3087.

This action is taken under authority delegated by the Executive Director of the TCEQ.

Sincerely,

For

Michael Wilson, P.E., Director
Air Permits Division
Office of Air
Texas Commission on Environmental Quality

MPW/dj

Enclosures

cc: Josh Reddoch, Senior Consultant, RPS JDC Inc, Austin
Chief Health Inspector, Health Department, City of Pasadena, Pasadena
Director, Harris County, Pollution Control Services, Pasadena
Air Section Manager, Region 12 - Houston

Project Number: 176606

Special Conditions

Permit Number 95307

Emission Limitations

1. This permit covers only those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates," and those sources are limited to the emission limits and other conditions specified in the attached table.

Federal Applicability

2. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) Regulations on Standards of Performance for New Stationary Sources in Title 40 Code of Federal Regulations (40 CFR) Part 60 Subparts A and Y promulgated for coal preparation plants and processing plants. (5/12)

Opacity/Visible Emission Limitations

3. There shall be no visible emissions leaving the property from any permitted facility (point source or fugitive) conveyors, material transfer points, hoppers, loading or unloading, stockpiles, internal roads and work areas. Observations for visible emissions shall be performed and recorded quarterly. The visible emissions determination shall be made during normal plant operations. Observations shall be made on the downwind property line for a minimum of six minutes. If visible emissions are observed then an evaluation must be accomplished in accordance with the EPA 40 CFR Part 60, Appendix A, Test Method (TM) 22, using the criteria that visible emissions shall not exceed a cumulative 30 seconds in duration in any six-minute period. If visible emissions exceed the TM 22 criteria then immediate action shall be taken to eliminate the excessive visible emissions. The corrective action shall be documented within 24 business hours of completion.

4. In accordance with the U.S. EPA TM 9 or equivalent, and except for those periods described in Title 30 Texas Administrative Code (30 TAC) §101.201 and 101.211, opacity of emissions from belt conveyors, transfer points on belt conveyors, material storage or feed bins, stockpiles and process buildings shall not exceed 10 percent averaged over a six-minute period.

Operational Representations

5. Maximum throughput limitations for unloading and loading are as follows: (5/12)

Source	tons per hour	tons per year in any rolling 12-month period
Material Receiving Operations - Phase I	2,000	2,500,000
Rail Receiving Operations to Stockpile 2	2,000	2,500,000
Material Loading Operations - Phase I Loader (EPNs ETR-2, ETR-3, ETR-4, ESL-1 and EBC-03)	2,500	5,000,000
Ship and Barge Loading from Stockpile 1	2,500	2,500,000
Ship and Barge Loading from Stockpile 2	2,500	2,500,000
Material Receiving Operations - Phase II	5,500	19,500,000
Rail Receiving Operations to Stockpile 2	2,000	2,500,000
Rail Receiving Operations to Stockpiles 3 and 4	3,500	16,000,000
Direct Loading from Railcar to Ship	3,500	1,000,000
Material Loading Operations - Phase II Loader (EPNs TR-11, TR-12, TR-13, TR-13a, SL-1 and BC-11)	6,000	22,000,000
Ship and Barge Loading from Stockpile 1	5,000	2,500,000
Ship and Barge Loading from Stockpile 2	5,000	2,500,000
Ship and Barge Loading Stockpile 3	6,000	10,000,000
Ship and Barge Loading Stockpile 4	6,000	6,000,000
Direct Loading from Railcar to Ship	3,500	1,000,000

All material handling operations are authorized to handle petroleum coke or coal except for "Ship and Barge Loading from Stockpile 1" which will only process petroleum coke. Petroleum coke shall be transported to Stockpile 1 from a nearby refinery via conveyor designated BC-01, except for times when BC-01 is not operational. When BC-01 is not operational, Stockpile 1 may receive petroleum coke via truck.

6. The facilities are authorized to operate up to 8,760 hours per year.

7. Anthracite coal is not authorized at any facility.

8. This permit allows the use of those aqueous surfactants as listed in the permit file for the chemical dust control wetting processes. Use of other aqueous surfactants is permissible provided the following conditions are met: (5/12)

   A. Aqueous surfactants, as applied, shall contain (by weight):

      (1) No more than one percent of any organic compound; or

(2) Up to five percent of a organic compound which has a vapor pressure less than 0.002 pounds per square inch absolute (0.01 mm Hg).

B. The new or replacement surfactant shall serve the same basic process function and shall be emitted from the same location (EPN) as the replaced product.

9. Plant roads and stockpiles shall be sprinkled with water as necessary to maintain compliance with the Opacity/Visible Emission Limitations of this permit.

10. The conveyor (BC-01) used for the transfer of petroleum coke from the nearby refinery to Stockpile 1 (East Waterfront) shall be enclosed with two sides and a roof with the sides extending from the roof (semi cylindrical cover) to below the level of the belt.

11. Facilities authorized by Phase I shall not be operated at the same time as facilities authorized by Phase II. **(5/12)**

Additional Operational Representations - Phase I **(5/12)**

12. Permanently mounted spray bars shall be installed at locations designated by Emission Point Numbers (EPN) ETR-1, TR-2a, TR-2b and ETR-6. All spray systems shall be operated as necessary to maintain a material moisture content of at least 6 percent and maintain compliance with TCEQ rules and regulations.

13. The following emission points (associated with railcar unloading) shall be located inside of an enclosed building: EPN U-1, TR-1 and TR-2. The openings on the ends of the building shall be equipped with flexible curtains to minimize fugitive emissions during the unloading. The flexible curtains in the railcar unloading area shall be maintained in good condition and shall be replaced when breaks or tears occur.

14. Permanently mounted chemical or chemical foam spray systems shall be applied at EPNs ETR-1 and ETR-6. The suppressants shall control emissions at EPNs ETR-3 and EBC-03.

15. All conveyors, except for conveyor designated by EPN EBC-03, shall be enclosed with a minimum of one side and a top with the side(s) extending from the top to below the level of the belt.

16. Permanently mounted enclosures consisting of at least three sides and a roof, shall be installed to control particulate emissions at the following transfer points: EPNs TR-2a, TR-2b, ETR-1, ETR-2, ETR-3, ETR-4, ETR-5, ETR-6 and TR-17.

17. The ship loader, designated by EPN ESL-1, shall be equipped with a retractable loading chute. The retractable loading chute shall be used to reduce the material fall distance.

Additional Operational Representations - Phase II (5/12)

18. Permanently mounted spray bars shall be installed at locations designated by Emission Point Numbers (EPN) TR-5, TR-7, TR-8, TR-9, TR-10, TR-11, TR-12, TR-14, TR-15, TR-16, TR-17, TR-18, TR-18a, TR-19, TR-20, TR-21, TR-22, and TR-23. All spray systems shall be operated as necessary to maintain a material moisture content of at least 6 percent and maintain compliance with TCEQ rules and regulations.

19. The following emission points (associated with railcar unloading) shall be located inside of an enclosed building: EPN U-1, U-2, TR-1, TR-2, TR-3, and TR-4. The openings on the ends of the building shall be equipped with flexible curtains to minimize fugitive emissions during the unloading. The flexible curtains in the railcar unloading area shall be maintained in good condition and shall be replaced when breaks or tears occur.

20. Permanently mounted chemical or chemical foam spray systems shall be employed to control EPNs TR-5, CV-5, TR-12 and BC-11.

21. The conveyor (CV-4) used for the transfer of material under the roadway, shall be enclosed with two sides and a roof (semi cylindrical cover) with the sides extending from the roof to below the level of the belt.

22. All conveyors, except for conveyors with EPN BC-11 and CV-5, shall be enclosed with a minimum of one side and a top with the side(s) extending from the top to below the level of the belt.

23. Permanently mounted enclosures consisting of at least three sides and a roof, shall be installed to control particulate emissions at the following transfer points: EPNs U-3, TR-5, TR-6, TR-7, TR-8, TR-9, TR-10, TR-11, TR-12, TR-13, TR-13a, TR-14, TR-15, TR-16, TR-17, TR-17a, TR-18, TR-18a, TR-19, TR-20, TR-21, TR-22, and TR-23.

24. Only two of the dozer traps, EPNs BF-03A, BF-03B, or BF-03C, which feed conveyor BC-03, may operate simultaneously.

25. The ship loader, designated by EPN SL-1, shall be equipped with a retractable loading chute. The retractable loading chute shall be used to reduce the material fall distance.

Continuous Determination of Compliance

26. Upon request by the TCEQ Executive Director or the TCEQ Regional Director having jurisdiction, the holder of this permit shall perform ambient air monitoring and/or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere to demonstrate compliance with the maximum allowable emission rates table (MAERT) and with emission performance levels as specified in the special conditions and/or otherwise prove satisfactory equipment performance. Sampling must be conducted in accordance with the TCEQ Sampling Procedures Manual or in accordance with the applicable EPA 40 CFR procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director or the appropriate TCEQ Regional Director prior to conducting sampling.

Sampling Requirements

27. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at their own expense. Sampling ports and platforms shall be incorporated into the design of the stacks according to the specifications set forth in the attachment entitled "Chapter 2, Stack Sampling Facilities" prior to stack sampling. Alternate sampling facility designs may be submitted for approval by the TCEQ Regional Office with jurisdiction.

28. Sampling shall be conducted in accordance with the TCEQ Sampling Procedures Manual and EPA Test Methods in 40 CFR Part 60, Appendix A, and 40 CFR Part 51, Appendix M, as follows:

    A. Test Method 9 for opacity; and

    B. Test Method 22 for fugitive emissions from materials sources.

29. A pretest meeting shall be held with personnel from the TCEQ before the required tests are performed. The TCEQ Regional Office with jurisdiction shall be notified not less than 45 days prior to sampling to schedule a pretest meeting. The notice shall include:

    A. Date for pretest meeting;
    B. Date sampling will occur;
    C. Points or sources to be sampled;
    D. Name of firm conducting sampling;
    E. Type of sampling equipment to be used; and
    F. Method or procedure to be used in sampling.

    The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports.

30. Alternate sampling methods and representative unit testing may be proposed by the permit holder. A written proposed description of any deviation from sampling procedures or emission sources specified in permit conditions or TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. Such a proposal must be approved, in writing, by the TCEQ Regional Office with jurisdiction and the TCEQ Office of Air, Air Permits Division in Austin at least two weeks prior to sampling.

31. Requests to waive testing for any pollutant specified shall be submitted, in writing, for approval to the TCEQ Office of Air, Air Permits Division in Austin.

32. During sampling emission testing, the facilities shall operate at maximum represented throughput rates. Primary operating parameters that enable determination of throughputs shall be monitored and recorded during the test. These parameters are to be determined at the pretest meeting.

If the plant is unable to operate at the maximum represented throughput rates during testing, then additional testing shall be required when the throughput exceeds the previous test throughput by +10 percent unless otherwise determined, in writing, by the TCEQ Executive Director.

33. Requests for additional time to perform sampling shall be submitted to the TCEQ Regional Office with jurisdiction. Additional time to comply with the applicable federal requirements requires EPA approval, and requests shall be submitted to the TCEQ Regional Office with jurisdiction.
34. Copies of the final sampling report shall be forwarded to the TCEQ within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

    One copy to the TCEQ Regional Office with jurisdiction.
    One copy to the TCEQ Office of Air, Air Permits Division in Austin.
    One copy to each appropriate local air pollution control program with jurisdiction.

35. If, as a result of sampling, compliance with the permitted emission rates cannot be demonstrated, the holder of this permit shall adjust any operating parameters so as to comply with the permitted emission rates.

36. If the holder of this permit is required to adjust any operating parameters for compliance, then beginning no later than 60 days after the date of the test conducted, the holder of this permit shall submit to the TCEQ, on a monthly basis, a record of adjusted operating parameters and daily records of material throughputs sufficient to demonstrate compliance with the permitted emission rates. Daily records of material throughputs and operating parameters shall be distributed as follows:

    One copy to the TCEQ Regional Office with jurisdiction.
    One copy to the TCEQ Office of Air, Air Permits Division in Austin.

Recordkeeping Requirements

37. Records shall be maintained and kept at the site for a rolling 24-month period which reflects compliance with General Condition No. 7 and the MAERT, including the following:

    A. Quarterly visible emission observations required by the Opacity/Visible Emission Limitations;

    B. Hourly and annual throughputs summarized in tons per hour, tons per month and tons per year;

    C. Instances of road cleaning, application of road dust control, or road maintenance for dust control;

    D. Type of chemical suppressant(s) used and the corresponding material safety data sheets; and

E. All malfunctions, repairs, and maintenance of abatement systems.

Permit Registrations

38. The following Permit by Rule (PBR) registrations are consolidated by reference: PBR §106.454 for a Degreasing Unit and PBR §106.472 authorizing storage tanks for antifreeze (275 gal), waste oil (290 gal), transmission oil (275 gal), motor oil (275 gal), hydraulic oil (275 gal) and diesel fuel (6,000 gal).

Date: May 7, 2012

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 95307

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

AIR CONTAMINANTS DATA

[illegible]	Source Name (2)	[illegible]	[illegible]	[illegible]
Phase I				
U-1, TR-1, TR-2, TR-2a and TR-2b.	Material Receiving - Hopper 1 to SP-2 (5)	PM	0.74	0.46
		PM_{10}	0.35	0.35
		$PM_{2.5}$	0.05	0.03
ETR-1, ETR-2, ETR-3, ETR-4, ETR-5, ETR-6, TR-17, ESL-1 and EBC-03.	Material Loading - SP-1 or SP-2 to vessel (5,6)	PM	1.57	1.34
		PM_{10}	0.74	0.63
		$PM_{2.5}$	0.11	0.10
Phase II				
U-1, TR-1 and TR-2.	Material Receiving (Hopper 1 to STK - 2) (5)	PM	0.37	0.23
		PM_{10}	0.18	0.11
		$PM_{2.5}$	0.03	0.02
U-2, TR-3, TR-4, TR-5, TR-6 and CV-5.	Material Unloading- Hopper 2 to SP-3 or SP-4 (5, 6)	PM	2.09	4.78
		PM_{10}	0.99	2.26
		$PM_{2.5}$	0.15	0.34
See footnote 7	Phase II Loading (STK 1, 2, 3 or 4 to vessel) (5,6)	PM	5.17	9.11
		PM_{10}	2.44	4.31
		$PM_{2.5}$	0.37	0.65
U-2, TR-3, TR-4, TR-5, TR-7, TR-8, TR-9, TR-10, TR-11, TR-12, TR-13,TR-13a, SL-1 and BC11.	Transfer of Material from Rail Directly to Vessel (5)	PM	3.83	0.55
		PM_{10}	1.81	0.26
		$PM_{2.5}$	0.27	0.04

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Material Stockpiles Phase I and II				
SP -1	Stockpile 1 - East Waterfront (5, 8)	PM	0.92	4.04
		PM_{10}	0.46	2.02
		$PM_{2.5}$	0.06	0.28
SP - 2	Stockpile 2 - West Waterfront (5)	PM	0.92	4.04
		PM_{10}	0.46	2.02
		$PM_{2.5}$	0.06	0.28
Material Stockpiles Phase II				
SP - 3	Stockpile 3 - East Inside Loop (5)	PM	1.01	4.42
		PM_{10}	0.51	2.21
		$PM_{2.5}$	0.07	0.31
SP - 4	Stockpile 4 - West Inside Loop (5)	PM	0.92	4.04
		PM_{10}	0.46	2.02
		$PM_{2.5}$	0.06	0.28
[illegible]				
PBR 106.472	Antifreeze Storage Tank (275 gal)	VOC	< 0.01	< 0.01
PBR 106.472	Waste Oil Storage Tank (290 gal)	VOC	< 0.01	< 0.01
PBR 106.472	Transmission Oil Storage Tank (275 gal)	VOC	< 0.01	< 0.01
PBR 106.472	Motor Oil Storage Tank (275 gal)	VOC	< 0.01	< 0.01
PBR 106.472	Hydraulic Oil Storage Tank (275 gal)	VOC	< 0.01	< 0.01
PBR 106.472	Diesel Fuel Storage Tank (6,000 gal)	VOC	< 0.01	< 0.01

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY (4)
Unregistered Permit By Rule				
PBR 106.545	Solvent Degreaser	VOC	0.11	0.33

(1) Emission point identification - either specific equipment designation or emission point number (EPN) from plot plan.
(2) Specific point source name. For fugitive sources, use area name or fugitive source name.
(3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
PM - total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$, as represented
PM_{10} - total particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$, as represented
$PM_{2.5}$ - particulate matter equal to or less than 2.5 microns in diameter
(4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.
(5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
(6) Maximum hourly emission rates are based on the worst case hourly emission scenario.
(7) The following EPNs associated with Phase II Loading: TR-14, TR-15, TR-16, TR-17, TR-18, TR-18a, TR-8, TR-19, TR-20, TR-21, TR-22, TR-23 TR-9, TR-10, TR-11, TR-12, TR-13, TR-13a, SL-1 and BC-11.
(8) Authorized to handle/store petroleum coke only.

Date: May 7, 2012

Attachment T



AIR QUALITY PROGRAM
836 Fulton Street
Pittsburgh, PA 15233-2124

Title V Operating Permit
& Federally Enforceable State Operating Permit

Issued To:	**Chambers Development Company, Inc.**	**ACHD Permit #:**	**0215-OP24**
Facility:	**Monroeville Landfill** **600 Thomas Street** **Monroeville, PA 15146**	**Date of Issuance:**	**Month 00, 20XX**
		Expiration Date:	**Month 00, 20XX**
		Renewal Date:	**expiration date – 6mo.**

Issued By: _____
JoAnn Truchan, P.E.
Program Manager, Engineering

Prepared By: _____
Hafeez Ajenifuja
Air Quality Engineer

DRAFT

C. Fugitive Emissions Due to Landfill Operations and Construction

Process Description: Earthcover (soil/rock) extraction, processing, application of sub-base, structural fill, protective cover soils, application of daily and intermediate soils, screening operations, wind erosion of in-place soils and paved /unpaved plant roads
Facility ID: F001
Max. Design Rate: 131 MMBtu/hour, 90 MMBtu/hr and 46.5 MMBtu/hr, respectively
Capacity: 2,999,000 Yd^3 of daily cover, 145,800 Yd^3 of intermediate cover soils, total protective cover soils of 218,800 Yd^3, total sub-base soils of 72,900 Yd^3, structural fill soils of 415,100 Yd^3, and final cover soils of 291,800 Yd^3, 0.2 miles of paved roads and 0.9 miles of Unpaved Roads
Raw Materials: Landfill Gas, Propane, or natural gas for flare startup
Control Device: Fugitive Dust Control Measures

1. Restrictions:

a. The permittee shall at no time use any soils contaminated with HAPS or petroleum hydrocarbons with a concentration of greater than 200 ppmv as a soil cover without Department approval. [IP# 0215-I001, V.B.1.a.1; §2103.12.a.2.D]

b. The permittee shall not use waste oil as a dust suppressant. [IP #0215-I001, V.B.1.a.2; §2103.12.a.2.D]

c. Emissions of particulate matter from landfill construction and operations shall not exceed the limitation given in Table V-C-1. [§2103.12.a.2.D, IP #0215-I001, V.B.1.b]

TABLE V-C-1: Emission Limitations

Pollutant	Annual Emissions Limit (tons/year)*
Particulate Matter	25.38
PM_{10}	25.36
$PM_{2.5}$	25.34

*A year is defined as any consecutive twelve-month period

d. Emissions of fugitive particulate matter from paved and unpaved operations shall not exceed the limitation given in Table V-C-2. [§2103.12.a.2.B]

TABLE V-C-2: Emission Limitations

Pollutant	Annual Emissions Limit (tons/year)*
Particulate Matter	34.98
PM_{10}	9.12
$PM_{2.5}$	1.04

*A year is defined as any consecutive twelve-month period

Attachment U

United States Environmental Protection Agency

Office of Air and Radiation
December 2024

White Paper Series:
Municipal Solid Waste Landfills – Advancements in Technology and Operating Practices

Fenceline Monitoring

Prepared by the
Sector Policies and Programs Division
Office of Air Quality Planning and Standards
U.S. Environmental Protection Agency
Research Triangle Park, North Carolina 27711

December 2024

White Paper for Evaluating Revisions to the Municipal Solid Waste (MSW) Landfills New Source Performance Standards (NSPS) and Emission Guidelines (EG)

- This series of white papers examines ways to improve the NSPS for Municipal Solid Waste (MSW) Landfills using new information and new technology to further control and reduce landfill gas emissions.
- Topics include applicability (size of landfill), controls (emission rate and timing of controls), operating practices (cover practices, active face), waste composition (organics), and emission monitoring (technology).

Topic: The use of fenceline monitoring for early detection of emissions from landfills

This white paper investigates the use of fenceline monitoring as a technique to detect emissions from landfills early such that the landfill owner/operator can take action to address and mitigate the source of the emissions. Fenceline monitoring and associated work practice requirements have been promulgated in other regulations developed by EPA as an important component of mitigating emissions from fugitive and other difficult-to-monitor sources such as equipment leaks, storage tanks, loading operations, and wastewater treatment systems. This white paper explores the feasibility of incorporating a similar fenceline monitoring program in the upcoming NSPS/EG rulemaking.

Rationale and Possible Results

Fenceline monitoring requirements and associated work practice standards have been promulgated in several regulations by EPA. For example, fenceline monitoring and associated work practice requirements have been implemented at petroleum refineries through requirements in 40 CFR part 63, subpart CC. Fenceline monitoring requirements have also been finalized for chemical plants and Group I polymers and resins plants in 40 CFR part 63, subparts H and U, respectively, for coke ovens in subpart CCCCC, and for integrated iron and steel facilities in subpart FFFFF.

The petroleum refinery regulations[1] require owners and operators to monitor benzene emissions at the facility's fenceline using passive diffusive sorbent tubes and Methods 325A and 325B of 40 CFR part 63 (EPA Method 325A/B). Method 325A is used to locate the monitors around the perimeter. Method 325B describes the analysis procedures, uptake rates, and appropriate sorbents for use in the passive monitors for the hazardous air pollutant (HAP) to be monitored.

The passive sampling tubes are left in place for two weeks and then collected and analyzed. When one set of passive sampling tubes is collected, a new set is deployed, providing continuous sampling at the fenceline. For each biweekly sampling period, the facility determines its contribution to the fenceline emissions by subtracting the lowest sample result in the set from the highest sample result. This concentration difference (Δc) is then averaged over a year on a rolling basis (i.e., the most recent 26 results are averaged every biweekly period). If the facility exceeds the threshold specified in the rule (the

[1] Although fenceline monitoring requirements exist for other source categories, the discussion here is limited to the requirements at petroleum refineries because the fenceline monitoring requirements for the other source categories have not gone into effect yet.

action level), the work practice requirements are triggered and the facility must investigate the root cause of the exceedance, and if appropriate, take corrective action to mitigate the emissions.[2]

Fenceline monitoring data have been generated at petroleum refineries for several years. Data show that petroleum refinery fenceline concentrations have dropped by an average of 30 percent since the inception of the monitoring program requirements in the four years beginning in 2018 (U.S. EPA 2023). These results illustrate that fenceline monitoring and the associated work practices are an effective tool in reducing benzene emissions at the fenceline of petroleum refineries. The fenceline monitoring program in refineries added a new layer of monitoring that allowed for the early identification and repair of fugitive sources of emissions.

The fenceline monitoring approach is used to identify areas within the facility that may be contributing to high emissions at the fenceline. The source(s) of the emissions can be subsequently identified and repaired as necessary, or different operational practices may be employed to reduce emissions from intermittent events in the future. Fenceline monitoring has been used to:

1. Measure HAP emission concentration around the fenceline of facilities as opposed to estimating emissions.
2. Identify areas within the facility that may be sources of HAP emissions – these sources could be point or area sources.
3. Manage fugitive emissions by allowing facilities to identify and repair leaking equipment such as pumps, connectors, and valves; implement better control of storage tanks; address emissions from wastewater treatment operations; and innovate or update process operations to reduce HAP emissions.
4. Realize significant HAP emission reductions through ongoing fenceline monitoring.
5. Work with local communities surrounding facilities to illustrate the efforts and work practices that have been implemented to reduce HAP emissions from facility operations and reduce community exposure to HAP emissions.

Although fenceline monitoring at refineries has resulted in reductions in emissions at the fenceline through identification and repair of fugitive sources of emissions, and implementation of different operational practices, it is not as clear whether similar reductions would be realized at MSW landfills. Landfill point and fugitive sources are unique compared to petroleum refineries; many refinery sources can be identified and repaired relatively quickly, or operational practices can be implemented to reduce emissions.

Because of the large footprint of the landfill, the topography encountered at landfills, and the variability of the emissions found at landfills, identifying the sources of elevated emissions monitored at the landfill perimeter is not always straightforward. However, a fenceline monitoring approach could be used to indicate when, and in general where, there are elevated emissions at the landfill. This could allow landfill operators to combine their knowledge of the site with additional monitoring techniques, such as Method 21 of 40 CFR part 60 Appendix A-7 (EPA Method 21) or optical gas imaging, to identify leaking

[2] In certain instances, corrective action may not be warranted because the emissions may be caused by offsite sources and events outside the control of the facility.

wellheads, leachate sources, cover penetrations, cracks or seeps in the landfill cover, or other fugitive sources on the landfill surface and mitigate these emissions.

The use of fenceline monitoring has been implemented at landfills, although in a different way than at petroleum refineries. Because landfills are large facilities, in some cases covering hundreds of acres, and because of the topography of the landfill, the everchanging location of the work face and vehicle traffic, and the operational activities occurring at the landfill, it may not be practical or even necessary to install monitors around the entire fenceline of the landfill. It may be just as effective to install monitors around the facility perimeter along the active area of the landfill. Where fenceline monitoring has been applied at landfills, the monitors have been placed at strategic locations on the landfill perimeter, close to both the active face of the landfill and to the surrounding communities that would be most affected by emissions from the landfill.

Fenceline monitoring for methane and hydrogen sulfide at the Arbor Hills landfill (AHL) in Salem Township, Michigan is instructive in how fenceline monitors could be incorporated into the upcoming NSPS/EG rulemaking. AHL has developed a website that provides background information, a map showing the most recent results for each of the six monitors, a table of results (for both methane and hydrogen sulfide) for each monitor, and the meteorological data from a 10-meter meteorological tower (GFL Environmental, 2024).

Investigations

Since early 2024, EPA has met with MSW landfill stakeholders, including representatives from industry, environmental groups, and environmental justice groups to understand the perspective of the various stakeholders. Based on these meetings, it is clear that the affected communities around the landfills would like to better understand the emissions from the landfills; in other words, they would like to know to what emissions they are being exposed. These groups would like for landfills to conduct fenceline monitoring and would like to see the monitoring results, similar to a landfill in North Carolina.

The Sampson County Disposal (SCD) Landfill (North Carolina), will post data to a community website, providing another example of how communities can be made aware of fenceline monitoring results. Identifying emission events sooner than the quarterly surface emissions monitoring events that are required in the NSPS/EG and requiring the landfill owners/operators to address locations on the landfill surface that require repair (either surface areas or cover penetrations) would be beneficial because it would help address emissions that communities are exposed to in a more expedient fashion.

As discussed in more detail below, in Michigan, AHL entered into a consent decree with the Michigan Department of the Environment, Great Lakes, and Energy (EGLE) to conduct monitoring at the perimeter of the landfill adjacent both to the working face of the landfill and to local communities (State of Michigan, 2024). The consent decree requires that the landfill install six monitors at the northeast perimeter of the landfill to monitor emissions of both methane and hydrogen sulfide (H_2S). The consent decree specifies the installation of six Scentroid CTair monitoring stations, which monitor for both H_2S and methane on a continuous basis using a sampling rate of approximately once per minute. Results are posted using an averaging period of 15 minutes on a rolling basis.

The monitoring system includes a feature that alerts landfill personnel through an app on their smartphones when emissions are detected at levels above specific thresholds for methane or H_2S. The landfill is required to identify the source of the elevated emissions detected at the fenceline and mitigate

the exceedance of the perimeter action levels within 48 hours after detection; if AHL cannot mitigate the exceedance within 48 hours, AHL can request an extension of time from Michigan EGLE.

Examples/Case Studies

This section discusses consent decrees for two landfills where fenceline or perimeter monitoring of emissions has been required. These examples illustrate how fenceline monitoring requirements could be implemented at landfills and illustrate some of the challenges inherent in applying fenceline monitoring at landfills.

Arbor Hills Landfill, Salem Township, Michigan

The AHL consent decree originated after residents in the neighborhoods located adjacent to the northeast corner of the landfill complained to EGLE about odors from the landfill. The consent decree was reached between AHL and EGLE as a remedy for the landfill to respond to instances of high H_2S emissions. EGLE viewed the use of perimeter or fenceline monitoring as a way for the landfill to identify odor issues and address the source of the emissions quickly.

Continuously monitoring emissions at the fenceline provides the landfill with an indication of when there is an issue that needs to be investigated and based on the location of the high monitor readings, the perimeter monitoring system incorporates software to help the facility identify the source of high emissions when the perimeter action levels for either methane or H_2S are triggered. However, there have been instances where, upon investigation, it has been challenging for the landfill operators to identify the source of odor; the landfill consists of 337 acres and emissions measured at the fenceline provide only a general idea of where the emissions are coming from.

In developing the consent decree, EGLE worked with AHL to determine H_2S and methane concentrations or perimeter action levels that would trigger an alert to landfill operators' phones. Perimeter action levels of 30 parts per billion (ppb) for H_2S and 40 ppm for methane, based on a 15-minute rolling average were established for the fenceline monitors at AHL. The 30 ppb perimeter action level for H_2S is based on the California ambient air quality standard for H_2S of 0.03 ppm for a one-hour average; the perimeter action level at AHL of 30 ppb H_2S is based on a 15-minute average. To determine the perimeter action level for methane, a consultant conducted perimeter methane monitoring at AHL over a two-week period and correlated emissions measured with emissions events at the landfill; the 40 ppm perimeter action level corresponds to an unusual emissions event at the landfill. Based on their experience in applying this perimeter action level at the fenceline, EGLE contends that this level is the appropriate level to trigger further investigation.

The Michigan-Ontario Ozone Source Experiment (MOOSE) study, a flyover study conducted by EGLE along with other partners including the Ontario Ministry of Environment, Conservation and Parks (MECP), Environment and Climate Change Canada (ECCC), the National Aeronautics and Space Administration (NASA), and the US Environmental Protection Agency (EPA), identified narrow bands of H_2S plumes and the locations where these bands tend to occur (Michigan EGLE, 2021). Using modeling and this flyover study, EGLE determined the number of monitors needed to provide adequate coverage around the northeast corner of the landfill, and the locations that should be monitored to ensure detection of H_2S emissions with a high level of confidence. The northeast corner of the landfill was chosen for monitoring because it is adjacent to the active face of the landfill and is closest to the

neighborhoods that have submitted complaints. Figure 1 provides a map of the facility showing the location of the monitors.



Figure 1. Location of the perimeter monitoring stations at the Arbor Hills Landfill, Salem Township, Michigan (State of Michigan 2024).

The AHL also operates a compost facility just to the north of the landfill. The compost facility sometimes receives materials that are in a fermented state, such as yard waste that has already begun to decompose, which causes odor to originate from the compost plant. One monitor is located about 0.3 miles Southeast of the main composting processing area, which has resulted in instances where the methane perimeter action level was exceeded. However, there have not been any exceedances of the H_2S perimeter action level at this monitor due to the composting pile. Nevertheless, the composting area has been and continues to be a significant source of odor complaints. The odor complaints are usually the result of improper composting management or accepting compost loads that are already fermenting upon arrival.

The consent decree also required that AHL use the Sniffer Drone (an unmanned aerial system developed by Sniffer Robotics, Inc.) to conduct surface emissions monitoring as follows:

- Monthly, at 30-meter intervals in areas with final cover or geomembrane temporary cover and at 15-meter intervals in areas with daily and interim cover outside of the working face.
- Quarterly, at 15-meter intervals that traverse the working face after daily cover has been applied and the landfill has stopped receiving waste.

At all locations with methane concentrations greater than 500 parts per million (ppm), a Jerome 631-X meter or equivalent must be used to measure H_2S surface concentrations. AHL is required to submit the surface emissions monitoring (SEM) data in map form, and after four quarters, AHL must submit an annual report to determine whether adjustments must be made to SEM.

Mapping the locations on the landfill surface with high methane emissions provides AHL with data that allow the operators to find and address these emissions. Locating and fixing leaks sooner improves the surface integrity of the landfill and likely reduces the number of alerts received through the perimeter monitoring system. The experience of implementing the consent decree at AHL has included the following outcomes and observations:

- The perimeter monitoring system allows AHL to identify major problems at the landfill that need to be addressed.
- Odors have been reduced, although odor complaints from neighboring communities still occur. AHL believes that the perimeter monitoring system has helped identify possible emission events, correlate these events with complaints received, and subsequently mitigate the emissions events.
- AHL is notified whenever there is an exceedance of the perimeter action level, which allows the operators to take action to address the source of the emissions in an expedient manner. There are times when the source of the emissions cannot be identified. Additionally, the perimeter monitoring system has allowed AHL to identify exceedances in real time so that problem areas can be identified and resolved quickly. Landfill staff are alerted by phone at all hours if an exceedance occurs and have gone onsite in the middle of the night during the worst events. Prior to the implementation of the perimeter monitoring system, problems may not have been identified for days or weeks. The system has allowed the identification of specific issues at the landfill; back trajectory analysis has been used to pinpoint areas with high emissions.
- Weather has affected the perimeter monitoring system. For example, the monitors are solar powered and sometimes there is not enough sunlight to power the monitors. AHL's third-party consultants are prepared to change out dead batteries with charged back-up batteries as needed. Additionally, AHL is investigating the feasibility of connecting each monitoring station to a direct power source, thereby minimizing the need for solar power. While there is no data capture requirement in the consent decree, EGLE and AHL have agreed to an 80 percent uptime averaged over a quarter averaged over all six monitors. In practice, AHL has been achieving a 95+ percent uptime and often 99 percent uptime. Note that AHL has an extra monitor mounted to a trailer and that is sometimes used to maintain measurements at a location if a monitor is down.
- Learning how the SnifferDRONE that is used to conduct surface emissions monitoring operates presented a challenge initially.
- There have been specific instances where odor is caused by leachate when the leachate handling system breaks down. When the system breaks down, H_2S emissions are high enough to be detected. However, H_2S perimeter action level exceedances are rare.
- Exceedances of the perimeter action levels occur almost exclusively between sunset and sunrise. There have been only a handful of exceedances during the day.
- The perimeter monitoring system has allowed AHL to make GCCS adjustments in the localized area next to the fenceline monitors.
- The fenceline monitoring system is relatively new, and it may be that a combination of the fenceline monitoring along with other surface monitoring techniques, or a combined remote

sensing stack would be effective in identifying the source of emissions and mitigating those emissions.

Due to the success of the monitoring program at AHL, EGLE is in the process of requiring another landfill in Michigan to install a perimeter monitoring system similar to the one implemented at AHL.

Sampson County Landfill, Roseboro, North Carolina

The SCD landfill in Roseboro, North Carolina is the largest landfill in North Carolina and has been in operation since 1973. The local residents have made complaints to the North Carolina Department of Environmental Quality and Sampson County about the SCD for many years. The SCD operators entered into a consent decree with the Environmental Justice Community Action Network (EJCAN) on August 30, 2024 (U.S. District Court – Eastern District of North Carolina (2024). SCD agreed to implement specific actions, including perimeter monitoring that could be model requirements for other landfills where neighboring residents have submitted complaints. The consent decree requires the SCD operators to do the following:

- Implement a continuous Emissions Monitoring System at the perimeter of the landfill for one year. The parties to the consent decree will select an independent third-party consultant to design and implement the continuous monitoring system. The consent decree indicates that the parties will agree on the placement of the monitors and the emission standards (emission thresholds). There are no details on the monitoring system at this time.
- The monitoring data from the Emissions Monitoring System is to be posted to a community landfill website.
- The landfill will monitor for a year, then submit a report with recommendations for emissions and odor mitigation, and address complaints.
- Use an EPA-approved drone SEM method, rather than EPA Method 21, to conduct SEM.[3] The use of the drone SEM will allow SCD to reach areas of the landfill that are excluded when a human operator conducts SEM using Method 21.
- Restrict the acceptance of special waste.
- Conduct community engagement through the community website and regular quarterly meetings.
- Develop a community engagement and complaint process, including the establishment of a community hotline.
- Urge local emergency management personnel to develop an Emergency Management Plan and Emergency Alert System to alert the community within two miles of the landfill in the event of an emergency at the landfill that may impact public safety or prompt the need for evacuation.
- Establish a school recycling and composting program at 10 Sampson County schools and fund a public campaign in Sampson County to encourage recycling in order to divert waste from the landfill.

This consent decree was only recently signed in August 2024; therefore, there are no results associated with its implementation to date. However, the expectation is that the implementation of a fenceline

[3] At the time of development of this paper, OTM-51 is the only EPA-approved drone SEM method.

monitoring program at SCD will reduce the emissions from the landfill over time, thereby reducing the residents' exposure to landfill emissions. The pollutants and emission levels will be agreed upon once a third-party consultant conducts an analysis of the site and surrounding hog facilities and provides recommendations on monitors, locations, and perimeter action levels.

Additional Information

This section provides statistical data on the number of people that live in close proximity to landfills and can be exposed to emissions from the landfills; these statistics illustrate the need to reduce emissions from landfills in order to minimize impacts on residents.

Statistical Data on the Number of People That Live in Close Proximity to Landfills Across the U.S.

Industrious Labs (IL) conducted an analysis of the impact of MSW landfills on fenceline communities. IL compiled data from several publicly available data sources and provided the following information:

- There are over 1,200 active MSW landfills in the United States.
- More than 800,000 people live within 1 mile and over 13 million people live within 3 miles of an active MSW landfill.
- There are more than 1,300 closed MSW landfills in the United States. Closed landfills continue to emit gases, including methane, after closure.
- Nearly 2 million people live within 1 mile and 23.5 million people live within 3 miles of a closed MSW landfill.

Regulation Changes and Implementation

The NSPS/EG requires landfill owners and operators to conduct quarterly SEM using EPA Method 21 to monitor the surface of the landfill for high emissions of methane to help determine whether the landfill GCCS is operating effectively. If EPA Method 21 identifies areas on the surface of the landfill with methane emissions higher than 500 ppm, then the landfill owner or operator must address the emissions from that location. SEM is not required at landfills that do not have a GCCS installed. There are no current requirements to conduct fenceline monitoring at MSW landfills.

As described earlier in this white paper, fenceline monitoring has been conducted at the perimeter of AHL in Michigan for both H_2S and methane. When perimeter action levels are triggered, the perimeter monitoring system sends an alert to the AHL staff. AHL staff then investigate the cause of the emissions and address the issue. The implementation of the perimeter monitoring system allows the operator to identify and respond to emission events faster than if AHL were to rely on the quarterly SEM only. In some instances, it has been challenging for AHL staff to identify the triggering event. However, overall, the perimeter monitoring system has allowed AHL to be more responsive to these events. It is important to note that pollutants of interest vary significantly when it comes to ease of detection. Hydrogen sulfide, for example, is more feasible to detect given the lack of natural or expected emissions in the surrounding area. Methane, on the other hand, proves more difficult when considering both the intrinsic sources (e.g., nearby farms, wetlands, compost) and fugitive components that cannot be easily separated with fenceline monitoring alone. Further research and site-specific modeling are needed to better assess fugitive methane emissions.

With the requirement for another MSW landfill in Michigan and one in North Carolina to install perimeter monitors, perimeter monitoring is recognized as a tool that landfills can use to improve and maintain the surface integrity of the landfill and to be more proactive in identifying triggering events. Additionally, as shown with the consent decree for SCD in North Carolina, perimeter monitoring could be a way to work with the communities that reside near landfills to identify emissions events sooner and to mitigate them more quickly.

Implementing a perimeter monitoring program at MSW landfills in the upcoming NSPS/EG rulemaking could be evaluated in an overall monitoring program that could, as an example, include the perimeter monitoring approach plus the use of fixed sensors across the surface of the landfill, sensors attached to drones that can map the surface of the landfill, or the use of sensors fixed to satellites. For example, drone technology could offer a safer and equivalent approach to SEM to identify issues on the landfill surface. However, drone-based monitoring only provides data periodically, such as once per quarter. Perimeter monitoring systems provide the capability to capture data much more frequently, but identification of the exact emissions source generally requires further investigation.

A drone-based system could be used in conjunction with a perimeter monitoring system to identify the locations on the landfill surface that have triggered alerts from the perimeter monitoring system. This combination monitoring approach would need to be evaluated fully before it could be incorporated into the NSPS/EG. This evaluation would need to consider the effectiveness of the current perimeter monitoring programs, the cost of the monitoring systems, and how best to identify the number of monitors and their locations on the perimeter of the landfill. Additionally, EPA would need to evaluate which pollutants to monitor and the concentrations that would trigger alerts, as well as subsequent investigation and mitigation requirements.

Summary and Next Steps

This paper examined the use of fenceline monitoring as a technique to detect emissions from landfills. This paper described the implementation of fenceline monitoring at petroleum refineries using passive diffusive monitors with Methods 325 A/B. Fenceline monitoring at refineries has allowed for early notification of emissions events such that owners/operators can take action to address and mitigate the source of the emissions sooner. This white paper also described the implementation of fenceline or perimeter monitoring at AHL in Michigan where six fenceline monitors were installed at the northeast corner of the landfill to monitor both H_2S and methane emissions. Another landfill in Michigan and one in North Carolina are also set to implement fenceline monitoring in the near future.

EPA will continue to gather information on the effectiveness of perimeter monitoring programs and evaluate whether this type of monitoring could be incorporated into the updated NSPS/EG. Specifically, EPA could:

- Continue to evaluate the effectiveness of the existing perimeter monitoring programs at landfills, especially for early identification of emissions events to inform repair and mitigation of emissions.
- Gather information on monitoring equipment that could be installed at the perimeter of landfills.
- Evaluate the costs of alternative monitoring systems that could be implemented at the perimeter of the landfills.

- Analyze the feasibility of developing an emissions monitoring program that could include the use of multiple monitoring platforms with a view towards:
    - Reducing emissions from the landfill
    - Supporting the efforts of landfill owners and operators in improving the surface integrity of the landfills by establishing best practices
    - Reducing the impacts of landfill gas emissions on residents that live in close proximity to MSW landfills.
- Address the question: Could a perimeter monitoring program enhance the SEM programs that are contemplated for the upcoming NSPS/EG rulemaking?
- Explore the development of a reference test method for fenceline monitoring if EPA decides to incorporate it into the upcoming NSPS/EG rulemaking.

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Attachment V

MARYLAND DEPARTMENT OF THE ENVIRONMENT
1800 Washington Blvd, Suite 715 Baltimore, MD 21230-1720
410-537-3000 1-800 633-6101 http://www.mde.state.md.us
Air and Radiation Management Administration
Air Quality Compliance Program
410-537-3220

FORM 1:

GENERAL FACILITY INFORMATION
EMISSIONS CERTIFICATION REPORT

Calendar Year: **2022**

	Do Not Write in this Space
A. FACILITY IDENTIFICATION Facility Name **Curtis Bay Piers #510-2263**	Date Received Regional
Address **1910 Benhill Avenue**	Date Received State
City **Baltimore** County **Baltimore** Zip Code **21226**	AIRS Code
B. Briefly describe the major function of the facility	FINDS code
Unloading and loading of coal, limestone, and miscellaneous mineral ores from trains, barges, and vessels.	SIC Code
	Facility Number
	TEMPO ID:
C. SEASONAL PRODUCTION (% if applicable) **Facility operates 24 hrs/day, 7 days/week**	Reviewed by:

	Winter (Dec-Feb)	Spring (Mar-May)	Summer (Jun-Aug)	Fall (Sept-Nov)	
	18%	29%	24%	30%	

Name Date

D. Explain any increases or decreases in emissions from the previous calendar year for each registration at this facility.

Total throughput decreased from 8,649,621 tons of coal (CY2021) to 7,152,661 tons of coal (CY2022) . Additional coal movement occurred (116,978 tons) related to the temporary movement from the north piles to the transfer tower and south piles. NOx, VOC, CO, and SOx emissions increased due to the use of the engine drivers for the temporary conveyors in January. PM emissions increased primarily due to a change in calculation method for piles and coal transfers and the movement of coal from north piles to the transfer tower and south piles in January.

E. CONTROL DEVICE INFORMATION (for NOx and VOC sources only)

Control Device	Capture Efficiency	Removal Efficiency

I am familiar with the facility and the installations and sources for which this report is submitted. I have personally examined the information in this report, which consists of **21** pages (including attachments), and certify that the information is correct to the best of my knowledge.

Rebecca Hensley	**Senior Manager Sustainability**	March 29, 2024
Name (Print/Type)	**Title**	**Date**
Rebecca Hensley		**(904) 359-4833**
Signature		**Telephone**

1/9/2008

FORM 2:

CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT

Facility Name: **Curtis Bay Piers #510-2263** **Facility ID#:** 24-021-00459 **Pollutant: VOC** **Calendar Year:** **2022**

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule			Emissions Methods
				Tons/yr	Lbs/dy	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End	
Coal Facility	3-05-104-98		S											
510-09-0335		N/A	F	0.00	0.00	24	7	52	365	-	24	4/1/2022	9/30/2022	C3
Temporary Conveyors			S	0.03	4.17	24	7	3	15	-	0	N/A	N/A	C3
		Diesel	F											
			S											
			F											
Totals				**0.0313**	**4.1670**					**0.00**				

S-Stack Emissions F-Fugitive Emissions Daily emissions (lbs/day) are lbs/operating day of the source.

TOSD-Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April-September). This section needs to be completed only for VOC and NOx sources.

Emission Estimation Method

A1- U. S. EPA Reference Method
A2- Other Particulate Sampling Train
A3- Liquid Absorption Technique
A4- Solid Absorption Technique
A5- Freezing Out Technique
A9- Other, Specify

C1- User calculated based on source test or other measurement
C2- User calculated based on material balance using engineering knowledge of the process
C3- User calculated based on AP- 42
C4- User calculated by best guess/ engineering judgment

C5- User calculated based on a State or local agency emission factor
C6- New construction, not operational
C7- Source closed, operation ceased
C8- Computer calculated based on standard

1/9/2008

FORM 2

CRITERIA AIR POLLUTANTS

Facility Name: **Curtis Bay Piers #510-2263** **Facility ID#:** 24-021-00459 **Pollutant: NO_x** **Calendar Year:** **2022**

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule			Emissions Methods
				Tons/yr	Lbs/dy	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End	
Coal Facility	3-05-104-98		S											
510-09-0335		N/A	F	0.00	0.00	24	7	52	365	-	24	4/1/2022	9/30/2022	C3
Temporary Conveyors			S	0.59	79.17	24	7	3	15	-	0	N/A	N/A	C3
		Diesel	F											
			S											
			F											
Totals				**0.59**	**79.17**					**0.00**				

S-Stack Emissions F-Fugitive Emissions Daily emissions (lbs/day) are lbs/operating day of the source.

TOSD-Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April-September). This section needs to be completed only for VOC and NOx sources.

Emission Estimation Method

A1- U. S. EPA Reference Method
A2- Other Particulate Sampling Train
A3- Liquid Absorption Technique
A4- Solid Absorption Technique
A5- Freezing Out Technique
A9- Other, Specify

C1- User calculated based on source test or other measurement
C2- User calculated based on material balance using engineering knowledge of the process
C3- User calculated based on AP- 42
C4- User calculated by best guess/ engineering judgment

C5- User calculated based on a State or local agency emission factor
C6- New construction, not operational
C7- Source closed, operation ceased
C8- Computer calculated based on standard

01/09/08

FORM 2

CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT

Facility Name: **Curtis Bay Piers #510-2263** **Facility ID#:** 24-021-00459 **Pollutant: CO** **Calendar Year:** **2022**

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule			Emissions Methods
				Tons/yr	Lbs/dy	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End	
Coal Facility 510-09-0335	3-05-104-98	N/A	S											
			F	0.00	0.00	24	7	52	365					C3
Temporary Conveyors		Diesel	S	0.73	97.53	24	7	3	15					C3
			F											
			S											
			F											
Totals				**0.73**	**97.53**									

S-Stack Emissions F-Fugitive Emissions Daily emissions (lbs/day) are lbs/operating day of the source.

TOSD-Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April-September). This section needs to be completed only for VOC and NOx sources.

Emission Estimation Method

A1- U. S. EPA Reference Method
A2- Other Particulate Sampling Train
A3- Liquid Absorption Technique
A4- Solid Absorption Technique
A5- Freezing Out Technique
A9- Other, Specify

C1- User calculated based on source test or other measurement
C2- User calculated based on material balance using engineering knowledge of the process
C3- User calculated based on AP- 42
C4- User calculated by best guess/ engineering judgment

C5- User calculated based on a State or local agency emission factor
C6- New construction, not operational
C7- Source closed, operation ceased
C8- Computer calculated based on standard

01/09/08

FORM 2

CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT

Facility Name: **Curtis Bay Piers #510-2263** **Facility ID#:** 24-021-00459 **Pollutant: SO_x** **Calendar Year:** **2022**

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule			Emissions Methods
				Tons/yr	Lbs/dy	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End	
Coal Facility	3-05-104-98		S											
510-09-0335		N/A	F	0.000	0.000	24	7	52	365					C3
Temporary Conveyors			S	0.001	0.131	24	7	3	15					C3
		Diesel	F											
			S											
			F											
Totals				**0.00**	**0.13**									

S-Stack Emissions F-Fugitive Emissions Daily emissions (lbs/day) are lbs/operating day of the source.

TOSD-Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April-September). This section needs to be completed only for VOC and NOx sources.

Emission Estimation Method

A1- U. S. EPA Reference Method
A2- Other Particulate Sampling Train
A3- Liquid Absorption Technique
A4- Solid Absorption Technique
A5- Freezing Out Technique
A9- Other, Specify

C1- User calculated based on source test or other measurement
C2- User calculated based on material balance using engineering knowledge of the process
C3- User calculated based on AP- 42
C4- User calculated by best guess/ engineering judgment
C5- User calculated based on a State or local agency emission factor
C6- New construction, not operational
C7- Source closed, operation ceased
C8- Computer calculated based on standard

01/09/08

Form 3: PM **Calendar Year:** **2022**

EMISSIONS CERTIFICATION REPORT
Particulate Matter

Facility Name: **Curtis Bay Piers #510-2263** **Facility ID#:** **24-021-00459** **Pollutant: PM**

Equipment Description / Registration Number	SCC Number	Fuel		PM - Filterable		PM 10 - Filterable		PM 2.5 - Filterable		PM 2.5 - Condensable		Operation	Emissions
				tons/yr	lbs/day	tons/yr	lbs/day	tons/yr	lbs/day	tons/yr	lbs/day	Days/yr	Methods
Coal Facility 510-09-0335	3-05-104-98	N/A	S										
			F	11.839	64.871	5.661	31.019	0.856	4.688	0.000	0.000	365	C3
Temporary Conveyors		Diesel	S	0.004	0.473	0.003	0.379	0.003	0.366	0.0004	0.0588	15	C3
			F	0.398	53.028	0.188	25.081	0.028	3.798	0.0000	0.0000	15	C3
			S										
			F										
TOTALS				**12.240**	**118.372**	**5.852**	**56.479**	**0.887**	**8.852**	**0.0004**	**0.0588**		

S - Stack Emissions F - Fugitive Emissions Daily emissions (lbs/day) are lbs/operating day of the source.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emissions Estimation Method

A1-US EPA Reference Method
A2-Other Particulate Sampling Train
A3-Liquid Absorption Technique
A4-Solid Absorption Technique
A5-Freezing Out Technique
A9-Other, Specify

C1-User Calculated based on source test or other measurement
C2-User Calculated based on material balance using engineering knowledge of the process
C3-User Calculated based on AP-42
C4-User Calculated based on best guess/engineering judgment

C5-User Calculated based on a State or local agency emission factor
C6-New construction, not operational
C7-Source closed, operation ceased
C8-Computer calculated based on standard

02/21/08

FORM 4:

Calendar Year: 2022

TOXIC AIR POLLUTANTS

EMISSIONS CERTIFICATION REPORT

Facility Name: Curtis Bay Piers #510-2263 **Facility ID#:** 24-021-00459 **Pollutant:** **Formaldehyde** *

Equipment Description/ Registration No.	Actual Emissions			Control Device**	% Efficiency
	Tons/yr	Lbs/day	Lbs/hr		
Temporary Conveyors	1.38E-03	9.17E-05	7.01E-03	N/A	N/A
Totals	**1.38E-03**	**9.17E-05**	**7.01E-03**		

* Please attach all calculations.
* See Attachment 1 for the minimum reporting values.
**Control Device
S = Scrubber
B = Baghouse
ESP = Electrostatic Precipitator
A = Afterburner
C = Condenser
AD = Adsorption
O = Other

1. Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

EXHIBIT I - 379

01/09/08

FORM 5: **Calendar Year:** **2022**

BILLABLE TOXIC AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT

Facility Name: **Curtis Bay Piers #510-2263** **Facility ID#:** 24-021-00459 **Pollutant:**

Chemical Name	CAS Number		Actual Emissions				Estimation Method
			Tons/yr	Lbs/day	Lbs/hr		
carbon disulfide	75-15-0	S F	---	0.00	0.00		
carbonyl sulfide	463-58-1	S F	---	0.00	0.00		
chlorine	7782-50-5	S F	---	0.00	0.00		
cyanide compounds	57-12-5	S F	---	0.00	0.00		
hydrochloric acid	7647-01-0	S F	---	0.00	0.00		
hydrogen fluoride	7664-39-3	S F	---	0.00	0.00		
methyl chloroform	71-55-6	S F	---	0.00	0.00		
methylene chloride	75-09-2	S F	---	0.00	0.00		
perchloroethylene	127-18-4	S F	---	0.00	0.00		
phosphine	7803-51-2	S F	---	0.00	0.00		
titanium tetrachloride	7550-45-0	S F	---	0.00	0.00		
Totals			**0.00**	**0.00**	**0.00**		

S-Stack Emissions F-Fugitive Emissions Daily emissions (lbs/day) are lbs/operating day of the source

Estimation Method

A1-U.S. EPA Reference Method
A2-Other Particulate Sampling Train
A3-Liquid Absorption Technique
A4-Solid Absorption Technique
A5-Freezing Out Technique
A9-Other, Specify
A5-Freezing Out Technique
A9-Other, Specify

C1-User calculated based on source test or other measurements
C2-User calculated based on material balance using engineering knowledge of the process
C3-User calculated based on AP-42
C4-User calculated by engineering judgment
C5-User calculated based on a State or local agency factor
C6-New construction, not operational
C7-Source closed, operation ceased
C8-Computer calculated based on standards

This form is to include only the chemicals identified.

PLEASE NOTE: Be sure to attach all data and calculations necessary to support the emissions figures shown above.

03/09/09

Form 6: Greenhouse Gases

Calendar Year: **2022**

GREENHOUSE GAS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT

Facility Name: **Curtis Bay Piers #510-2263** **Facility ID#:** **24-021-00459**

Pollutant: Carbon Dioxide (CO_2)

Equipment Description / Registration Number	Actual Emissions		
	tons/yr	lbs/day	lbs/hr
Coal Facility 510-09-0034	0.00	0.00	0.00
Temporary Conveyor	172.41	22,988.17	957.84
TOTALS	172.41	22,988.17	957.84

This form must be used to report
Greenhouse gas emissions:
-- carbon dioxide (CO2)
-- methane (CH4)
-- nitrous oxide (N2O)
-- hydrofluorocarbons (HFCs)
-- perfluorocarbons (PFCs)
-- sulfur hexafluoride (SF6)
* Use a separate form for each pollutant.
* Please attach all calculations.

1. Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

1/15/2008

Form 6: Greenhouse Gases

Calendar Year: **2022**

GREENHOUSE GAS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT

Facility Name: **Curtis Bay Piers #510-2263** **Facility ID#:** **24-021-00459**

Pollutant: Nitrous Oxide (N_2O)

Equipment Description / Registration Number	Actual Emissions		
	tons/yr	lbs/day	lbs/hr
Coal Facility 510-09-0034	0.00E+00	0.00	0.00
Temporary Conveyor	1.40E-03	0.19	0.01
TOTALS	0.001	0.186	0.008

This form must be used to report
Greenhouse gas emissions:
-- carbon dioxide (CO2)
-- methane (CH4)
-- nitrous oxide (N2O)
-- hydrofluorocarbons (HFCs)
-- perfluorocarbons (PFCs)
-- sulfur hexafluoride (SF6)
* Use a separate form for each pollutant.
* Please attach all calculations.

1. Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

1/15/2008

Form 6: Greenhouse Gases

Calendar Year: **2022**

GREENHOUSE GAS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT

Facility Name: **Curtis Bay Piers #510-2263** **Facility ID#:** **24-021-00459**

Pollutant: Methane (CH_4)

Equipment Description / Registration Number	Actual Emissions		
	tons/yr	lbs/day	lbs/hr
Coal Facility 510-09-0034	5.11E+03	28,010.07	1,167.09
Temporary Conveyor	0.01	0.93	0.00
TOTALS	5,111.84	28,011.00	1,167.09

This form must be used to report
Greenhouse gas emissions:
-- carbon dioxide (CO2)
-- methane (CH4)
-- nitrous oxide (N2O)
-- hydrofluorocarbons (HFCs)
-- perfluorocarbons (PFCs)
-- sulfur hexafluoride (SF6)
* Use a separate form for each pollutant.
* Please attach all calculations.

1. Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

1/15/2008

2022 Criteria Pollutant and GHG Emissions Summary

Criteria Pollutants (tons per year)

Source	Description	NOx	VOC	CO	SO_2	PM	PM_{filt}	$PM_{10\text{-}filt}$	$PM_{2.5\text{-}filt}$	$PM_{2.5\text{-}cond}$
Fugitive Process	Coal transfers from receiving to pile to loadout	0.00	0.00	0.00	0.00	9.56	9.56	4.52	0.68	0.00
Storage Piles	9 Coal Piles	0.00	0.00	0.00	0.00	2.28	2.28	1.14	0.17	0.00
Temporary Conveyors	Engines, Transfers	0.59	0.03	0.73	0.00	0.40	0.40	0.19	0.03	0.00
TOTALS		**0.59**	**0.03**	**0.73**	**0.00**	**12.24**	**12.24**	**5.85**	**0.89**	**0.00**

Greenhouse Gases (tons per year)

Source	Description	CO_2	CH_4	N_2O
Storage Piles	9 Coal Piles	0.00	5,111.84	0.000
Temporary Conveyors	Engines, Transfers	172.41	0.01	0.001
TOTALS		**172.41**	**5,111.84**	**0.001**

2022 HAP Emissions Summary

Pollutant	Temporary Conveyors	
	lb/hour	tpy
1,3-Butadiene	2.32E-04	4.56E-05
2-Methylnapthalene	0.00E+00	0.00E+00
Acenaphthene	8.44E-06	1.66E-06
Acenaphthylene	3.01E-05	5.90E-06
Acetaldehyde	4.56E-03	8.94E-04
Acrolein	5.50E-04	1.08E-04
Anthracene	1.11E-05	2.18E-06
Arsenic	0.00E+00	0.00E+00
Benzene	5.54E-03	1.09E-03
Benz(a)anthracene	0.00E+00	0.00E+00
Beryllium	0.00E+00	0.00E+00
Benzo(a)pyrene	1.12E-06	2.19E-07
Benzo(b)fluoranthene	5.89E-07	1.16E-07
Benzo(g,h,i)perylene	2.91E-06	5.70E-07
Benzo(k)fluoranthene	9.21E-07	1.81E-07
Cadmium	0.00E+00	0.00E+00
Chromium	0.00E+00	0.00E+00
Chrysene	2.10E-06	4.11E-07
Cobalt	0.00E+00	0.00E+00
Dibenzo(a,h)anthracene	0.00E+00	0.00E+00
Dichlorobenzene	0.00E+00	0.00E+00
Fluoranthene	4.52E-05	8.87E-06
Fluorene	1.74E-04	3.40E-05
Formaldehyde	7.01E-03	1.38E-03
Hexane	0.00E+00	0.00E+00
Indeno(1,2,3-cd)pyrene	2.23E-06	4.37E-07
Manganese	0.00E+00	0.00E+00
Mercury	0.00E+00	0.00E+00
Naphthalene	5.04E-04	9.88E-05
Nickel	0.00E+00	0.00E+00
Phenanthrene	1.75E-04	3.43E-05
Pyrene	2.84E-05	5.57E-06
Selenium	0.00E+00	0.00E+00
Toluene	2.43E-03	4.77E-04
Xylenes	1.69E-03	3.32E-04
TOTALS	**2.30E-02**	**4.51E-03**

Fugitive Process Emissions

Type of Enclosure	Control Efficiency	Source of Efficiency Factor
Partially Enclosed	75%	OAPC RACM for Fugitive Dust Sources - Table 2.1.3-3 (Sep 1980)
Enclosed in Building	99%	OAPC RACM for Fugitive Dust Sources - Table 2.1.3-3 (Sep 1980)
Telescoping Chute	75%	Air & Waste Management Association (AWMA) Air Pollution Engineering Manual (1992)

Process Description	No. of Transfers	2022 Throughput[a]	Building Controls		Uncontrolled Emission Factor[b] (lb per ton of throughput)			Controlled Emission Rates (tpy)[c]		
		tpy	Type of Control	Control Efficiency	PM_{filt}	$PM_{10\text{-}filt}$	$PM_{2.5\text{-}filt}$	PM_{filt}	$PM_{10\text{-}filt}$	$PM_{2.5\text{-}filt}$
Through Tower 1										
Rotary Railcar Dumper at Dumper 2	1	392,942	Partially Enclosed	75%	5.88E-04	2.78E-04	4.21E-05	0.03	0.01	0.00
11 Transfers	11	392,942	Partially Enclosed	75%	6.47E-03	3.06E-03	4.63E-04	0.32	0.15	0.02
1 transfer through Tower	1	392,942	Enclosed in Building	99%	5.88E-04	2.78E-04	4.21E-05	0.00	0.00	0.00
1 transfer to pile	1	392,942	None	0%	5.88E-04	2.78E-04	4.21E-05	0.12	0.05	0.01
Through Tower 2										
Rotary Railcar Dumper at Dumper 2	1	0	Partially Enclosed	75%	5.88E-04	2.78E-04	4.21E-05	0.00	0.00	0.00
10 Transfers	10	0	Partially Enclosed	75%	5.88E-03	2.78E-03	4.21E-04	0.00	0.00	0.00
1 transfer through Tower	1	0	Enclosed in Building	99%	5.88E-04	2.78E-04	4.21E-05	0.00	0.00	0.00
1 transfer to pile	1	0	None	0%	5.88E-04	2.78E-04	4.21E-05	0.00	0.00	0.00
Through Tower 3										
Rotary Railcar Dumper at Dumper 2	1	114,805	Partially Enclosed	75%	5.88E-04	2.78E-04	4.21E-05	0.01	0.00	0.00
9 Transfers	9	114,805	Partially Enclosed	75%	5.29E-03	2.50E-03	3.79E-04	0.08	0.04	0.01
1 transfer through Tower	1	114,805	Enclosed in Building	99%	5.88E-04	2.78E-04	4.21E-05	0.00	0.00	0.00
1 transfer to pile	1	114,805	None	0%	5.88E-04	2.78E-04	4.21E-05	0.03	0.02	0.00
Through Tower 4										
Rotary Railcar Dumper at Dumper 2	1	718,193	Partially Enclosed	75%	5.88E-04	2.78E-04	4.21E-05	0.05	0.02	0.00
8 Transfers	8	718,193	Partially Enclosed	75%	4.71E-03	2.23E-03	3.37E-04	0.42	0.20	0.03
1 transfer through Tower	1	718,193	Enclosed in Building	99%	5.88E-04	2.78E-04	4.21E-05	0.00	0.00	0.00
1 transfer to pile	1	718,193	None	0%	5.88E-04	2.78E-04	4.21E-05	0.21	0.10	0.02
Through Tower 5										
Rotary Railcar Dumper at Dumper 2	1	0	Partially Enclosed	75%	5.88E-04	2.78E-04	4.21E-05	0.00	0.00	0.00
7 Transfers	7	0	Partially Enclosed	75%	4.12E-03	1.95E-03	2.95E-04	0.00	0.00	0.00
1 transfer through Tower	1	0	Enclosed in Building	99%	5.88E-04	2.78E-04	4.21E-05	0.00	0.00	0.00
1 transfer to pile	1	0	None	0%	5.88E-04	2.78E-04	4.21E-05	0.00	0.00	0.00
Through Tower 6										
Rotary Railcar Dumper at Dumper 2	1	1,140,686	Partially Enclosed	75%	5.88E-04	2.78E-04	4.21E-05	0.08	0.04	0.01
7 Transfers	7	1,140,686	Partially Enclosed	75%	4.12E-03	1.95E-03	2.95E-04	0.59	0.28	0.04
1 transfer through Tower	1	1,140,686	Enclosed in Building	99%	5.88E-04	2.78E-04	4.21E-05	0.00	0.00	0.00
1 transfer to pile	1	1,140,686	None	0%	5.88E-04	2.78E-04	4.21E-05	0.34	0.16	0.02
Through Tower 7										
Rotary Railcar Dumper at Dumper 2	1	1,278,380	Partially Enclosed	75%	5.88E-04	2.78E-04	4.21E-05	0.09	0.04	0.01
8 Transfers	8	1,278,380	Partially Enclosed	75%	4.71E-03	2.23E-03	3.37E-04	0.75	0.36	0.05
1 transfer through Tower	1	1,278,380	Enclosed in Building	99%	5.88E-04	2.78E-04	4.21E-05	0.00	0.00	0.00
1 transfer to pile	1	1,278,380	None	0%	5.88E-04	2.78E-04	4.21E-05	0.38	0.18	0.03
Through Tower 8										
Rotary Railcar Dumper at Dumper 2	1	2,295,374	Partially Enclosed	75%	5.88E-04	2.78E-04	4.21E-05	0.17	0.08	0.01
9 Transfers	9	2,295,374	Partially Enclosed	75%	5.29E-03	2.50E-03	3.79E-04	1.52	0.72	0.11
1 transfer through Tower	1	2,295,374	Enclosed in Building	99%	5.88E-04	2.78E-04	4.21E-05	0.01	0.00	0.00
1 transfer to pile	1	2,295,374	None	0%	5.88E-04	2.78E-04	4.21E-05	0.68	0.32	0.05
To Pile SP-1										
Rotary Railcar Dumper at Dumper 2	1	481,198	Partially Enclosed	75%	5.88E-04	2.78E-04	4.21E-05	0.04	0.02	0.00
2 Transfers	9	481,198	Partially Enclosed	75%	5.29E-03	2.50E-03	3.79E-04	0.32	0.15	0.02
1 transfer to pile	1	481,198	None	0%	5.88E-04	2.78E-04	4.21E-05	0.14	0.07	0.01

Fugitive Process Emissions

Type of Enclosure	Control Efficiency	Source of Efficiency Factor
Partially Enclosed	75%	OAPC RACM for Fugitive Dust Sources - Table 2.1.3-3 (Sep 1980)
Enclosed in Building	99%	OAPC RACM for Fugitive Dust Sources - Table 2.1.3-3 (Sep 1980)
Telescoping Chute	75%	Air & Waste Management Association (AWMA) Air Pollution Engineering Manual (1992)

Process Description	No. of Transfers	2022 Throughput[a]	Building Controls		Uncontrolled Emission Factor[b] (lb per ton of throughput)			Controlled Emission Rates (tpy)[c]		
		tpy	Type of Control	Control Efficiency	PM_{filt}	$PM_{10\text{-}filt}$	$PM_{2.5\text{-}filt}$	PM_{filt}	$PM_{10\text{-}filt}$	$PM_{2.5\text{-}filt}$
Loadout from All Piles Except SP-1										
Pile to BC-7 or -11 to BC-12[d]	1	5,844,220	Enclosed in Building	99%	5.88E-04	2.78E-04	4.21E-05	0.02	0.01	0.00
5 Transfers	5	5,844,220	Partially Enclosed	75%	2.94E-03	1.39E-03	2.11E-04	2.15	1.02	0.15
1 transfer to barge	1	5,844,220	Telescoping Chute	75%	5.88E-04	2.78E-04	4.21E-05	0.43	0.20	0.03
Loadout from Pile SP-1										
2 Transfers	2	470,505	Partially Enclosed	75%	1.18E-03	5.56E-04	8.42E-05	0.07	0.03	0.00
1 transfer to barge	1	470,505	Telescoping Chute	75%	5.88E-04	2.78E-04	4.21E-05	0.03	0.02	0.00
Loadout direct to Barge (no pile)										
7 Transfers	7	837,937	Partially Enclosed	75%	4.12E-03	1.95E-03	2.95E-04	0.43	0.20	0.03
1 transfer to barge	1	837,937	Telescoping Chute	75%	5.88E-04	2.78E-04	4.21E-05	0.06	0.03	0.00
							TOTALS	**9.56**	**4.52**	**0.68**

References

[a] Based on annual data from Ore Docks data system

[b] Emission factor based on Drop Equation from AP-42 Section 13.2.4 (see below)

$$E = k\,(0.0032)\,\frac{(U/5)^{1.3}}{(M/2)^{1.4}}$$

k =	0.74	PM - (AP-42, Section 13.2.4, for Particle Size < 30 um)
	0.35	PM_{10} - (AP-42, Section 13.2.4, for Particle Size < 10 um)
	0.053	$PM_{2.5}$ - (AP-42, Section 13.2.4, for Particle Size < 2.5 um)
M =	6.9	AP-42 Table 13.2.4-1, Western Surface Coal Mine
U =	6.5	mph - (average wind speed at Baltimore-Washington International Airport for 2022)

[c] Emissions calculated using the following equation:

$$PM = N \times T \times (1-\eta_E) \times (1-\eta_A) \times EF \times \frac{1}{2{,}000}$$

Where:

PM = Annual PM/PM_{10}/$PM_{2.5}$ emissions (tpy)
N = Number of Transfers
T = Material handling throughput (tpy)
η_E = Enclosure efficiency
η_A = Additional control efficiency
EF = PM/PM_{10}/$PM_{2.5}$ Emission factor, specific to material and process (lb/ton of throughput)

[d] Underground transfer using Enclosed in Building control efficiency

Emission Factor (see footnote b)

Emission Source Type		PM (lb/ton)	PM_{10} (lb/ton)	$PM_{2.5}$ (lb/ton)	PM_{cond} (lb/ton)	Source of Emission Factor
Drop Equation	drop equation	5.88E-04	2.78E-04	4.21E-05	0.00E+00	AP-42 Section 13.2.4 Drop Equation

Wind Erosion from Storage Piles

Exposed Pile Surface Area (9 piles)	5.00	acre	From CSX
Disturbances per day [a]	1.53		Based on throughput to towers + SP-1 throughput and 11,500 tons per train. Each train is one disturbance.
Storage Piles (m/s) =	0.55		Threshold friction velocity, for ground coal AP-42, Table 13.2.5-2.
Erosion Control Efficiency	49.50%		Using half of control efficiency for water suppression with chemicals
Emission Factor[b], PM	1178.86	lb/acre-yr	U.S. EPA, AP-42, Section 13.2.5 - Industrial Wind Erosion (11/06). Equation 2
Emission Factor, PM_{10}	589.43	lb/acre-yr	U.S. EPA, AP-42, Section 13.2.5 - Industrial Wind Erosion (11/06). Equation 2
Emission Factor, $PM_{2.5}$	88.41	lb/acre-yr	U.S. EPA, AP-42, Section 13.2.5 - Industrial Wind Erosion (11/06). Equation 2
Emission Factor[c], PM	4.94	lb/acre-day	AP-42, Section 13.2.5 / 365 * disturbances per day
Emission Factor, PM_{10}	2.47	lb/acre-day	AP-42, Section 13.2.5 / 365 * disturbances per day
Emission Factor, $PM_{2.5}$	0.37	lb/acre-day	AP-42, Section 13.2.5 / 365 * disturbances per day
Actual Emissions[d], PM	2.28	tpy	=PM EF (lb/acre/day) * 365 * Surface Area (acre) * (1-CE (%)) / 2000 (lb/ton)
Actual Emissions, PM_{10}	1.14	tpy	=PM EF (lb/acre/day) * 365 * Surface Area (acre) * (1-CE (%)) / 2000 (lb/ton)
Actual Emissions, $PM_{2.5}$	0.17	tpy	=PM EF (lb/acre/day) * 365 * Surface Area (acre) * (1-CE (%)) / 2000 (lb/ton)

Wet Suppression for Piles

Wet Suppression with Chemicals	99%	Air & Waste Management Association (AWMA) Air Pollution Engineering Manual (1992)

[a] Pile Disturbances per day calculated as follows:

$$\text{Disturbances per day} = \text{Throughput to Towers \& SP}{-}1\ (\text{tons}) \div \text{Train Capacity}\ (11{,}500\ \text{tons}) \div 365\ \left(\frac{\text{days}}{\text{yr}}\right)$$

[b] Emissions factors calculated using Equation 2 of AP-42, Section 13.2.5.3 and based on hourly wind data from 2017-2021 (average mass/area emission factor), threshold friction velocity for ground coal in AP-42 Table 13.2.5-2, and k factors below.

k (PM) = 1
k (PM10) = 0.5
k (PM2.5) = 0.075

[c] Emissions factors calculated as follows:

$$\text{Emission Factor}\left(\frac{\text{lb}}{\frac{\text{acre}}{\text{day}}}\right) = \text{Emission Factor (as calculated by AP}{-}42)\left(\frac{\text{lb}}{\frac{\text{acre}}{\text{day}}}\right) \times \text{Disturbances per Day}$$

The emissions factor calculated by Equation 2 from AP-42, Section 13.2.5.3 compares wind speed for a single hour to the threshold wind velocity associated with the pile material. Emissions are calculated in mass/pile area for each hour with a wind speed above the threshold wind velocity (i.e., an hour with a wind speed below the threshold wind velocity has zero emissions). These hourly emissions are summed for the year, divided by 365 days (for per day emission rate) and scaled by the number of disturbances per day to account for multiple disturbances of the pile during one day. Wind data available from MDE from 2017-2021 was used for this estimate.

[d] Emissions calculated as follows:

$$\text{Annual PM Emissions}\left(\frac{\text{tons}}{\text{yr}}\right) = \text{Emission Factor}\left(\frac{\text{lb}}{\frac{\text{acre}}{\text{day}}}\right) \times \text{Pile Area (acres)} \times 365\left(\frac{\text{days}}{\text{yr}}\right) \div 2{,}000\left(\frac{\text{lbs}}{\text{ton}}\right)$$

Methane Emissions[a]

Parameter	Value	Units	Comments/Notes
In-situ methane content[a]	147	ft^3/ton	Central Appalachian Underground Mining
Average gas remaining[a]	58%	%	Assumed for when coal leaves the mine
Gas content of coal leaving mine	85.26	ft^3/ton	In-situ content * average gas remaining
Time for 67% of gas to be released[a]	21	days	
% Gas Released after 3 days of transport	9.57%	%	For delivery from mine, estimated as 3 days to Curtis Bay
Gas content of coal after 3 days transport (material arriving at CBP)	77.10	ft^3/ton	Content leaving mine * (1-% Gas Released after 3 days transport)

Parameter	Value	Units	Comments/Notes
Total gas released during 3 days of transit from coal mine to site[b]	8.16	ft^3/ton	Gas content of coal leaving mine * 9.57%
Gas emission rate, per day	2.72	ft^3/ton/day	

Directly Transferred[c]

Parameter	Value	Units	Comments/Notes
Tons coal per year	837,937	tons/year	Based on data from Ore Docks
Gas emission rate	2.72	ft^3/ton/day	
Days on site	0.5	day	Based on site understanding of loads
Methane emissions	1,139,678	ft^3/year	
Methane density (77°F, 1 atm)	0.0410	lb/ft^3	https://www.engineeringtoolbox.com/methane-d_1420.html
Methane emissions	46,727	lb/year	
Engineering conversion factor	2,000	lbs/ton	Engineering conversion factor
Methane emissions	23	tons/year	

Stored on Site

Parameter	Value	Units	Comments/Notes
Gas emission rate	2.72	ft^3/ton/day	
Average Stored Onsite (daily)	250,000	tons	Engineering estimate
Days on site	365	days	
Methane emissions	248,218,250	ft^3/year	
Methane density (77°F, 1 atm)	0.0410	lb/ft^3	https://www.engineeringtoolbox.com/methane-d_1420.html
Methane emissions	10,176,948	lb/year	
Engineering conversion factor	2,000	lbs/ton	Engineering conversion factor
Methane emissions	5,088	tons/year	

Methane Emissions Summary

Process	*Methane Emissions (tons/year)*
Directly transferred (on-site 1/2 day)	23
Material with interim storage	5,088
Total	**5,112**

References/Notes

[a] This approach is based on: "An Improved Inventory of Methane Emissions from Coal Mining in the United States" David Kirchgessner, U.S. EPA, Stephen D. Piccot and Sushma S. Masemore, Southern Research Institute (1 November 2000). Provides data for CY 1995. Data from Table 6, Post-mining Emissions Inventory Estimation Method

[b] Another 67% will be released over 21 days. Assume this value is linear to get a daily emission rate for coal on-site.

[c] Assume coal has a residence time on site of 0.5 day.

CSXT Curtis Bay Piers, Maryland
Emission Estimates
Temporary Coal Transfer Operations
Permit Number: 510-2263
January 2022
Worksheet 2 - Actual Estimates - Temporary Conveyors

This worksheet is used to estimate emissions of particulate matter from the actual temporary coal transfer operations at the facility.
These emissions are estimated for the temporary portion of the operation which encompasses:
1. Transfer of coal from the piles to the feeder stacker using a front end loader
2. Various drop points along the temporary conveyor until the coal is transferred to the existing belt conveyor (BC 12).

The emission factors for PM_{30}, PM_{10}, and $PM_{2.5}$ for each drop point are derived below Table 2.

$E(PM_{30})$	8.98E-04	lb/ton
$E(PM_{10})$	4.25E-04	lb/ton
$E(PM_{2.5})$	6.43E-05	lb/ton

The initial configuration of the mechanical conveyors has a total of 8 drop points for each line.
Since the number of drop points is the same, emissions can be estimated based on total amount of coal transferred.
The uncontrolled emission rate is conservatively used as no credit is taken for dust suppression from water sprays.

Table 2: Actual Emissions and Daily Throughput Summary

Date	Coal Transferred (tons/day)	Maximum Number of Drop Points	Emissions (lb/day)			Daily End Weight (total tons transferred)
			PM_{30}	PM_{10}	$PM_{2.5}$	
1/13/2022	0	8	0.00	0.00	0.00	0
1/14/2022	4,529	8	32.54	15.39	2.33	4,529
1/15/2022	13,979	8	100.43	47.50	7.19	18,508
1/16/2022	9,685	8	69.58	32.91	4.98	28,193
1/17/2022	16,426	8	118.01	55.81	8.45	44,619
1/18/2022	12,692	8	91.18	43.13	6.53	57,311
1/19/2022	6,662	8	47.86	22.64	3.43	63,973
1/20/2022	13,494	8	96.94	45.85	6.94	77,467
1/21/2022	2,593	8	18.63	8.81	1.33	80,060
1/22/2022	1,362	9	11.01	5.21	0.79	81,422
1/23/2022	7,916	10	71.09	33.62	5.09	89,338
1/24/2022	1,119	9	9.04	4.28	0.65	90,457
1/25/2022	9,514	8	68.35	32.33	4.90	99,971
1/26/2022	8,457	8	60.76	28.74	4.35	108,428
1/27/2022	5,379	7	33.81	15.99	2.42	113,807
1/28/2022	3,171	7	19.93	9.43	1.43	116,978
Total Actual (lbs)			**795.42**	**376.21**	**56.97**	
Total Actual (tons)	**116,978**	**n/a**	**0.40**	**0.19**	**0.03**	

Drop Equation Data Input and Estimated "E" Values

Parameter	Value	Units	Notes
k (PM_{30})	0.74		
k (PM_{10})	0.35		
k ($PM_{2.5}$)	0.053		
U	9	miles per hour	Mean windspeed for Baltimore for January and February
M	6.9	%	AP-42 Table 13.2.4-1, Western Surface Coal Mine
$E(PM_{30})$	8.98E-04	lb/ton	
$E(PM_{10})$	4.25E-04	lb/ton	
$E(PM_{2.5})$	6.43E-05	lb/ton	

Windspeed from: https://www.weatherwx.com/hazardoutlook/md/baltimore.html

CSXT Curtis Bay Piers, Maryland
Emission Estimates
Temporary Coal Transfer Operations
Permit Number: 510-2263
February 2022
Worksheet 1 - Engine Related Emissions - Actual Emissions

This worksheet estimates actual emissions associated with the engines used to power the feeder stacker and conveyors (stackers) used to transfer coal at the site.

Portable Equipment Engine Inventory

Actual Equipment Inventory
Inventory per Mr. David Kosla, CSXT Senior Manager of Coal and Piers - Infrastructure
Specifications per McClean Work Plan, and Scott Huchenski of McClean Contracting, all engines are Tier 4 compliant

Table 1-1: Actual Equipment Inventory

Unit	Description	kW	Hp	Tier Certification	QTY
SF80	High capacity feeder/stacker	100	127	Tier 4	1
ST80T	Stacker	36.5	49	Tier 4	12
BF7048	Bareford Unit	100	134	Tier 4	1

The data log sheets for the conveyor configuration give the number of drop points (equipment pieces plus 1) and the time of operation for each line.

Per David Kosla, CSXT Senior Manager of Coal and Piers - Infrastructure, the larger units were used as one per each conveyor line.

To further simplify the estimates, it is conservatively assumed that the maximum emission factor for the two sizes of engines applies to both engines.
That is, the Tier 4 emission factors for the 19 - 37 kW apply to both sets of engines. The majority of the equipment is in this size range,
hence this assumption will likely make only a small difference in emissions.
Since the NOx emissions for the ST80T (smaller engine) are greater than those for the two other larger pieces of equipment, this assumption is conservative.

Table 1-2: Emission Factors - Tier 4 Emission Standards (g/kWhr)

Engine Tier	kW (range)	CO	VOC (NMHC)[2]	VOC + NOx	NOx[2]	PM	SOx[1]
4	19 - 37	**5.5**	**0.235**	**4.7**	**4.465**	**0.03**	**0.0074**
4	56 - 130	5.0	0.19	n/a	0.4	0.02	0.0074

1 - SO_2 emission factor from AP-42 Table 3.3-2, 15 ppm sulfur in fuel maximum, converted to kW-hr

2 - For 19 to 37 kW engines, it is assumed 95% of emissions are NOx, and 5% are VOC (typical range per Santa Barbara County APCD documentation for Diesel Internal Combustion Engines in this size range for Tier 3 engines).

From Worksheet 2, the total kW-hrs = 120,647

The next step is to estimate emissions based on the above emission factors and total kW-hr of operation:
Conversion factor 453.5924 g/lb

Table 1-3: Total Actual Estimated Emissions - Conveyor and Stacker Engine Related

Total Emissions	Pollutant				
	CO	VOC (NMHC)	NOx	PM	SOx
Pounds	1,462.90	62.51	1,187.61	7.98	1.96
Tons	0.73	0.03	0.59	0.004	0.001

PM Speciation

	PM-total	PM-filterable	PM_{10}-filterable	$PM_{2.5}$-filterable	PM-condensable
Emission Rate[a] (lb/MMbtu)	0.0697	0.0620	0.0496	0.0479	0.0077
Tons[b]	0.004	0.004	0.003	0.003	0.000

[a] Based on AP-42 Table 3.4-2. $PM_{2.5}$-filterable emission rate based on PM_3 emission rate.

[b] Calculated as Total PM in Table 1-3 multiplied by ratio of PM emission rate (e.g., PM_{10}-filterable, etc) and PM-total emission rate (using emission rates per footnote a).

Hours of Operation 392.25

Table T-1: GHG Emissions for Conveyor Engines			Emissions (tpy) [2]		
Pollutant	Emission Factor [1]	Unit	SF80	ST80T	BF7048
CO_2	73.96	kg/MMBtu	25.8	119.4	27.2
CH_4	3.00E-03	kg/MMBtu	0.00	0.00	0.00
N_2O	6.00E-04	kg/MMBtu	0.000	0.001	0.000

[1] 40 CFR 98 Subpart C

[2] Emissions are calculated by converting the engine output in hp to engine heat input in MMBtu/hr using an average brake specific fuel consumption of 7,000 Btu/hp-hr, as provided in footnote a of Table 3.3-1 of AP-42. See 2022 HAPs Emissions Summary Table for calculated fuel use for each conveyor.

Temporary Conveyor Emissions - HAPs

Unit	Description	kW	Hp	Tier Certification	QTY	Hours of Operation	MMBtu/yr [a]
SF80	High capacity feeder/stacker	100	127	Tier 4	1	392.25	348.7
ST80T	Stacker	36.5	49	Tier 4	12	392.25	1614.5
BF7048	Bareford Unit	100	134	Tier 4	1	392.25	367.9

Hazardous Air Pollutant (HAP)[b]	Emission Factor (lb/MMBtu)	Emission Totals			Emission Totals			Emission Totals		
		SF80 (lbs/yr)	ST80T (lbs/yr)	BF7048 (lbs/yr)	SF80 (lbs/hr)	ST80T (lbs/hr)	BF7048 (lbs/hr)	SF80 (tons/yr)	ST80T (tons/yr)	BF7048 (tons/yr)
Benzene	9.33E-04	3.25E-01	1.51E+00	3.43E-01	8.29E-04	3.84E-03	8.75E-04	1.63E-04	7.53E-04	1.72E-04
Toluene	4.09E-04	1.43E-01	6.60E-01	1.50E-01	3.64E-04	1.68E-03	3.84E-04	7.13E-05	3.30E-04	7.52E-05
Xylenes	2.85E-04	9.94E-02	4.60E-01	1.05E-01	2.53E-04	1.17E-03	2.67E-04	4.97E-05	2.30E-04	5.24E-05
1,3-Butadiene	3.91E-05	1.36E-02	6.31E-02	1.44E-02	3.48E-05	1.61E-04	3.67E-05	6.82E-06	3.16E-05	7.19E-06
Formaldehyde	1.18E-03	4.11E-01	1.91E+00	4.34E-01	1.05E-03	4.86E-03	1.11E-03	2.06E-04	9.53E-04	2.17E-04
Acetaldehyde	7.67E-04	2.67E-01	1.24E+00	2.82E-01	6.82E-04	3.16E-03	7.19E-04	1.34E-04	6.19E-04	1.41E-04
Acrolein	9.25E-05	3.23E-02	1.49E-01	3.40E-02	8.22E-05	3.81E-04	8.68E-05	1.61E-05	7.47E-05	1.70E-05
Naphthalene	8.48E-05	2.96E-02	1.37E-01	3.12E-02	7.54E-05	3.49E-04	7.95E-05	1.48E-05	6.85E-05	1.56E-05
Acenaphthylene	5.06E-06	1.76E-03	8.17E-03	1.86E-03	4.50E-06	2.08E-05	4.75E-06	8.82E-07	4.08E-06	9.31E-07
Acenaphthene	1.42E-06	4.95E-04	2.29E-03	5.22E-04	1.26E-06	5.84E-06	1.33E-06	2.48E-07	1.15E-06	2.61E-07
Fluorene	2.92E-05	1.02E-02	4.71E-02	1.07E-02	2.60E-05	1.20E-04	2.74E-05	5.09E-06	2.36E-05	5.37E-06
Phenanthrene	2.94E-05	1.03E-02	4.75E-02	1.08E-02	2.61E-05	1.21E-04	2.76E-05	5.13E-06	2.37E-05	5.41E-06
Anthracene	1.87E-06	6.52E-04	3.02E-03	6.88E-04	1.66E-06	7.70E-06	1.75E-06	3.26E-07	1.51E-06	3.44E-07
Fluoranthene	7.61E-06	2.65E-03	1.23E-02	2.80E-03	6.77E-06	3.13E-05	7.14E-06	1.33E-06	6.14E-06	1.40E-06
Pyrene	4.78E-06	1.67E-03	7.72E-03	1.76E-03	4.25E-06	1.97E-05	4.48E-06	8.33E-07	3.86E-06	8.79E-07
Benzo(a)anthracene	1.68E-06	5.86E-04	2.71E-03	6.18E-04	1.49E-06	6.91E-06	1.58E-06	2.93E-07	1.36E-06	3.09E-07
Chrysene	3.53E-07	1.23E-04	5.70E-04	1.30E-04	3.14E-07	1.45E-06	3.31E-07	6.15E-08	2.85E-07	6.49E-08
Benzo(b)fluoranthene	9.91E-08	3.46E-05	1.60E-04	3.65E-05	8.81E-08	4.08E-07	9.30E-08	1.73E-08	8.00E-08	1.82E-08
Benzo(k)fluoranthene	1.55E-07	5.41E-05	2.50E-04	5.70E-05	1.38E-07	6.38E-07	1.45E-07	2.70E-08	1.25E-07	2.85E-08
Benzo(a)pyrene	1.88E-07	6.56E-05	3.04E-04	6.92E-05	1.67E-07	7.74E-07	1.76E-07	3.28E-08	1.52E-07	3.46E-08
Indeno(1,2,3-cd)pyrene	3.75E-07	1.31E-04	6.05E-04	1.38E-04	3.33E-07	1.54E-06	3.52E-07	6.54E-08	3.03E-07	6.90E-08
Dibenz(a,h)anthracene	5.83E-07	2.03E-04	9.41E-04	2.15E-04	5.18E-07	2.40E-06	5.47E-07	1.02E-07	4.71E-07	1.07E-07
Benzo(g,h,i)perylene	4.89E-07	1.71E-04	7.89E-04	1.80E-04	4.35E-07	2.01E-06	4.59E-07	8.53E-08	3.95E-07	9.00E-08

References:

[a] Fuel use calculated by converting the engine utilization hp-hours to MMBtu using an average brake specific fuel consumption of 7,000 Btu/hp-hr, as provided in footnote a of Table 3.3-1 of AP-4

[b] AP-42, Tables 3.3-2, October 1996

Rebecca Hensley
Senior Manager Sustainability

500 Water Street – J275
Jacksonville, Florida 32202
Office: (904) 359-4833
Mobile: (904) 476-7576
Rebecca_Hensley@csx.com

March 29, 2024

Air Quality Compliance Program
Maryland Department of the Environment
Air and Radiation Administration
1800 Washington Boulevard, Suite 715
Baltimore, MD 21230-1720

RE: Emission Certification Report for Calendar Year 2023
CSX Transportation, Inc., Curtis Bay Piers, Baltimore, Maryland
Premise Number 510-2263

To Whom It May Concern:

CSX Transportation, Inc. (CSXT) Curtis Bay Piers is submitting this annual Emission Certification Report for Calendar Year (CY) 2023 per Condition D(3) of Permit No. 510-2263. CSXT Curtis Bay Piers was in full compliance with Maryland's Air Toxic Regulations (COMAR 26.11.15) during CY2023. Please note that this report does not include emissions that were outside of our normal operations. Changes noted from the 2022 ECR report as described below:

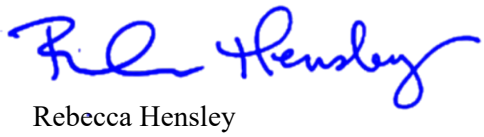
- Site specific moisture content (provided as an attachment to this letter) is being used for coal emission estimates instead of a published value from the United States Environmental Protection Agency Compilation of Air Pollutant Emissions Factors (AP-42).
- Temporary conveyors are not used during 2023.

In accordance with permit condition 510-2263, Part D(3)(c), CSXT is including the following statement:

> *I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

If you have any questions concerning this report, please contact me at (904) 359-4833.

Sincerely,



Rebecca Hensley
Senior Manager Sustainability

Attachment – CSXT Curtis Bay Piers - Coal Analysis and Moisture Content

CSXT Curtis Bay Piers, Baltimore, Maryland
Coal Analyses
Moisture Content
Prepared January 2023
Printed March 2024

This worksheet compiles June 2022 analytical data coal analyses for the purpose of obtaining the moisture (water) composition of coal.
Various analytical data are available from recent shipments as provided by John Healy, CSXT Sr. Sales Manager - Export Coal.

The following data are obtained from various analytical samples for coal handled at Curtis Bay Piers in 2021 and 2022.

Vessel/ Description	Coal Supplier	Date(s)	Percent Water (%)	Certificate or Sample No	Incoming or Outgoing
LE	A	1st Quarter 2022	7.83%	2022-03457	Incoming
AH	B	Oct 21 - 25, 2021	6.24%	21110209EF	Outgoing
NF	B	Nov 20 - 24, 2021	5.88%	21120709FC	Outgoing
NG	B	Sep 29 - Oct 3, 202	6.42%	2110120945	Outgoing
PA	B	Oct 14 - 17, 2021	6.53%	2110250B46	Outgoing
TN	B	Dec 10 - 13, 2021	6.16%	211223099B	Outgoing
TO	B	Nov 6 - 9, 2021	5.49%	21111809B7	Outgoing
UL	B	Nov 1 - 4, 2021	6.20%	231-2100834	Outgoing
CR	C	April 13, 2021	9.00%	2160575	Incoming
BE	C	April 16, 2022	9.94%	2204220B4E	Outgoing
FB	C	Dec 1 - 3, 2021	8.98%	2112090BE4	Outgoing
NA	C	Dec 28 - 29, 2021	9.01%	2201060B17	Outgoing
NI	C	March 4 - 11, 2022	9.56%	2203170B0E	Outgoing
NU	C	Feb 7 - 16, 2022	9.55%	2202270082	Outgoing
RO	C	October 26, 2021	9.45%	2111020B11	Outgoing

Statistics for Percent Moisture in Coal (above data) Per Supplier

Coal Supplier	Mean Value (%)	N (sample size)	Range	1/2 Range as % of Mean Value
A	7.83%	1	n/a	n/a
B	6.13%	7	1.04%	8.48%
C	9.36%	7	0.96%	5.13%

The total weight (tons) for each of the coal companies listed above is used to create a volume weighted average.
Material throughput data for CY 2021 and 2022 (January through June) are used.
Data for companies with throughput without corresponding analytical data are excluded.

Coal Suppliers with Analytical Data Provided

	Throughput			
Coal Supplier	**2021 Tons**	**2022 Tons**	**Total Tons**	**Percent of Total**
A	2,859,907	1,307,405	4,167,312	39.68%
B	4,261,875	1,074,709	5,336,584	50.82%
C	714,423	283,574	997,997	9.50%
Total (3 above)	**7,836,205**	**2,665,688**	**10,501,893**	**100.00%**

Other Suppliers Not Having Analytical Data Provided

	Throughput			
Coal Supplier	**2021 Tons**	**2022 Tons**	**Total Tons**	**Percent of Total**
D	87,986	0	87,986	2.79%
E	2,859,907	200,649	3,060,556	97.21%
Total (2 above)	**2,947,893**	**200,649**	**3,148,542**	**100.00%**

Next, determine what percentage of the total throughput for 2021 and 2022 that we have analytical data for

Supplier Type	**Total 2021 & 2022 Throughput (tons)**	**2021 & 2022 Percent of Total**	**2022 (only) Throughput (tons)**	**2022 (only) Percent of Total**
Have Analytical Data	10,501,893	77%	2,665,688	93%
Missing Analytical Data	3,148,542	23%	200,649	7%
Total	**13,650,435**	**100%**	**2,866,337**	**100%**

Next, develop a volume weighted average moisture composition based on the above data for the 3 suppliers

Supplier	**Percent of Total Throughput**	**Percent Water**	**Product of % Total Throughput and % Water**
A	39.68%	7.83%	3.11%
B	50.82%	6.13%	3.12%
C	9.50%	9.36%	0.89%
Total/Volume Weighted Average	**100.00%**	n/a	**7.11%**

Summary Information

Volume weighted average moisture composition	**7.11%**	Percent of coal
Arithmetic average water composition	7.48%	Based on number of analytical samples
Percent of facilty throughput for which we have analytical data	77%	
Percent of facilty throughput for missing analytical data	23%	

MARYLAND DEPARTMENT OF THE ENVIRONMENT
1800 Washington Blvd, Suite 715 Baltimore, MD 21230-1720
410-537-3000 1-800 633-6101 http://www.mde.state.md.us
Air and Radiation Management Administration
Air Quality Compliance Program
410-537-3220

FORM 1:

GENERAL FACILITY INFORMATION
EMISSIONS CERTIFICATION REPORT

Calendar Year: **2023**

A. FACILITY IDENTIFICATION Facility Name **Curtis Bay Piers #510-2263**	Do Not Write in this Space Date Received Regional
Address **1910 Benhill Avenue**	Date Received State
City **Baltimore** County **Baltimore** Zip Code **21226**	AIRS Code
B. Briefly describe the major function of the facility	FINDS code
Unloading and loading of coal, limestone, and miscellaneous mineral ores from trains, barges, and vessels.	SIC Code Facility Number
	TEMPO ID:

C. SEASONAL PRODUCTION (% if applicable)
Facility operates 24 hrs/day, 7 days/week

	Winter (Dec-Feb)	Spring (Mar-May)	Summer (Jun-Aug)	Fall (Sept-Nov)	
	23%	22%	25%	29%	

Reviewed by:
Name Date

D. Explain any increases or decreases in emissions from the previous calendar year for each registration at this facility.

Total throughput increased from 7,269,640 tons of coal (CY2022) to 9,754,019 tons of coal (CY2023) . NOx, VOC, CO, and SOx emissions decreased due to the removal of the temporary conveyors. PM emissions increased due to increased throughput.

E. CONTROL DEVICE INFORMATION (for NOx and VOC sources only)

Control Device	Capture Efficiency	Removal Efficiency

I am familiar with the facility and the installations and sources for which this report is submitted. I have personally examined the information in this report, which consists of 16 pages (including attachments), and certify that the information is correct to the best of my knowledge.

Rebecca Hensley	**Senior Manager Sustainability**	March 29, 2024
Name (Print/Type)	**Title**	**Date**
Rebecca Hensley		**(904) 359-4833**
Signature		**Telephone**

1/9/2008

FORM 2:

CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT

Facility Name: **Curtis Bay Piers #510-2263** **Facility ID#:** 24-021-00459 **Pollutant: VOC** **Calendar Year:** **2023**

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule			Emissions Methods
				Tons/yr	Lbs/dy	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End	
Coal Facility	3-05-104-98		S											
510-09-0335		N/A	F	0.00	0.00	24	7	52	365	-	24	1/1/2023	12/31/2023	N/A
			S											
			F											
			S											
			F											
Totals				**0.0000**	**0.0000**					**0.00**				

S-Stack Emissions F-Fugitive Emissions Daily emissions (lbs/day) are lbs/operating day of the source.

TOSD-Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April-September). This section needs to be completed only for VOC and NOx sources.

Emission Estimation Method

A1- U. S. EPA Reference Method
A2- Other Particulate Sampling Train
A3- Liquid Absorption Technique
A4- Solid Absorption Technique
A5- Freezing Out Technique
A9- Other, Specify

C1- User calculated based on source test or other measurement
C2- User calculated based on material balance using engineering knowledge of the process
C3- User calculated based on AP- 42
C4- User calculated by best guess/ engineering judgment

C5- User calculated based on a State or local agency emission factor
C6- New construction, not operational
C7- Source closed, operation ceased
C8- Computer calculated based on standard

1/9/2008

FORM 2

CRITERIA AIR POLLUTANTS

Facility Name: **Curtis Bay Piers #510-2263** **Facility ID#:** 24-021-00459 **Pollutant: NO_x** **Calendar Year:** **2023**

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule			Emissions Methods
				Tons/yr	Lbs/dy	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End	
Coal Facility	3-05-104-98		S											
510-09-0335		N/A	F	0.00	0.00	24	7	52	365	-	24	1/1/2023	12/31/2023	N/A
			S											
			F											
			S											
			F											
Totals				**0.00**	**0.00**					**0.00**				

S-Stack Emissions F-Fugitive Emissions Daily emissions (lbs/day) are lbs/operating day of the source.

TOSD-Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April-September). This section needs to be completed only for VOC and NOx sources.

Emission Estimation Method

A1- U. S. EPA Reference Method
A2- Other Particulate Sampling Train
A3- Liquid Absorption Technique
A4- Solid Absorption Technique
A5- Freezing Out Technique
A9- Other, Specify

C1- User calculated based on source test or other measurement
C2- User calculated based on material balance using engineering knowledge of the process
C3- User calculated based on AP- 42
C4- User calculated by best guess/ engineering judgment

C5- User calculated based on a State or local agency emission factor
C6- New construction, not operational
C7- Source closed, operation ceased
C8- Computer calculated based on standard

01/09/08

FORM 2

CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT

Facility Name: **Curtis Bay Piers #510-2263** **Facility ID#:** 24-021-00459 **Pollutant: CO** **Calendar Year:** **2023**

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule			Emissions Methods
				Tons/yr	Lbs/dy	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End	
Coal Facility 510-09-0335	3-05-104-98	N/A	S											
			F	0.00	0.00	24	7	52	365					N/A
			S											
			F											
			S											
			F											
Totals				**0.00**	**0.00**									

S-Stack Emissions F-Fugitive Emissions Daily emissions (lbs/day) are lbs/operating day of the source.

TOSD-Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April-September). This section needs to be completed only for VOC and NOx sources.

Emission Estimation Method

A1- U. S. EPA Reference Method
A2- Other Particulate Sampling Train
A3- Liquid Absorption Technique
A4- Solid Absorption Technique
A5- Freezing Out Technique
A9- Other, Specify

C1- User calculated based on source test or other measurement
C2- User calculated based on material balance using engineering knowledge of the process
C3- User calculated based on AP- 42
C4- User calculated by best guess/ engineering judgment

C5- User calculated based on a State or local agency emission factor
C6- New construction, not operational
C7- Source closed, operation ceased
C8- Computer calculated based on standard

01/09/08

FORM 2

CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT

Facility Name: **Curtis Bay Piers #510-2263** **Facility ID#:** 24-021-00459 **Pollutant:** SO_x **Calendar Year:** **2023**

Equipment Description/ Registration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule			Emissions Methods
				Tons/yr	Lbs/dy	Hrs/dy	Dys/wk	Wk/yr	Days/yr	Lbs/dy	Hrs/dy	Start	End	
Coal Facility	3-05-104-98		S											
510-09-0335		N/A	F	0.000	0.000	24	7	52	365					N/A
			S											
			F											
			S											
			F											
Totals				**0.00**	**0.00**									

S-Stack Emissions F-Fugitive Emissions Daily emissions (lbs/day) are lbs/operating day of the source.

TOSD-Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April-September). This section needs to be completed only for VOC and NOx sources.

Emission Estimation Method

A1- U. S. EPA Reference Method
A2- Other Particulate Sampling Train
A3- Liquid Absorption Technique
A4- Solid Absorption Technique
A5- Freezing Out Technique
A9- Other, Specify

C1- User calculated based on source test or other measurement
C2- User calculated based on material balance using engineering knowledge of the process
C3- User calculated based on AP- 42
C4- User calculated by best guess/ engineering judgment

C5- User calculated based on a State or local agency emission factor
C6- New construction, not operational
C7- Source closed, operation ceased
C8- Computer calculated based on standard

01/09/08

Form 3: PM **Calendar Year:** **2023**

EMISSIONS CERTIFICATION REPORT
Particulate Matter

Facility Name: **Curtis Bay Piers #510-2263** **Facility ID#:** **24-021-00459** **Pollutant: PM**

Equipment Description / Registration Number	SCC Number	Fuel		PM - Filterable		PM 10 - Filterable		PM 2.5 - Filterable		PM 2.5 - Condensable		Operation	Emissions
				tons/yr	lbs/day	tons/yr	lbs/day	tons/yr	lbs/day	tons/yr	lbs/day	Days/yr	Methods
Coal Facility 510-09-0335	3-05-104-98	N/A	S										
			F	15.736	86.227	7.524	41.227	1.137	6.231	0.000	0.000	365	C3
			S										
			F										
			S										
			F										
TOTALS				**15.736**	**86.227**	**7.524**	**41.227**	**1.137**	**6.231**	**0.0000**	**0.0000**		

S - Stack Emissions F - Fugitive Emissions Daily emissions (lbs/day) are lbs/operating day of the source.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emissions Estimation Method

A1-US EPA Reference Method
A2-Other Particulate Sampling Train
A3-Liquid Absorption Technique
A4-Solid Absorption Technique
A5-Freezing Out Technique
A9-Other, Specify

C1-User Calculated based on source test or other measurement
C2-User Calculated based on material balance using engineering knowledge of the process
C3-User Calculated based on AP-42
C4-User Calculated based on best guess/engineering judgment

C5-User Calculated based on a State or local agency emission factor
C6-New construction, not operational
C7-Source closed, operation ceased
C8-Computer calculated based on standard

02/21/08

FORM 4:

Calendar Year: 2023

TOXIC AIR POLLUTANTS

EMISSIONS CERTIFICATION REPORT

Facility Name: Curtis Bay Piers #510-2263 **Facility ID#:** 24-021-00459 **Pollutant:** None above threshold *

Equipment Description/ Registration No.	Actual Emissions			Control Device**	% Efficiency
	Tons/yr	Lbs/day	Lbs/hr		
Not Applicable					
Totals	**0.00E+00**	**0.00E+00**	**0.00E+00**		

* Please attach all calculations.
* See Attachment 1 for the minimum reporting values.
**Control Device
S = Scrubber
B = Baghouse
ESP = Electrostatic Precipitator
A = Afterburner
C = Condenser
AD = Adsorption
O = Other

1. Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

EXHIBIT I - 404

01/09/08

FORM 5: **Calendar Year:** **2023**

BILLABLE TOXIC AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT

Facility Name: **Curtis Bay Piers #510-2263** **Facility ID#:** 24-021-00459 **Pollutant:**

Chemical Name	CAS Number		Actual Emissions				Estimation Method
			Tons/yr	Lbs/day	Lbs/hr		
carbon disulfide	75-15-0	S F	---	0.00	0.00		
carbonyl sulfide	463-58-1	S F	---	0.00	0.00		
chlorine	7782-50-5	S F	---	0.00	0.00		
cyanide compounds	57-12-5	S F	---	0.00	0.00		
hydrochloric acid	7647-01-0	S F	---	0.00	0.00		
hydrogen fluoride	7664-39-3	S F	---	0.00	0.00		
methyl chloroform	71-55-6	S F	---	0.00	0.00		
methylene chloride	75-09-2	S F	---	0.00	0.00		
perchloroethylene	127-18-4	S F	---	0.00	0.00		
phosphine	7803-51-2	S F	---	0.00	0.00		
titanium tetrachloride	7550-45-0	S F	---	0.00	0.00		
Totals			**0.00**	**0.00**	**0.00**		

S-Stack Emissions F-Fugitive Emissions Daily emissions (lbs/day) are lbs/operating day of the source

Estimation Method

A1-U.S. EPA Reference Method
A2-Other Particulate Sampling Train
A3-Liquid Absorption Technique
A4-Solid Absorption Technique
A5-Freezing Out Technique
A9-Other, Specify
A5-Freezing Out Technique
A9-Other, Specify

C1-User calculated based on source test or other measurements
C2-User calculated based on material balance using engineering knowledge of the process
C3-User calculated based on AP-42
C4-User calculated by engineering judgment
C5-User calculated based on a State or local agency factor
C6-New construction, not operational
C7-Source closed, operation ceased
C8-Computer calculated based on standards

This form is to include only the chemicals identified.

PLEASE NOTE: Be sure to attach all data and calculations necessary to support the emissions figures shown above.

03/09/09

Form 6: Greenhouse Gases

Calendar Year: **2023**

GREENHOUSE GAS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT

Facility Name: **Curtis Bay Piers #510-2263** **Facility ID#:** **24-021-00459**

Pollutant: Carbon Dioxide (CO_2)

Equipment Description / Registration Number	Actual Emissions		
	tons/yr	lbs/day	lbs/hr
Coal Facility 510-09-0034	0.00	0.00	0.00
TOTALS	0.00	0.00	0.00

This form must be used to report
Greenhouse gas emissions:
-- carbon dioxide (CO2)
-- methane (CH4)
-- nitrous oxide (N2O)
-- hydrofluorocarbons (HFCs)
-- perfluorocarbons (PFCs)
-- sulfur hexafluoride (SF6)
* Use a separate form for each pollutant.
* Please attach all calculations.

1. Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

1/15/2008

Form 6: Greenhouse Gases

Calendar Year: **2023**

GREENHOUSE GAS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT

Facility Name: **Curtis Bay Piers #510-2263** **Facility ID#:** **24-021-00459**

Pollutant: Nitrous Oxide (N_2O)

Equipment Description / Registration Number	Actual Emissions		
	tons/yr	lbs/day	lbs/hr
Coal Facility 510-09-0034	0.00E+00	0.00	0.00
TOTALS	0.000	0.000	0.000

This form must be used to report
Greenhouse gas emissions:
-- carbon dioxide (CO2)
-- methane (CH4)
-- nitrous oxide (N2O)
-- hydrofluorocarbons (HFCs)
-- perfluorocarbons (PFCs)
-- sulfur hexafluoride (SF6)
* Use a separate form for each pollutant.
* Please attach all calculations.

1. Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

1/15/2008

Form 6: Greenhouse Gases

Calendar Year: **2023**

GREENHOUSE GAS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT

Facility Name: **Curtis Bay Piers #510-2263** **Facility ID#:** **24-021-00459**

Pollutant: Methane (CH_4)

Equipment Description / Registration Number	Actual Emissions		
	tons/yr	lbs/day	lbs/hr
Coal Facility 510-09-0034	5.11E+03	27,998.06	1,166.59
TOTALS	5,109.65	27,998.06	1,166.59

This form must be used to report
Greenhouse gas emissions:
-- carbon dioxide (CO2)
-- methane (CH4)
-- nitrous oxide (N2O)
-- hydrofluorocarbons (HFCs)
-- perfluorocarbons (PFCs)
-- sulfur hexafluoride (SF6)
* Use a separate form for each pollutant.
* Please attach all calculations.

1. Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

1/15/2008

2023 Criteria Pollutant and GHG Emissions Summary

Criteria Pollutants (tons per year)

Source	Description	NOx	VOC	CO	SO_2	PM	PM_{filt}	$PM_{10\text{-}filt}$	$PM_{2.5\text{-}filt}$	$PM_{2.5\text{-}cond}$
Fugitive Process	Coal transfers from receiving to pile to loadout	0.00	0.00	0.00	0.00	12.74	12.74	6.02	0.91	0.00
Storage Piles	9 Coal Piles	0.00	0.00	0.00	0.00	3.00	3.00	1.50	0.23	0.00
TOTALS		**0.00**	**0.00**	**0.00**	**0.00**	**15.74**	**15.74**	**7.52**	**1.14**	**0.00**

Greenhouse Gases (tons per year)

Source	Description	CO_2	CH_4	N_2O
Storage Piles	9 Coal Piles	0.00	5,109.65	0.000
TOTALS		**0.00**	**5,109.65**	**0.000**

Fugitive Process Emissions

Type of Enclosure	Control Efficiency	Source of Efficiency Factor
Partially Enclosed	75%	OAPC RACM for Fugitive Dust Sources - Table 2.1.3-3 (Sep 1980)
Enclosed in Building	99%	OAPC RACM for Fugitive Dust Sources - Table 2.1.3-3 (Sep 1980)
Telescoping Chute	75%	Air & Waste Management Association (AWMA) Air Pollution Engineering Manual (1992)

Process Description	No. of Transfers	2023 Throughput[a]	Building Controls		Uncontrolled Emission Factor[b] (lb per ton of throughput)			Controlled Emission Rates (tpy)[c]		
		tpy	Type of Control	Control Efficiency	PM_{filt}	$PM_{10\text{-}filt}$	$PM_{2.5\text{-}filt}$	PM_{filt}	$PM_{10\text{-}filt}$	$PM_{2.5\text{-}filt}$
Through Tower 1										
Rotary Railcar Dumper at Dumper 2	1	1,785,582	Partially Enclosed	75%	5.45E-04	2.58E-04	3.91E-05	0.12	0.06	0.01
11 Transfers	11	1,785,582	Partially Enclosed	75%	6.00E-03	2.84E-03	4.30E-04	1.34	0.63	0.10
1 transfer through Tower	1	1,785,582	Enclosed in Building	99%	5.45E-04	2.58E-04	3.91E-05	0.00	0.00	0.00
1 transfer to pile	1	1,785,582	None	0%	5.45E-04	2.58E-04	3.91E-05	0.49	0.23	0.03
Through Tower 2										
Rotary Railcar Dumper at Dumper 2	1	0	Partially Enclosed	75%	5.45E-04	2.58E-04	3.91E-05	0.00	0.00	0.00
10 Transfers	10	0	Partially Enclosed	75%	5.45E-03	2.58E-03	3.91E-04	0.00	0.00	0.00
1 transfer through Tower	1	0	Enclosed in Building	99%	5.45E-04	2.58E-04	3.91E-05	0.00	0.00	0.00
1 transfer to pile	1	0	None	0%	5.45E-04	2.58E-04	3.91E-05	0.00	0.00	0.00
Through Tower 3										
Rotary Railcar Dumper at Dumper 2	1	1,456,055	Partially Enclosed	75%	5.45E-04	2.58E-04	3.91E-05	0.10	0.05	0.01
9 Transfers	9	1,456,055	Partially Enclosed	75%	4.91E-03	2.32E-03	3.51E-04	0.89	0.42	0.06
1 transfer through Tower	1	1,456,055	Enclosed in Building	99%	5.45E-04	2.58E-04	3.91E-05	0.00	0.00	0.00
1 transfer to pile	1	1,456,055	None	0%	5.45E-04	2.58E-04	3.91E-05	0.40	0.19	0.03
Through Tower 4										
Rotary Railcar Dumper at Dumper 2	1	0	Partially Enclosed	75%	5.45E-04	2.58E-04	3.91E-05	0.00	0.00	0.00
8 Transfers	8	0	Partially Enclosed	75%	4.36E-03	2.06E-03	3.12E-04	0.00	0.00	0.00
1 transfer through Tower	1	0	Enclosed in Building	99%	5.45E-04	2.58E-04	3.91E-05	0.00	0.00	0.00
1 transfer to pile	1	0	None	0%	5.45E-04	2.58E-04	3.91E-05	0.00	0.00	0.00
Through Tower 5										
Rotary Railcar Dumper at Dumper 2	1	600,340	Partially Enclosed	75%	5.45E-04	2.58E-04	3.91E-05	0.04	0.02	0.00
7 Transfers	7	600,340	Partially Enclosed	75%	3.82E-03	1.81E-03	2.73E-04	0.29	0.14	0.02
1 transfer through Tower	1	600,340	Enclosed in Building	99%	5.45E-04	2.58E-04	3.91E-05	0.00	0.00	0.00
1 transfer to pile	1	600,340	None	0%	5.45E-04	2.58E-04	3.91E-05	0.16	0.08	0.01
Through Tower 6										
Rotary Railcar Dumper at Dumper 2	1	208,552	Partially Enclosed	75%	5.45E-04	2.58E-04	3.91E-05	0.01	0.01	0.00
7 Transfers	7	208,552	Partially Enclosed	75%	3.82E-03	1.81E-03	2.73E-04	0.10	0.05	0.01
1 transfer through Tower	1	208,552	Enclosed in Building	99%	5.45E-04	2.58E-04	3.91E-05	0.00	0.00	0.00
1 transfer to pile	1	208,552	None	0%	5.45E-04	2.58E-04	3.91E-05	0.06	0.03	0.00
Through Tower 7										
Rotary Railcar Dumper at Dumper 2	1	0	Partially Enclosed	75%	5.45E-04	2.58E-04	3.91E-05	0.00	0.00	0.00
8 Transfers	8	0	Partially Enclosed	75%	4.36E-03	2.06E-03	3.12E-04	0.00	0.00	0.00
1 transfer through Tower	1	0	Enclosed in Building	99%	5.45E-04	2.58E-04	3.91E-05	0.00	0.00	0.00
1 transfer to pile	1	0	None	0%	5.45E-04	2.58E-04	3.91E-05	0.00	0.00	0.00
Through Tower 8										
Rotary Railcar Dumper at Dumper 2	1	4,580,045	Partially Enclosed	75%	5.45E-04	2.58E-04	3.91E-05	0.31	0.15	0.02
9 Transfers	9	4,580,045	Partially Enclosed	75%	4.91E-03	2.32E-03	3.51E-04	2.81	1.33	0.20
1 transfer through Tower	1	4,580,045	Enclosed in Building	99%	5.45E-04	2.58E-04	3.91E-05	0.01	0.01	0.00
1 transfer to pile	1	4,580,045	None	0%	5.45E-04	2.58E-04	3.91E-05	1.25	0.59	0.09
To Pile SP-1										
Rotary Railcar Dumper at Dumper 2	1	324,874	Partially Enclosed	75%	5.45E-04	2.58E-04	3.91E-05	0.02	0.01	0.00
2 Transfers	9	324,874	Partially Enclosed	75%	4.91E-03	2.32E-03	3.51E-04	0.20	0.09	0.01
1 transfer to pile	1	324,874	None	0%	5.45E-04	2.58E-04	3.91E-05	0.09	0.04	0.01

Fugitive Process Emissions

Type of Enclosure	Control Efficiency	Source of Efficiency Factor
Partially Enclosed	75%	OAPC RACM for Fugitive Dust Sources - Table 2.1.3-3 (Sep 1980)
Enclosed in Building	99%	OAPC RACM for Fugitive Dust Sources - Table 2.1.3-3 (Sep 1980)
Telescoping Chute	75%	Air & Waste Management Association (AWMA) Air Pollution Engineering Manual (1992)

Process Description	No. of Transfers	2023 Throughput[a]	Building Controls		Uncontrolled Emission Factor[b] (lb per ton of throughput)			Controlled Emission Rates (tpy)[c]		
		tpy	Type of Control	Control Efficiency	PM_{filt}	$PM_{10\text{-}filt}$	$PM_{2.5\text{-}filt}$	PM_{filt}	$PM_{10\text{-}filt}$	$PM_{2.5\text{-}filt}$
Loadout from All Piles Except SP-1										
Pile to BC-7 or -11 to BC-12[d]	1	8,593,661	Enclosed in Building	99%	5.45E-04	2.58E-04	3.91E-05	0.02	0.01	0.00
5 Transfers	5	8,593,661	Partially Enclosed	75%	2.73E-03	1.29E-03	1.95E-04	2.93	1.39	0.21
1 transfer to barge	1	8,593,661	Telescoping Chute	75%	5.45E-04	2.58E-04	3.91E-05	0.59	0.28	0.04
Loadout from Pile SP-1										
2 Transfers	2	401,032	Partially Enclosed	75%	1.09E-03	5.16E-04	7.81E-05	0.05	0.03	0.00
1 transfer to barge	1	401,032	Telescoping Chute	75%	5.45E-04	2.58E-04	3.91E-05	0.03	0.01	0.00
Loadout direct to Barge (no pile)										
7 Transfers	7	759,326	Partially Enclosed	75%	3.82E-03	1.81E-03	2.73E-04	0.36	0.17	0.03
1 transfer to barge	1	759,326	Telescoping Chute	75%	5.45E-04	2.58E-04	3.91E-05	0.05	0.02	0.00
							TOTALS	**12.74**	**6.02**	**0.91**

References

[a] Based on annual data from Ore Docks data system

[b] Emission factor based on Drop Equation from AP-42 Section 13.2.4 (see below)

$$E = k\,(0.0032)\,\frac{(U/5)^{1.3}}{(M/2)^{1.4}}$$

k =	0.74	PM - (AP-42, Section 13.2.4, for Particle Size < 30 um)
	0.35	PM_{10} - (AP-42, Section 13.2.4, for Particle Size < 10 um)
	0.053	$PM_{2.5}$ - (AP-42, Section 13.2.4, for Particle Size < 2.5 um)
M =	7.11	Based on mean volume-weighted moisture content of client material samples in 2022 (15 samples)
U =	6.3	mph - (average wind speed at Baltimore-Washington International Airport for 2023)

[c] Emissions calculated using the following equation:

$$PM = N \times T \times (1 - \eta_E) \times (1 - \eta_A) \times EF \times \frac{1}{2{,}000}$$

Where:

PM = Annual PM/PM_{10}/$PM_{2.5}$ emissions (tpy)
N = Number of Transfers
T = Material handling throughput (tpy)
η_E = Enclosure efficiency
η_A = Additional control efficiency
EF = PM/PM_{10}/$PM_{2.5}$ Emission factor, specific to material and process (lb/ton of throughput)

[d] Underground transfer using Enclosed in Building control efficiency

Emission Factor (see footnote b)

Emission Source Type		PM (lb/ton)	PM_{10} (lb/ton)	$PM_{2.5}$ (lb/ton)	PM_{cond} (lb/ton)	Source of Emission Factor
Drop Equation	drop equation	5.45E-04	2.58E-04	3.91E-05	0.00E+00	AP-42 Section 13.2.4 Drop Equation

Wind Erosion from Storage Piles

Exposed Pile Surface Area (9 piles)	5.00	acre	From CSX
Disturbances per day [a]	2.13		Based on throughput to towers + SP-1 throughput and 11,500 tons per train. Each train is one disturbance.
Storage Piles (m/s) =	0.55		Threshold friction velocity, for ground coal AP-42, Table 13.2.5-2.
Erosion Control Efficiency	49.50%		Using half of control efficiency for water suppression with chemicals
Emission Factor[b]**, PM**	1114.09	lb/acre-yr	U.S. EPA, AP-42, Section 13.2.5 - Industrial Wind Erosion (11/06). Equation 2
Emission Factor, PM_{10}	557.05	lb/acre-yr	U.S. EPA, AP-42, Section 13.2.5 - Industrial Wind Erosion (11/06). Equation 2
Emission Factor, $PM_{2.5}$	83.56	lb/acre-yr	U.S. EPA, AP-42, Section 13.2.5 - Industrial Wind Erosion (11/06). Equation 2
Emission Factor[c]**, PM**	6.51	lb/acre-day	AP-42, Section 13.2.5 / 365 * disturbances per day
Emission Factor, PM_{10}	3.26	lb/acre-day	AP-42, Section 13.2.5 / 365 * disturbances per day
Emission Factor, $PM_{2.5}$	0.49	lb/acre-day	AP-42, Section 13.2.5 / 365 * disturbances per day
Actual Emissions[d]**, PM**	3.00	tpy	=PM EF (lb/acre/day) * 365 * Surface Area (acre) * (1-CE (%)) / 2000 (lb/ton)
Actual Emissions, PM_{10}	1.50	tpy	=PM EF (lb/acre/day) * 365 * Surface Area (acre) * (1-CE (%)) / 2000 (lb/ton)
Actual Emissions, $PM_{2.5}$	0.23	tpy	=PM EF (lb/acre/day) * 365 * Surface Area (acre) * (1-CE (%)) / 2000 (lb/ton)

Wet Suppression for Piles

Wet Suppression with Chemicals	99%	Air & Waste Management Association (AWMA) Air Pollution Engineering Manual (1992)

[a] Pile Disturbances per day calculated as follows:

$$\text{Disturbances per day} = \text{Throughput to Towers \& SP}-1\ (\text{tons}) \div \text{Train Capacity (11,500 tons)} \div 365\ \left(\frac{\text{days}}{\text{yr}}\right)$$

[b] Emissions factors calculated using Equation 2 of AP-42, Section 13.2.5.3 and based on hourly wind data from 2018 - 2022 (average mass/area emission factor), threshold friction velocity for ground coal in AP-42 Table 13.2.5-2, and k factors below.

k (PM) = 1
k (PM10) = 0.5
k (PM2.5) = 0.075

[c] Emissions factors calculated as follows:

$$\text{Emission Factor}\left(\frac{\text{lb}}{\frac{\text{acre}}{\text{day}}}\right) = \text{Emission Factor (as calculated by AP}-42)\left(\frac{\text{lb}}{\frac{\text{acre}}{\text{day}}}\right) \times \text{Disturbances per Day}$$

The emissions factor calculated by Equation 2 from AP-42, Section 13.2.5.3 compares wind speed for a single hour to the threshold wind velocity associated with the pile material. Emissions are calculated on a mass/pile area basis for each hour with a wind speed above the threshold wind velocity (i.e., an hour with a wind speed below the threshold wind velocity has zero emissions). These hourly emissions are summed for the year, divided by 365 days (for per day emission rate) and scaled by the number of disturbances per day to account for multiple disturbances of the pile during one day. Wind data available from MDE from 2018-2022 was used for this estimate.

[d] Emissions calculated as follows:

$$\text{Annual PM Emissions}\left(\frac{\text{tons}}{\text{yr}}\right) = \text{Emission Factor}\left(\frac{\text{lb}}{\frac{\text{acre}}{\text{day}}}\right) \times \text{Pile Area (acres)} \times 365\left(\frac{\text{days}}{\text{yr}}\right) \div 2{,}000\left(\frac{\text{lbs}}{\text{ton}}\right)$$

Methane Emissions[a]

Parameter	Value	Units	Comments/Notes
In-situ methane content[a]	147	ft^3/ton	Central Appalachian Underground Mining
Average gas remaining[a]	58%	%	Assumed for when coal leaves the mine
Gas content of coal leaving mine	85.26	ft^3/ton	In-situ content * average gas remaining
Time for 67% of gas to be released[a]	21	days	
% Gas Released after 3 days of transport	9.57%	%	For delivery from mine, estimated as 3 days to Curtis Bay
Gas content of coal after 3 days transport (material arriving at CBP)	77.10	ft^3/ton	Content leaving mine * (1-% Gas Released after 3 days transport)

Parameter	Value	Units	Comments/Notes
Total gas released during 3 days of transit from coal mine to site[b]	8.16	ft^3/ton	Gas content of coal leaving mine * 9.57%
Gas emission rate, per day	2.72	ft^3/ton/day	

Directly Transferred[c]

Parameter	Value	Units	Comments/Notes
Tons coal per year	759,326	tons/year	Based on data from Ore Docks
Gas emission rate	2.72	ft^3/ton/day	
Days on site	0.5	day	Based on site understanding of loads
Methane emissions	1,032,759	ft^3/year	
Methane density (77°F, 1 atm)	0.0410	lb/ft^3	https://www.engineeringtoolbox.com/methane-d_1420.html
Methane emissions	42,343	lb/year	
Engineering conversion factor	2,000	lbs/ton	Engineering conversion factor
Methane emissions	21	tons/year	

Stored on Site

Parameter	Value	Units	Comments/Notes
Gas emission rate	2.72	ft^3/ton/day	
Average Stored Onsite (daily)	250,000	tons	Engineering estimate
Days on site	365	days	
Methane emissions	248,218,250	ft^3/year	
Methane density (77°F, 1 atm)	0.0410	lb/ft^3	https://www.engineeringtoolbox.com/methane-d_1420.html
Methane emissions	10,176,948	lb/year	
Engineering conversion factor	2,000	lbs/ton	Engineering conversion factor
Methane emissions	5,088	tons/year	

Methane Emissions Summary

Process	*Methane Emissions (tons/year)*
Directly transferred (on-site 1/2 day)	21
Material with interim storage	5,088
Total	**5,110**

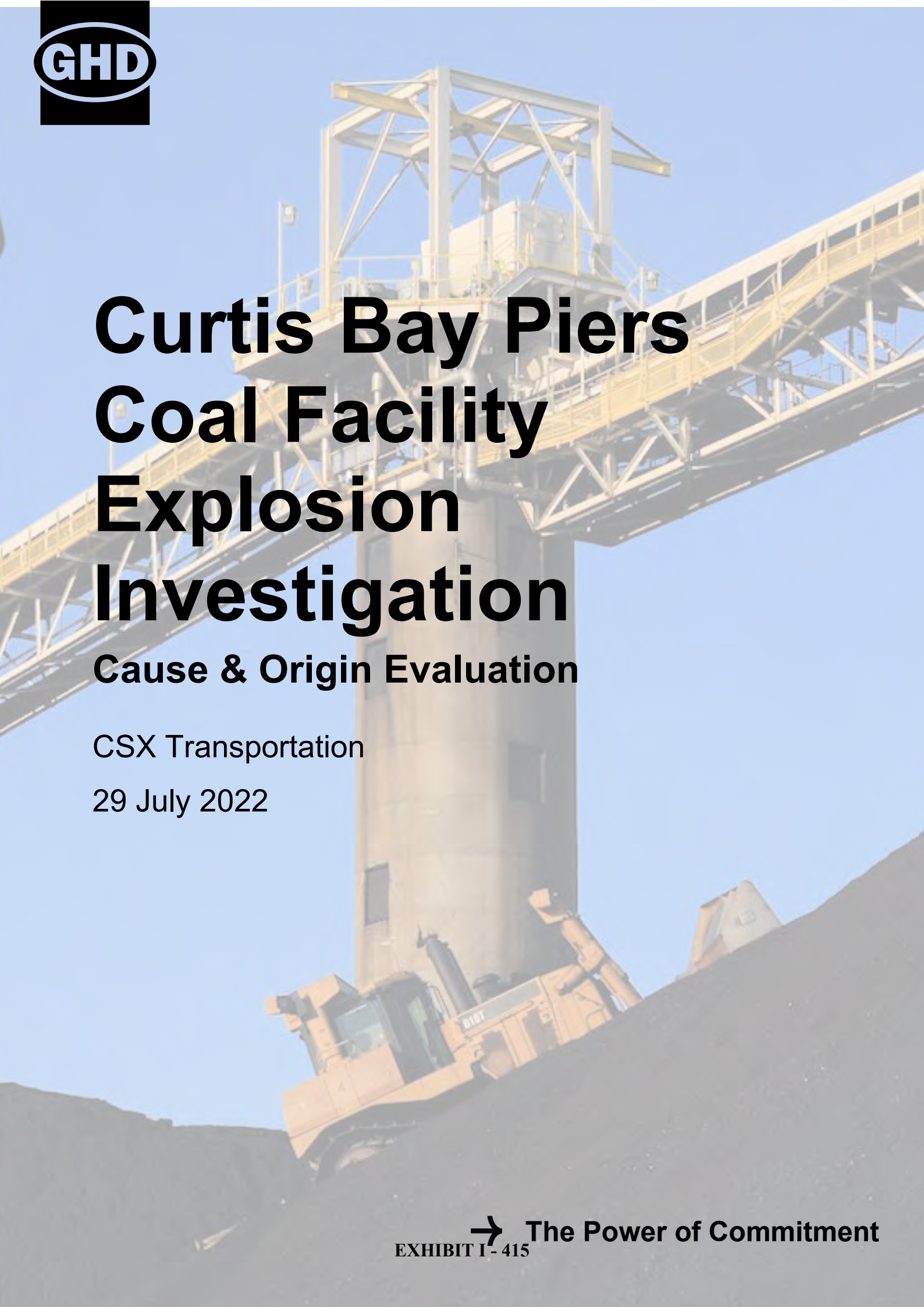
References/Notes

[a] This approach is based on: "An Improved Inventory of Methane Emissions from Coal Mining in the United States" David Kirchgessner, U.S. EPA, Stephen D. Piccot and Sushma S. Masemore, Southern Research Institute (1 November 2000). Provides data for CY 1995. Data from Table 6, Post-mining Emissions Inventory Estimation Method

[b] Another 67% will be released over 21 days. Assume this value is linear to get a daily emission rate for coal on-site.

[c] Assume coal has a residence time on site of 0.5 day.

Attachment W



Curtis Bay Piers Coal Facility Explosion Investigation

Cause & Origin Evaluation

CSX Transportation

29 July 2022

The Power of Commitment

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Executive Summary

On December 30, 2021, at approximately 11:24 AM US Eastern Standard Time, an explosion occurred in the North Reclaim Tunnel of the Curtis Bay Piers (CBP) Coal Facility in Baltimore, Maryland (hereafter, “the facility”). GHD was requested by CSXT to lead an investigation team tasked with determining the cause of the explosion. The investigation team was comprised of personnel with decades of experience in prevention of, responses to, and investigations of fires and explosions across a wide range of industries and scenarios

The North Reclaim Tunnel of the facility is comprised of an approximately 770-foot-long concrete tunnel running from north to south. An approximately 147-foot concrete escape tunnel extends westward from the north end of the North Reclaim Tunnel (hereafter, “North Escape Tunnel”). The North Reclaim Tunnel contained coal feeders, conveyor structure, and associated equipment. The 28 coal feeders were spaced equally from one another throughout the tunnel and were numbered from 4 through 31 from north to south. The North Escape Tunnel was empty with the exception of lighting and a ventilation system designed for air supply to the North Escape Tunnel.

The investigation focused upon visual inspection of the north main and escape tunnels and debris from the explosion, in an effort to identify two primary properties of the explosion: the location of its origin, and the potential initial sources of fuel and ignition. The investigation team preserved evidence such as loose debris and equipment to the extent possible, given constraints of safety and ongoing operational needs. Video footage of the explosion was collected from both on- and off-site sources, and was reviewed in detail as a further aide to understanding the location of the origin of the explosion, and its initial fuel and ignition sources. Employee interviews were conducted to potentially assist with understanding the nature and timing of the event. Samples of the coal being transferred at the time of the event were obtained and analysed for combustible properties. Ongoing monitoring and documentation of operations within the South Reclaim Tunnel have also informed the investigation in regards to potential atmospheric conditions at the time of the event.

Based upon the physical and video evidence of the explosion, the most likely location of origin of the explosion was between feeders 7 and 17 within the North Reclaim Tunnel. The explosion likely was initiated by the ignition of a localized flammable atmosphere comprised of methane released from the coal, and a relatively low concentration of coal dust made airborne by the operating conveyor, which enhanced the flammability of the released methane. This localized atmosphere was made possible by low ventilation rates, which did not allow for adequate dissipation and removal of methane and coal dust. This initial combustion event would have generated a pressure wave travelling both north and south through the North Reclaim Tunnel that increased the quantity and density of airborne coal dust within the tunnel. This coal dust is believed to have fueled further combustion through the tunnel and out of the south surface entrance and North Escape Tunnel of the North Reclaim Tunnel. Combustion and blast pressures increased along the tunnel’s length, resulting in the visible plume that exited the south surface entrance, which damaged the adjacent central coal transfer tower.

Based on the above, the localized congregation of methane and airborne coal dust represents a cause of the December 30, 2021 explosion. The likely cause of the build-up of this flammable atmosphere was insufficient ventilation of the North Reclaim Tunnel, which is therefore also considered a cause. The precise source of the ignition has not been determined but is believed to have been located within the North Reclaim Tunnel between vertical Feeder 7 and 17.

CSXT is continuing its design of a new ventilation system for the North Reclaim Tunnel. Based on early analysis of the explosion, CSXT added monitoring devices and additional ventilation to the South Reclaim Tunnel. Ongoing monitoring of the South Reclaim Tunnel continues to demonstrate the effectiveness of increased ventilation coupled with dust cleanliness protocols to significantly mitigate the possibility of a flammable atmosphere within the tunnel. This information was used in designing the North Reclaim Tunnel to include monitoring devices, higher air flow, additional water sprays, skirting of conveyors, grounding of equipment and installation of electrical fixtures to meet appropriate electrical codes.

This report is subject to, and must be read in conjunction with, the limitations set out in section 1.0 and the assumptions and qualifications contained throughout the Report.

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1. Introduction

This report summarizes the findings of the Curtis Bay Piers Coal Facility Explosion investigation team as of July 25, 2022. These findings are based upon the best judgment and technical knowledge available, at the time of writing.

1.1 Purpose of this report

The purpose of this report is to provide a summary of the findings of the investigation team as of July 25, 2022. Further information may be forthcoming which would add clarity to certain aspects of the investigation; however, the most actionable aspect of the root cause investigation – fuel source and mitigation potential – is complete. This report may also be used to inform best practices for the ongoing safe operations of the CBP Coal Facility, using lessons learned from this incident and associated recommendations for future operations.

1.2 Scope and limitations

This report: has been prepared by GHD for CSX Transportation and may only be used and relied on by CSX Transportation for the purpose agreed between GHD and CSX Transportation as set out in section 1.1 of this report.

GHD otherwise disclaims responsibility to any person other than CSX Transportation arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.

Accessibility of documents

If this report is required to be accessible in any other format, this can be provided by GHD upon request and at an additional cost if necessary.

GHD has prepared this report on the basis of information provided by CSX Transportation and others who provided information to GHD, which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

1.3 Assumptions

GHD assumes that the information provided by CSXT and its employees, for example in relation to employee interviews, is reliable and trustworthy. GHD further assumes that all relevant information available to CSXT management, and of which CSXT management is aware, has been made known and available to GHD during the course of this investigation. GHD assumes that all necessary access to facilities and information has been made known and available during the course of this investigation.

2. Description of Facility

The Curtis Bay Piers Coal Facility is comprised of incoming and outgoing rail service, a railyard, a coal transfer yard, railcar offloading infrastructure, conveyor infrastructure, pier loading facilities, and associated office, maintenance, and operations buildings. The focus of this report will be primarily on the coal transfer and storage yard and conveyor infrastructure.

The coal transfer yard is in the middle of the facility and is comprised of 8 primary stacking tubes (towers) which characterize the appearance of the facility. The transfer yard collects incoming coal into piles created by

transferring the coal along conveyors at the tops of the stacking tubes, down through the tubes, and into piles. There are five primary stacking tubes on the north side, and three on the south side of the transfer yard. In between the north and south sides of the transfer yard is a central transfer tower which contains conveyor infrastructure capable of diverting coal a number of different ways. Figure 1 in Appendix A shows an overview of the north coal transfer yard, along with annotated points of interest to the event and the investigation.

The explosion occurred on the north side of the transfer yard, within the North Reclaim Tunnel, which lies directly underneath the yard surface, upon which coal piles are formed. The coal from these piles is transferred to the conveyor system in the tunnel through the use of vibrating feeders mounted to openings in the yard surface. Figure 1 in Appendix B shows the general layout of the North Reclaim Tunnel, with its two parts – the North Reclaim Tunnel and the North Escape Tunnel.

2.1 North Reclaim Tunnel

The North Reclaim Tunnel contains the conveyor structure including the 28 vibratory feeders (commonly labelled VF-4 through VF-31) which are mounted to corresponding openings in the coal transfer yard. Figure 1 in Appendix B shows the general layout of the North Reclaim Tunnel. Discussions regarding the North Reclaim Tunnel operations will be discussed in Section 2.3 below, in context with the South Reclaim Tunnel, whose operations have continued since the event. The North Reclaim Tunnel is approximately 770 feet in length, with a flat section from VF-4 through VF-21, and ramped section gaining in elevation near VF-22.

2.2 North Escape Tunnel

The North Escape Tunnel was expanded in late 2019 / early 2020 to provide a better means of egress from the North Reclaim Tunnel. Appendix C contains the construction plan drawings for the escape tunnel enlargement / replacement.

Prior to installation of the North Escape Tunnel, the only means of egress from the north end of the North Reclaim Tunnel was a 36-inch diameter exhaust tunnel leading westward along the same path as the new North Escape Tunnel. This 36-inch diameter tunnel also served as an exhaust ventilation duct for the entirety of the North Reclaim Tunnel. Air was exhausted through a 42-inch fan mounted to the outlet of the tunnel. The 2019/2020 North Escape Tunnel expansion changed the ventilation system from an exhaust to a supply configuration. The expansion included equipping the tunnel with circular ducts along the ceiling of the tunnel, leading from a ventilation system designed to provide ventilation for occupation of the escape tunnel, at a design flowrate of approximately 4,000 cfm. Figure 2.2.1 shows the conditions of the North Escape Tunnel after the expansion, and prior to the explosion.

Figure 2.2.1. North Escape Tunnel as seen on July 9, 2020.



2.3 South Reclaim Tunnel

The South Reclaim Tunnel is comprised of two parts – a main tunnel containing coal transport infrastructure, and an escape tunnel. The South Reclaim Tunnel and South Escape Tunnel run along the same north-south axis, in

contrast to the North Reclaim Tunnel, whose escape tunnel is at an angle slightly more acute than perpendicular. A generic figure depicting the layout of the South Reclaim Tunnel is included in Figure 2 in Appendix B.

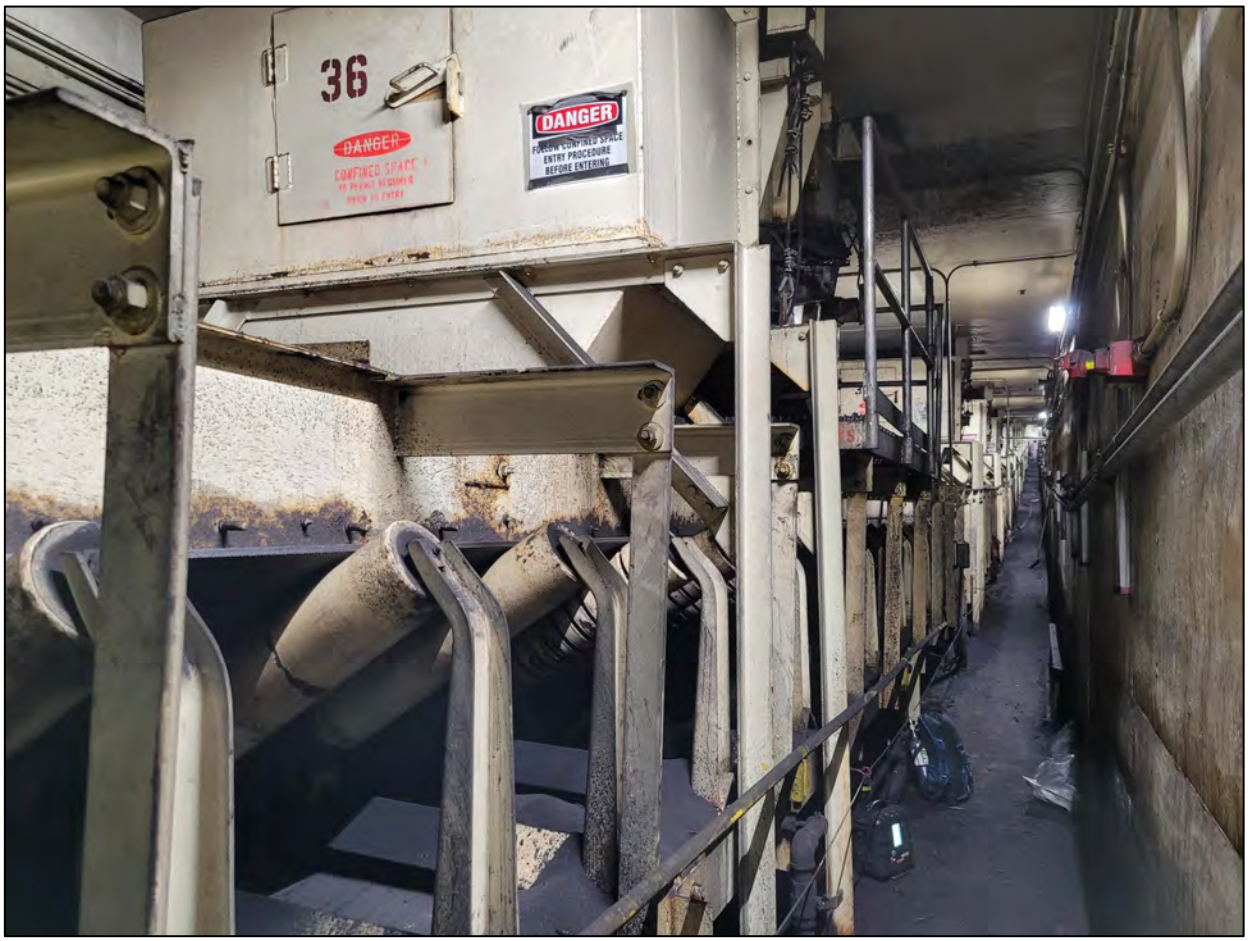
The South Reclaim Tunnel provides insight as to the operation of the North Reclaim Tunnel, as it includes similar operating equipment (vibratory feeders – VF-32 through VF-48, conveyor structure, lighting, exhaust conditions, and escape tunnel) and similar operational conditions to its counterpart to the north. Thus, the South Reclaim Tunnel has been used as an effective go-by during loading operations from the south coal transfer yard during 2022 and to inform the investigation team.

Each vibratory feeder is designed to provide up to 900-1,000 tons per hour of coal through the feeder holes in the coal transfer yard, while in reality they generally operate at approximately 500 tons per hour. Any coal accumulating in the walkways on either side of the conveyor is washed periodically to a sump at the south end of the tunnel. A view of washing towards the sump is shown in Figure 2.3 below.

Figure 2.3.1. Washing walkways of South Reclaim Tunnel. View towards north from tail pulley enclosed in yellow grating.



Figure 2.3.2. View from VF-36 along walkway towards the south of the South Reclaim Tunnel



2.4 South Escape Tunnel

A similar expansion of the escape tunnel in the South Reclaim Tunnel was undertaken in early 2021 (similar to what was done in the North Reclaim Tunnel, as described in Section 2.2). A photograph of the South Reclaim Tunnel ventilation system from the smaller 36-inch tunnel / duct is depicted in Figure 2.4.1 below. This would have been a similar arrangement to the previous exhaust fan on the North Escape Tunnel). A similar ventilation system to that of the new North Escape Tunnel was installed during the expansion of the South Escape Tunnel to its current dimensions. Operational tests of the new ventilation system, which was designed to provide fresh air to the escape tunnel only, showed performance consistent with its design flowrate of approximately 4,000 cfm. This would be similar to the flowrate present in the North Reclaim Tunnel, which shared the same cross-sectional dimensions and escape tunnel ventilation specifications.

Figure 2.4.1. South Reclaim Tunnel exhaust as seen on July 9, 2020.



2.5 Railcar Offloading Infrastructure

Railcars entering the facility are decoupled from one another, and enter one of three dumper sheds, where they are turned upside down using a counterweighted platform system. The coal is loaded by means of hoppers and

conveyors into the network of conveyors leading to the transfer tower, or directly to the piers for loading onto ships and barges.

GHD has been monitoring air quality in the dumper sheds since the explosion occurred as an additional means of safety precautions. GHD continues to work with CSXT to develop long-term monitoring solutions as warranted.

Figure 2.5.1. Air monitor in top level of railcar dumper shed. The yellow arm in the bottom of the picture is part of the counterweighted platform.



3. Description of Incident

On December 30, 2021, at approximately 11:24 am US Eastern Standard Time, an explosion occurred in the North Reclaim Tunnel at the Curtis Bay Piers Coal Facility (“the facility”). A pressure wave was observed coming from the North Escape Tunnel. Multiple plumes of exhausted coal dust were observed being emitted from the coal transfer yard. A fireball was observed exiting the south portal of the North Reclaim Tunnel.

3.1 Operations at Time of Incident

At the time of the incident, up to 6 vibratory feeders were in operation, moving coal from piles surrounding Tower 1 into the North Reclaim Tunnel. As each vibratory feeder came online, personnel working the piles would ensure the feeders were moving coal and operating correctly. Bulldozers would push coal down through the coal piles into the feeder holes and vibratory feeders. As each vibratory feeder moved coal, crevasses would form in the coal piles where coal was moving to the conveyer system in the tunnel below. The bulldozers on the piles would push the coal towards the feeder holes to ensure a continuous supply of coal was entering the feeder holes.

On the morning of the explosion, employees reported the tunnel had just been cleaned, and there was very little accumulated coal in the walkways. The general consensus was that the tunnel was as clean as it had ever been. As the coal was beginning to move along the conveyor, it was reported to be very wet as well, with more than one employee describing the coal entering the transfer tower as “black rain” due to how wet the coal was. Some lights inside the tunnel were undergoing maintenance, as some of the new LED lights which had recently been installed were not working and were being repaired.

3.2 Employee Operations

Three employees stated they were in the tunnel at approximately 10:00 am starting the feeders and evaluating their operation. These employees were responsible for operating bulldozers on the coal piles surrounding Tower 1; two heavy equipment operators were training a third junior operator to use the bulldozers. The employees were also responsible for going into the North Reclaim Tunnel to apply a jet of water, if necessary, to the vibratory feeders in the event they were not moving coal. At 10:00 am on the day of the event, the three employees had been in the tunnel applying water to VF-6 to get coal moving. The two bulldozer operators had resumed their positions on the pile, and the junior operator had taken a position at the base of the pile to observe their operations when the explosion occurred.

3.3 Feeder Operations

The vertical / vibratory feeders (commonly abbreviated “VF”) had three essential setpoints: manually engaged in the tunnel, activated in the control room, and remotely turned on at the coal pier to control the total flowrate of coal. At the time of the explosion, VF-5 through VF-10 had been activated in the control room and were being turned on at the coal pier as needed. Feeder 10 had some difficulty being engaged, and a fuse and coil had to be replaced in the control room, which was located next to the transfer tower (i.e., not in the tunnel). As noted in Section 3.2, VF-6 needed a water jet applied to get coal moving. The other feeders were noted by facility personnel to have operated normally. All 6 feeders were operating at the time of the explosion.

4. Scope of Investigation

The scope of the investigation was to determine the source of the explosion and to advise CSXT on operational changes which may have been warranted by the findings of the investigation. The investigation team relied on information provided by CSXT and were satisfied that all requests for information were met. The team was limited to some degree by the extent of damage to the tunnel, and by safety and operational considerations. The damage to the tunnel was extensive; thus, the nature and condition of the equipment prior to the explosion was in some cases difficult to deduce. Safety considerations precluded evaluation of certain portions of the tunnel in an undisturbed state; for example, the southern-most portion of the North Reclaim Tunnel was inaccessible due to structural stability concerns and limited means of physical access due to the build-up of debris. Operationally, removal of the debris needed to be conducted as a part of recovery efforts; therefore, some of the debris within the tunnel was only made visible through its forcible removal, which required some destructive actions that may have caused further damage beyond what resulted from the explosion.

The investigation team proceeded to gather and preserve all the evidence possible, despite these constraints. Every effort was made to capture the equipment in its final location, with annotated photographs to describe its condition. This information has been archived and may be produced upon request to CSXT as needed. Investigation of individual pieces of evidence has been undertaken with care and consideration of other potentially interested parties and in some cases has slowed the investigation process. The investigation team has worked with CSXT and other stakeholders to find an appropriate balance to these sometimes conflicting priorities.

4.1 Investigation Project Team

Dyron Hamlin, a GHD Principal chemical engineer and certified industrial hygienist (CIH) with specific experience in response to and investigation of emergency events of this nature, was requested by Mike Austin of CSXT, to lead the investigation team. The investigation team was also comprised of members of EFI Global, SciRisq, and

other CSXT personnel. James Wesevich and David Beachy of EFI Global were directly involved with on-site activities, and Andrew Staszak of SciRisq supported the team with Computation Fluid Dynamics (CFD) modelling expertise. Additional personnel were involved in ongoing operations and were engaged for their experience and expertise related to similar circumstances, and their individual expertise has also been relied upon by the primary investigation team. Their contributions are acknowledged and appreciated. CVs for the investigation team are provided in Appendix H.

4.2 Investigation Objectives and Strategy

The investigation team was charged with determining the source of the explosion, and to advise CSXT personnel of any immediate operational changes which should be instituted to ensure employee safety in ongoing operations at the CBP facility as well as other coal transfer facilities. With these objectives, the investigation team set about evaluating the physical evidence available, including:

– Off-site impacts to buildings which would indicate the extent of overpressure effects (broken windows, damage to building structures, etc.)
– Off-site impacts which would indicate material that was released as a result of the explosion and combustion events
– On-site debris field investigation, to inform the possible source of the initiating event, as well as the direction and extent of overpressure
– Tunnel walk-throughs, to evaluate structural damage which might give insight to the source of the explosion as well as the extent of overpressure based on structural damage

In addition to the physical evidence, the investigation team also reviewed objective evidence from video footage collected both on- and off-site. Finally, subjective accounts were obtained through interviews of both off-site and on-site personnel with first-hand observations of the event.

5. Methods of Investigation

The investigation team used a multi-pronged approach to evaluating the effects of the explosion, with a view to determining its origin, and to advise corrective actions to prevent future loss. The primary methods used for investigating the explosion were:

– Visual Investigations of Tunnel
– Collection and Mapping of Debris
– Surveillance Video Reviews
– Modelling of Pressure Wave Propagation
– Evaluation of Coal Samples
– Evaluation of South Tunnel Operations
– Employee Interviews

The following sections will detail the results of each of these methods; further detail is available in the Appendices.

5.1 Visual Investigations of Tunnel

Investigation team personnel conducted dozens of walkthroughs of the tunnel after the incident occurred. The tunnel was deemed structurally sound by an on-site third-party structural engineer prior to entry. Access was limited to the walkway along the western wall of the North Reclaim Tunnel, from the north end of the tunnel to VF-27. Beyond VF-27 towards the south was deemed to be potentially structurally unsound due to the flaring of the ceiling of the tunnel at that location.

Each item of debris in the tunnel was marked and geolocated and is archived in a database which may be made available upon request to CSXT. The items were photographed and numbered according to their position in the

North Reclaim Tunnel. An example presentation is provided in Appendix D, showing the state of the vertical / vibratory feeders and conveyor structure following the explosion.

Of particular note and interest to the investigation team was the apparent direction of flow, as noted on Figure 1 in Appendix B, and elsewhere in Appendix D. Damage to VF-4 and the tail pulley (at the northern end of the tunnel) were also of particular note and are addressed in more detail in Section 5.4. Images of each may be seen in Appendix D. In short, the damage at the north end of the tunnel, by the intersection with the North Escape Tunnel, indicated a secondary explosion or otherwise reflected overpressure which caused more damage relative to the feeders near it, or within the North Escape Tunnel.

5.2 Collection and Mapping of Debris

Debris was released from the tunnel from three primary vectors:

– Released from the North Escape Tunnel, along with the pressure wave, towards the west into the railyard and as into the neighborhood to the west of the facility property
– Released vertically from the open feeder holes in the North Reclaim Tunnel and primarily depositing on the facility property
– Released towards the south from the south portal of the North Reclaim Tunnel, along with the fireball, primarily impacting the central transfer tower.

5.2.1 Off-site Debris and Deposition

GHD conducted a survey of the surrounding neighborhood and found deposition of coal dust (as distinguished from combusted material) in an approximately 12-block area to the west of the facility. The region was consistent with what would be expected to have emanated from the escape tunnel, and possibly from the vertical releases from the open feeder holes advected by winds.

5.2.2 On-site Debris Field

The on-site debris field was located directly west of the North Escape Tunnel portal, and it was comprised of material released primarily from the escape tunnel. This included the ventilation system, escape tunnel lights, electrical and alarm systems associated with the escape tunnel, ducts from the escape tunnel, and the oxygen tank and cart that were located inside the escape tunnel. As noted in Section 5.3 below, the propane tank which was released from the North Escape Tunnel was located on the adjacent property in the direction of the escape tunnel portal, after having come to rest next to the warehouse wall under construction to the west of the facility.

5.2.3 Debris inside North Reclaim Tunnel

Debris inside the North Reclaim Tunnel included:

– All vertical / vibratory feeders, table shaker, and hoppers
– Conveyor structure – belt, frame, and pulleys
– Light fixtures
– Loose electrical conduit and junction boxes
– Two ladders – one fiberglass and one aluminum
– Two gas cylinders which were used in cutting / replacing conveyor infrastructure – one oxygen, one propane. The propane cylinder was found to be slightly leaking and was recovered by CSXT Hazmat personnel on December 31.

To the extent possible, the debris inside the North Reclaim Tunnel was logged and collected for further investigation as needed. As of the time of the preparation of this report, the investigation team has had opportunity to evaluate all of the debris to a satisfactory degree, with the exception of some of the recently-installed LED light fixtures and conduit. All of the debris removed from the tunnel was documented, geolocated, and photographed as conditions allowed.

5.3 Surveillance Video Reviews

Surveillance video was invaluable to the investigation team to validate employee eyewitness accounts, and to explain the timing and speed of the event. Specifically, three primary videos proved most valuable:

– Off-site video from a neighboring auto salvage yard facility, Beltsville Auto Parts
– On-site video facing west, viewing bulldozer activities on the coal pile near Tower / Stacker Tube 1
– On-site video facing south, located along the eastern side of the Towers / Stacker Tubes

The off-site surveillance video showed a number of compelling phenomena. The vestibule of the North Escape Tunnel was blown outwards, and the resulting pressure wave was apparent from the surveillance video. The investigation team was able to slow the video down and analyze the timing of the North Escape Tunnel pressure wave relative to the fireball exiting the south portal of the North Reclaim Tunnel. Given the limitation of a pressure wave propagating through the atmosphere at the speed of sound, the investigation team was able to estimate that the source of the initial ignition would have had to have been somewhere near the midpoint of the south portal of the North Reclaim Tunnel and the west portal of the North Escape Tunnel. The video provided was at a rate of approximately 28 frames per second. On the video, approximately four frames elapse between the appearance of the pressure wave at the portal of the North Escape Tunnel and the fireball appearing at the south portal of the North Reclaim Tunnel. This indicates the time between the appearance of those two effects is approximately 0.1-0.2 seconds. If the pressure source originated from the same location within the tunnel, the distance to either location would be within 100-200 feet of the other, based on the speed of sound of approximately 1125 feet per second. This places the initiating event near the middle of the tunnel, which is consistent with other aspects of the investigation team's evaluation.

A propane cylinder from a cutting torch assembly and its skid were visible being projected from the North Escape Tunnel. The investigation team closely examined the possibility of the involvement of propane from one of the two cylinders in the tunnel as a potential fuel source for the explosion. Upon review of the surveillance video, unignited propane was visibly leaking from the cylinder projected from the escape tunnel upon colliding with the warehouse wall, as depicted on Figure 4 in Appendix B. For this reason and others discussed elsewhere, the propane cylinder was ruled out as a cause of the explosion.

The on-site video facing west showed the bulldozers operating on the coal pile near Tower / Stacker Tube 1. The ventilation system that was mounted to the top of the North Escape Tunnel vestibule was reported by employees to have been projected vertically to nearly the height of the stacking tubes (approximately 150 feet). Debris is visible at the reported location in this on-site video.

The on-site video facing south provided some insight into the fireball which emanated from the south portal of the tunnel. Review of this video was helpful to validate some of the modelling which was conducted, and is discussed in Section 5.4.

These videos have been archived and may be made available upon request to CSXT.

5.4 Modelling of Pressure Wave Propagation

The investigation team used an industry standard computational fluid dynamics (CFD) model called CAMBER to evaluate the pressure propagation throughout the tunnel. CAMBER is a simulation domain that uses **C**artesian **A**daptive **M**eshing for **B**last, **E**xplosion and **R**elease scenarios. It applies hydrocode and CFD techniques to simulate a variety of problems to include simulation of high explosives, and gas-phase/ complex combustion. It uses an object-oriented structure, applying a finite-volume formulation on an automatic mesh refinement (AMR) framework.

The investigation team created CAD drawings of the North Reclaim Tunnel which included features significant to the propagation of a pressure wave and combustion, such as the feeder holes which were open to atmosphere, the presence of vertical feeders and conveyor structure as interfering geometries within the tunnel, and the varying geometries of the North Reclaim Tunnel and North Escape Tunnel. These CAD drawings were imported to CAMBER using a utility that allows for the model to define complex geometries.

The CAMBER model inputs were varied to produce a number of scenarios, which were then compared to observations of damage, debris, and other physical evidence that remained from the explosion. Inputs such as the location of the initiating event, the combustible fuel composition, and the ignition source and timing were varied. Based on the results of the modelling, the investigation team confirmed the likely location of the initiating event as originating between VF-7 and VF-17, with areas closer to VF-17 more likely. The models affirmed the presence of a pressure wave build-up at the western portal of the North Escape Tunnel, as well as a combustion event culminating at the south portal of the North Reclaim Tunnel. They also affirmed the fuel composition as most likely a mixture of methane and entrained coal dust, with secondary and tertiary energetic events / deflagrations at the north end of the North Reclaim Tunnel and the area near VF-21, with a ramp-up in pressure from VF-21 to the south portal.

A full summary of the modelling approach and results is available as Appendix E

5.5 Coal Samples

GHD collected coal samples from the conveyor structure to characterize the possible accumulated dust which may have contributed to a secondary and / or tertiary combustible dust explosion. The samples were sent to EMSL Laboratory in and had them analyzed for combustibility. The results of the analysis were incorporated in the modelling described in Section 5.4 above, and in the modelling results described in further detail in Appendix E. A full copy of the sample results is also included in Appendix F.

5.6 South Tunnel Evaluations

The South Reclaim Tunnel has the same cross-sectional area, a similar ramp-up design towards its exit portal, and nearly identical equipment to that installed in the North Reclaim Tunnel prior to the explosion. As such, it provided a useful go-by for conditions that may have been present in the North Reclaim Tunnel prior to the explosion. The investigation team used observations from the South Reclaim Tunnel in its determination of the cause and origin of the explosion, and to continue to improve operations at the facility.

5.6.1 Monitoring During Operations

Since the restart of the South Reclaim Tunnel operations, GHD has been monitoring the air continuously for both gas and particulate matter concentrations during operations. In addition, GHD has assisted CSXT personnel with monitoring the ventilation conditions within the tunnel. Aside from brief excursions for methane, generally in the range of less than 10% of the lower explosive limit (LEL), levels have been consistently well below lower explosive limits or non-detect for either gases or particulate matter levels similar to background air, and well below any fractional threshold of the LEL that would trigger a temporary cessation of operations.

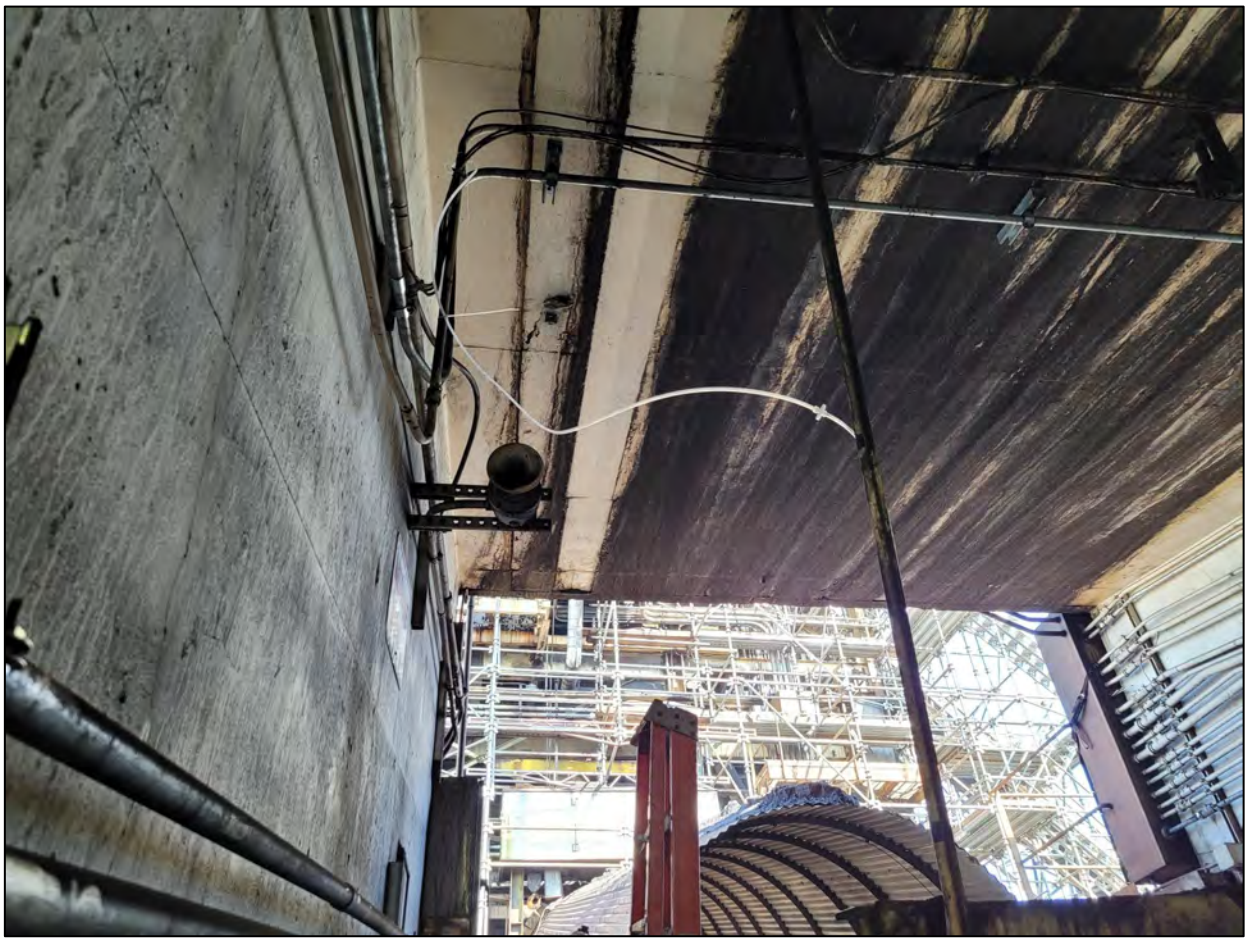
5.6.1.1 Air Monitoring

Air monitoring has been conducted inside the South Reclaim Tunnel for the purpose of ensuring operational safety and health for workers inside the tunnel. Air monitoring has been conducted using both handheld and telemetry-system air monitoring devices. Honeywell / RAE Systems AreaRAEs have been stationed throughout the South Reclaim Tunnel since operations resumed. These units are equipped with combustible gas sensors capable of detecting methane. Particulate matter monitoring has also been conducted to characterize conditions for the purpose of ensuring operational safety and health for workers inside the tunnel while coal is being transferred.

Figure 5.6.1. Monitor on floor of South Reclaim Tunnel with sample tube leading to higher elevation



Figure 5.6.2. Monitoring high location near top of tunnel using tubing.



5.6.1.2 Ventilation Rate Monitoring

During the restart of the South Reclaim Tunnel, CSXT installed a temporary fan capable of providing up to 100,000 cfm airflow. At normal idle, the fan provides 80,000 cfm airflow, which would yield a theoretical linear flowrate of 500 feet per minute through the South Reclaim Tunnel. The mining industry uses a layering number analysis method to ensure adequate ventilation in underground coal mines. Typical linear velocities that are recommended for places where workers are present, and to prevent methane layering near ceilings or creating pockets in tunnels are reported to be 200-600 feet per minute.[1,2] This is consistent with observations in the South Reclaim Tunnel.

[1] Vinson, R.P. et al., METHANE ACCUMULATIONS IN COAL MINE ROOF CAVITIES, 1978, USBM Report of Investigations, RI 8267
[2] McPherson, M.J. "Subsurface Ventilation Engineering." Accessed at **https://wipp.energy.gov/Library/Information_Repository_A/Supplemental_Information/2019/References/McPherson.%202009.pdf**.

Figure 5.6.3. Temporary ventilation fan installed at south portal of South Reclaim Tunnel.



5.6.2 Review of Electrical Installations

CSXT hired Weiser Engineering, P.C., a third-party electrical engineer licensed in the State of Maryland to evaluate the electrical installations in the South Reclaim Tunnel. Specifically, concerns were raised regarding

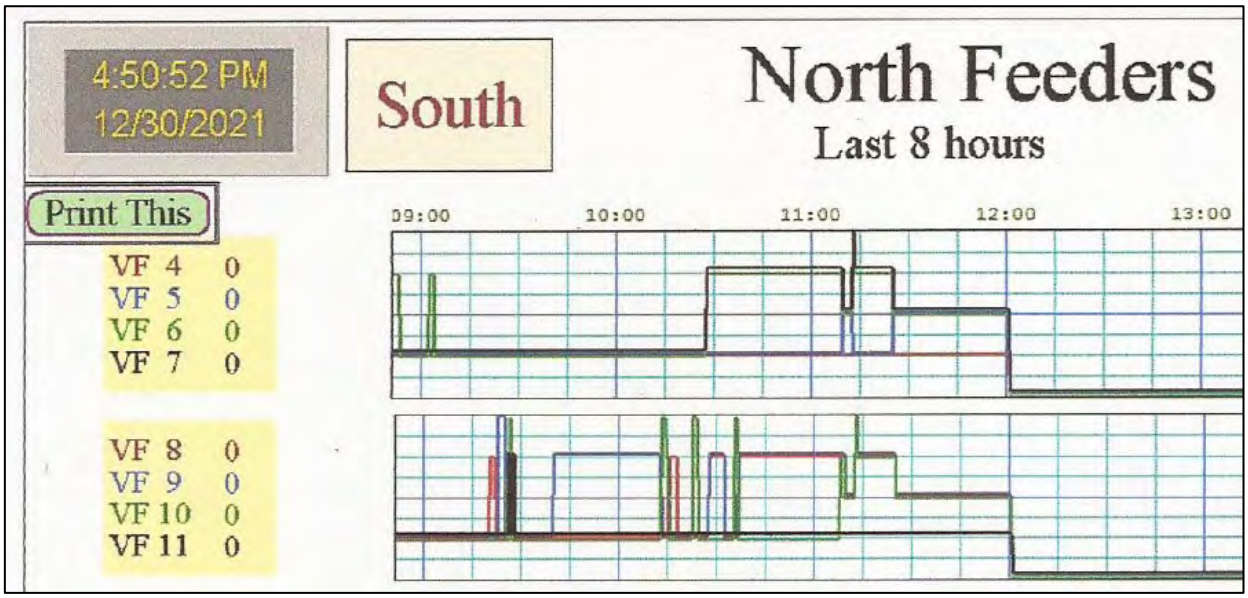
some of the electrical systems, including the recently installed LED light fixtures. The inspection of the South Reclaim Tunnel revealed a number of installations which did not meet National Electrical Code Article 500 and 501 requirements for Class I, Div II locations. A full copy of the report is provided in Appendix G.

5.7 Employee Interviews

The investigation team interviewed or reviewed interviews of employees present at the facility on the day of the event. These interviews are documented and witness statements were obtained and may be made available for review upon request to CSXT.

Additional detail was provided by Bruno Reyntjens of PCMA Systems, Inc. regarding the control system operation of the feeders during the time of the explosion. He reported that no feeders were being turned off or turned on in the moments before the explosion. A graph of the system is provided in Figure 5.7.1 below, with the intermittent activation of VF-5 through VF-10 visible on the graph.

Figure 5.7.1. Graph of feeder operation leading up to the time of the explosion.



6. Results of Investigation

Based on the above strategy, methodology, and resulting evaluations, the investigation team concluded that the source of the initiating explosion was a combination of methane and coal dust accumulating in the North Reclaim Tunnel between VF-7 and VF-17. Propane was ruled out as a probable fuel due to examination of the regulators and valves recovered from the tanks, which were found to be in the closed position; due to the presence of uncombusted propane leaking from the propane cylinder which struck the warehouse wall; and due to the more probable presence of methane and coal dust. There was also no evidence that certain other structures and equipment damaged during the incident, including the concrete structure of the North Reclaim and North Escape tunnels, the continuous conveyor, and the vertical feeders, would have been causes of the explosion.

The ventilation of the tunnel was inadequate to effectively disperse methane and coal dust produced during the movement of coal in the tunnel, as evidenced by ongoing operations in the South Reclaim Tunnel – namely, when ventilation is not provided in the South Reclaim Tunnel, ongoing monitoring shows that levels of methane can reach up to a maximum of 44% of the LEL for methane, or 2.2% methane by volume. This level was not representative of normal operations; LEL has exceeded 5% on few occasions.

The theory of the explosion is settled on the following facts:

1. Methane from the coal, along with some coal dust, provided the initial fuel

2. Inadequate ventilation allowed the atmosphere to build up flammable levels of this fuel
3. An ignition source for the fuel caused an initiating event between feeders 7 and 17 in the North Reclaim Tunnel
4. This created a lofting event that unexpectedly increased the concentration of coal dust sufficient for combustion in other parts of the tunnel, leading to secondary and tertiary energetic events inside the North Reclaim Tunnel.

6.1 Initial Explosion

The initial explosion likely occurred between VF-7 and VF-17, and most likely was fueled by methane and coal dust. As noted in Appendix E, flammable gases will enhance the combustibility of dust, and dust will enhance the flammability of commingled gases. It is likely that the poorly ventilated tunnel, with an estimated linear air flowrate of approximately 25 feet per minute, allowed this mixture to accumulate. An ignition source within the tunnel caused this mixture to ignite and create a pressure wave that propagated north and south through the tunnel.

6.2 Secondary Energetic Event / Reflection

The pressure wave traveling north in the tunnel encountered the wall at the north end of the tunnel, and was magnified by reflection, as well as the additional confinement at the junction due to tunnel geometry (for example, an approximately 2-foot drop in elevation between the floor of the escape tunnel and the floor of the main tunnel. Pressure built slowly due to the confinement by the vestibule enclosure at the west portal of the escape tunnel until it failed outwards and released the pressure wave, in the absence of combustion. This release is partially evidenced by the presence of coal dust on the north wall of the escape tunnel, and absence of coal dust on the south wall of the escape tunnel, as depicted in Figure 6.2.1.

Figure 6.2.1. View east into escape tunnel portal. North wall (left in picture) is black; south wall is not.



6.3 Tertiary Energetic Event and Deflagration from South Portal

The pressure wave traveling south towards the south portal of the main tunnel built in intensity and picked up additional fuel in the form of dust and additional methane being released by the coal. A tertiary pressure front likely built near VF-21, which was thrust upward and outward through its feeder hole. Figure 6.3.1 shows the surface picture of VF-21, and Figure 6.3.2 shows the feeder from inside the tunnel. This pressure front led to the combustion of a large amount of fuel, and the resulting fireball that exited the south portal.

Figure 6.3.1. Feeder hole for VF-21 from the surface of the coal transfer yard.



Figure 6.3.2. Feeder 21 from beneath the feeder hole, in the North Reclaim Tunnel.



7. Recommendations

To prevent this type of event from occurring, the following recommendations should be considered to minimize the risk of the presence of flammable atmospheres.

The primary means of preventing this type of event is the provision of adequate ventilation, ongoing monitoring to validate continued safe operations, and the installation of electrical systems that meet National Electric Code. Current plans for repair of the North Reclaim Tunnel include:

- 300+ feet per minute airflow (final design to be determined)
- Reduction of feeders from 28 to 15
- New clam shell style feeders instead of vibratory feeders to reduce dust generation and power requirements
- Skirting (sides and top) of conveyor to minimize dust generation, loss, and potential for build up within the tunnel, and to preclude electrical sources in vicinity of conveyor
- Air monitors placed approximately every 80 feet
- Dust suppression at exit side of each feeder using water mist
- Static control through grounding at each end of tunnel
- Electrical system throughout at typically 24 Volts, with higher supply (240 V) reserved only for sump pump
- Electrical system designed to applicable NEC codes for Class I and II Div II specifications up to 15-foot radius outside tunnel; final validation to be conducted by licensed electrical engineer

As noted, GHD has been monitoring the South Reclaim Tunnel continuously since its return to operation. The monitoring includes LEL, VOCs, H2S, CO, and dust. No levels of any analytes have been a cause for concern

during normal operations. CSXT has increased the flow of fresh air within the South tunnel. Monitoring in the South Reclaim Tunnel has confirmed these efforts have proved effective in maintaining safe conditions.

Aside from brief excursions, levels have been consistently well below lower explosive limits for either gases or coal particulate matter, and well below any fractional threshold of the lower explosive limits that would trigger a temporary cessation of operations. Although the facility is not under the Mine Safety and Health Administration jurisdiction, as a general guideline, MSHA regulations dictate that surface installations maintain methane levels below 1.0%, or 20% of the lower explosive limit (LEL) for methane.[3] Operations in the South Reclaim Tunnel have been monitored continuously since resuming operations and have been consistently below 20% of the LEL under normal ventilation conditions. These parameters are being monitored 24/7 by personnel who will make necessary process adjustments, including shutdown of operations, as needed. No shutdown has been necessary.

Similar measures are being implemented in connection with the repair of the North Reclaim Tunnel. Namely, sensors are going to be placed approximately every 80 feet throughout the tunnel. In addition, dust control measures are being implemented, including skirting surrounding the conveyor, and water mist suppression at the exit of each feeder. The feeder systems are also designed to minimize the generation of dust – rather than using a vibratory system, the new feeder systems are clam shell design, meaning they will more directly introduce the coal to the conveyor (lowered a short distance), thereby reducing dust generation.

[3] 30 CFR 77.201

Appendices

Appendix A

Map Overview of Facility

Appendix B

North Tunnel Diagrams

Appendix C

North Escape Tunnel Construction Drawings

Appendix D

Visual Summary of North Reclaim Tunnel

Appendix E

CAMBER Modelling Approach and Results

Appendix F

Coal Dust Sample Results

Appendix G

Weiser Engineering Electrical Inspection

Appendix H

Investigation Team Curriculum Vitae



ghd.com

→ The Power of Commitment

Attachment X

D R A F T
OCTOBER 1990

New Source Review Workshop Manual

Prevention of Significant Deterioration and Nonattainment Area Permitting

An example is the emissions from an existing quarry owned by one company that doubles its production to supply aggregate to a cement plant proposed for construction as a major source on adjacent property by another company. The quarry's increase in emissions would be secondary emissions which the cement plant's ambient impacts analysis must consider.

Secondary emissions do not include any emissions which come directly from a mobile source, such as emissions from the tailpipe of a motor vehicle or from the propulsion unit of a train or a vessel. This exclusion is limited, however, to only those mobile sources that are regulated under Title II of the Act (see 43 FR 26403 - note #9). Most off-road vehicles are not regulated under Title II and are usually treated as area sources. [As a result of a court decision in NRDC v. EPA, 725 F.2d 761 (D.C. Circuit 1984), emissions from vessels at berth ("dockside") not to be included in the determination of secondary emissions but are considered primary emissions for applicability purposes.]

Although secondary emissions are excluded from the potential emissions estimates used for applicability determinations, they must be considered in PSD analyses if PSD review is required. In order to be considered, however, secondary emissions must be specific, well-defined, quantifiable, and impact the same general area as the stationary source or modification undergoing review.

II.B.5. REGULATED POLLUTANTS

The potential to emit must be determined separately for each pollutant regulated by the Act and emitted by the new or modified source. Twenty-six compounds, 6 criteria and 20 noncriteria, are regulated as air pollutants by the Act as of December 31, 1989. They are listed in Table A-4. Note that EPA has designated PM-10 (particulate matter with an aerodynamic diameter less than 10 microns) as a criteria pollutant by promulgating NAAQS for this

Comments in Opposition to
The CSX Curtis Bay Coal Terminal
Draft Permit to Operate

Monday, December 16, 2024

Permit No. 510-2263

Dear Governor Moore and Secretary McIlwain,

The undersigned 31 environmental, climate, and environmental justice organizations in Maryland urge you to prevent the ongoing coal dust pollution in Curtis Bay caused by the operations of the CSX terminal by denying the request to renew its Permit to Operate. Residents of Curtis Bay and non-resident experts alike have witnessed firsthand the harmful effects of coal dust on both the environment and the health of the community. This issue is urgent, as the residents of Curtis Bay and South Baltimore have long been overburdened by pollution, and continued operations are making the situation worse by the day.

The CSX terminal in Curtis Bay handled 7.1 million tons of coal in 2022 and 8.6 million tons in 2021. As coal is transported and processed, it releases large quantities of coal dust into the surrounding area. This dust contains dangerous particulate matter (PM2.5 and PM10) as well as toxic substances such as arsenic, mercury, and lead. These pollutants pose serious health risks, particularly for vulnerable populations like children, the elderly, and individuals with pre-existing health conditions.

The scientific evidence is clear. New peer-reviewed research proves what residents have long said: coal dust contaminates the community. Particulate matter from coal dust has been linked to premature mortality, respiratory diseases, cardiovascular conditions, and even mental health issues. PM2.5 is particularly harmful because of its ability to penetrate deep into the lungs and enter the bloodstream. This pollution not only affects the outdoor environment but also invades homes, settling on windowsills, inside living spaces, and contaminating everyday life.

In Curtis Bay, residents often find their homes, cars, and outdoor spaces covered in black soot, forcing many to keep their windows closed year-round. These impacts are not just a nuisance; they are a direct threat to Curtis Bay residents' health and well-being. Many residents have seen a rise in respiratory problems, and the pollution from the CSX terminal has only exacerbated existing health concerns.

Additionally, the ongoing expansion of coal exports from the Port of Baltimore is incompatible with Maryland's climate goals and its commitment to a clean energy future. While the state has made significant strides in reducing greenhouse gas emissions and transitioning toward cleaner energy sources, allowing coal exports to grow undermines those efforts. Coal exported from Baltimore contributes significantly to global CO2 emissions, and as international demand for coal continues, Maryland's progress at home is being erased by the emissions from coal burned

abroad. The state must prioritize the health of communities like Curtis Bay, which have borne the brunt of industrial pollution for far too long.

We urge you to take immediate action to protect residents of Curtis Bay from coal dust contamination by denying CSX's request to renew its Permit to Operate. Maryland must take action to protect communities from coal dust emissions and support a just transition away from coal exports. As leaders committed to environmental justice, we ask that you prioritize the well-being of South Baltimore residents and ensure that our transition to clean energy includes protections for communities most impacted by pollution.

Thank you for your attention to this matter. We look forward to your response and to working with your administration to ensure a healthier and more sustainable future for all Marylanders.

Sincerely,

Mid-Atlantic Justice Coalition, Maryland
Jennifer Kunze and Walkiria Pool,
Co-anchors

South Baltimore Community Land Trust
Shashawnda Campbell,
Co-founder

Clean Water Action
Emily Ranson,
Chesapeake Regional Director

Fix Maryland Rail
Diane Wittner,
Director

Young, Gifted & Green
LaTricea D. Adams,
CEO and President

Baltimore Green Space
Katherine Lautar,
Executive Director

Namati US Environmental and Economic Justice Program
Jay Monteverde,
Senior Advisor

Baltimore Renters United
Detrese Dowridge,
Executive Director

Maryland Latinos Unidos (MLU)
Gabriela Lemus,
Executive Director

Concerned Citizens Against Industrial CAFOs (CCAIC)
Gabby Ross,
Founder

Unitarian Universalist Legislative Ministry of Maryland
Phil Webster,
Lead Advocate for Climate

Langley Park Civic Association, Inc.
Norberto Martinez,
Executive Director

Interfaith Power & Light (DC.MD.NoVa)
Andrea Orozco,
Faithful Advocacy Lead

Centro de Apoyo Familiar
Walkiria Pool,
President and Founder

350.org
Taylor Smith-Hams,
US Senior Organizer

Climate Communications Coalition
Sonia Demiray,
Executive Director

Third Act Maryland
Rob Wald,
Communications and Volunteer Coordinator

Baltimore 350
David Neun,
Founder

CASA
Jose Coronado Flores,
Climate Policy Analyst

Chesapeake Bay Foundation
Matt Stegman,
Maryland Staff Attorney

Maryland Sierra Club
Josh Tulkin,
Director

Coal Kills Baltimore
John Scheinman,
Co-founder

Chesapeake Physicians for Social Responsibility
Gwen L. DuBois MD, MPH,
President

Greater Baltimore Group-Sierra Club
Deborah “Spice” Kleinmann,
Chair of Board

Chesapeake Climate Action Network
Tzippy Horowitz,
Baltimore Campaigns Coordinator

Black Yield Institute
Jordan Taylor,
Communications Manager

Progressive Maryland
SirJames Weaver,
Environmental Justice Organizer

Food & Water Watch
Jomar Lloyd,
Maryland Organizer

Sentinels of Eastern Shore Health
Maria Payan,
Co-founder

Center for Progressive Reform
Bryan Dunning,
Senior Policy Analyst

Cedar Lane Unitarian Universalist Environmental Justice Ministry
Lee McNair,
Member

MARYLAND LEAGUE OF CONSERVATION VOTERS

December 16, 2024

Christopher Hoagland, Director
Air and Radiation Administration
Maryland Department of the Environment
1800 Washington Blvd, Suite 720
Baltimore, MD 21230

RE: Curtis Bay Piers Permit to Operate, Permit No. 510-2263
Submitted electronically to shannon.heafey@maryland.gov

Thank you for the opportunity to comment on MDE's draft permit to operate for the CSX Curtis Bay Coal Terminal. The Maryland League of Conservation Voters (Maryland LCV) is a non-partisan non-profit organization whose vision is a healthy environment for everyone in Maryland.

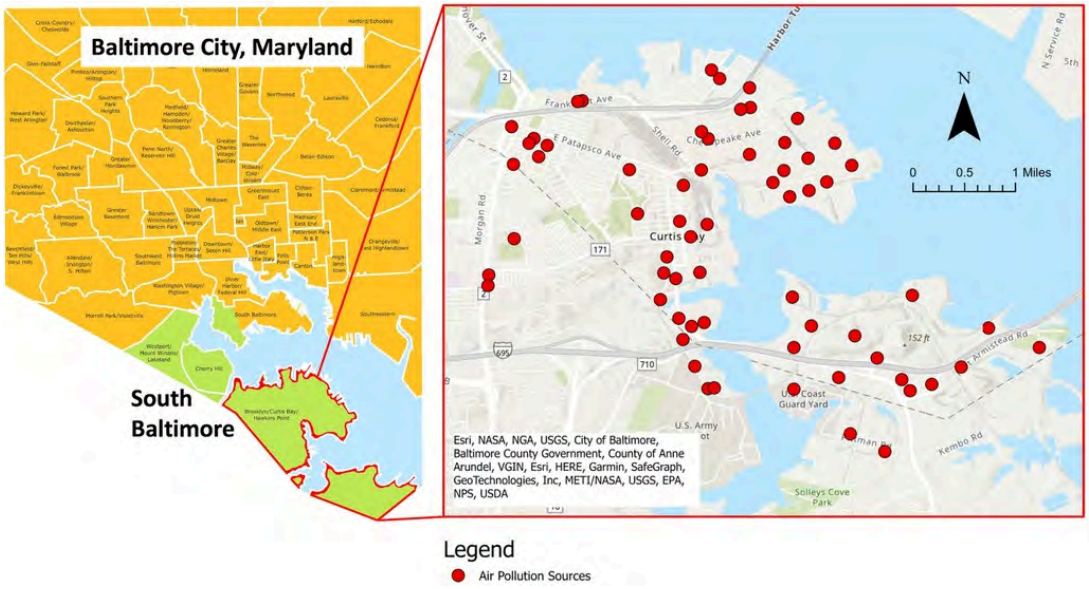
As MDE determines whether to grant this permit, we urge consideration of the following:

1. **Community Input and Engagement**
   During the Moore/Miller Administration and under the leadership of Secretary Serena McIlwain, MDE has supported the approach of applying an environmental justice lens to all of its work. Among the foundational 17 principles of environmental justice are the fundamental right to political, economic, cultural, and environmental self-determination of all peoples and the right to participate as equal partners at every level of decision-making (numbers five and seven). The residents of Curtis Bay, where the coal export facility is located, and surrounding communities are overwhelmingly in favor of denying this permit. Their testimonials about living next to a coal export facility that handles seven million tons of coal per year include health impacts, economic impacts, and quality of life impacts. Governor Moore has repeated the adage, "Those closest to the problem are closest to the solution" as his administration's core value in decision-making, which is fully aligned with using an environmental justice lens. Taking an environmental justice approach would prioritize requests of the affected community.

2. **Cumulative Impacts**
   In Maryland law, "environmental justice" means equal protection from environmental and public health hazards for all people regardless of race, income, culture, and social status. There is a disconnect between this definition and the way MDE approaches permitting, which assesses one facility (and sometimes one

pollutant) at a time. To be protected from environmental public health hazards, regulatory processes should include the scenarios that reflect people's lived experiences. Curtis Bay is the location for several regulated polluting facilities (see Figure 1) as well as being bordered and intersected by major roadways trafficked by diesel trucks regulated under a different system than stationary pollution sources. While any one facility may be in compliance with state and federal regulations, when there are so many sources in close proximity, the cumulative impact is much greater and higher than safe exposure levels. Without considering these cumulative measures, MDE is falling short of achieving the state's definition of environmental justice.

Figure 1. Clustering of Maryland Department of the Environment-regulated stationary sources of air pollution (red dots) in the Curtis Bay area.



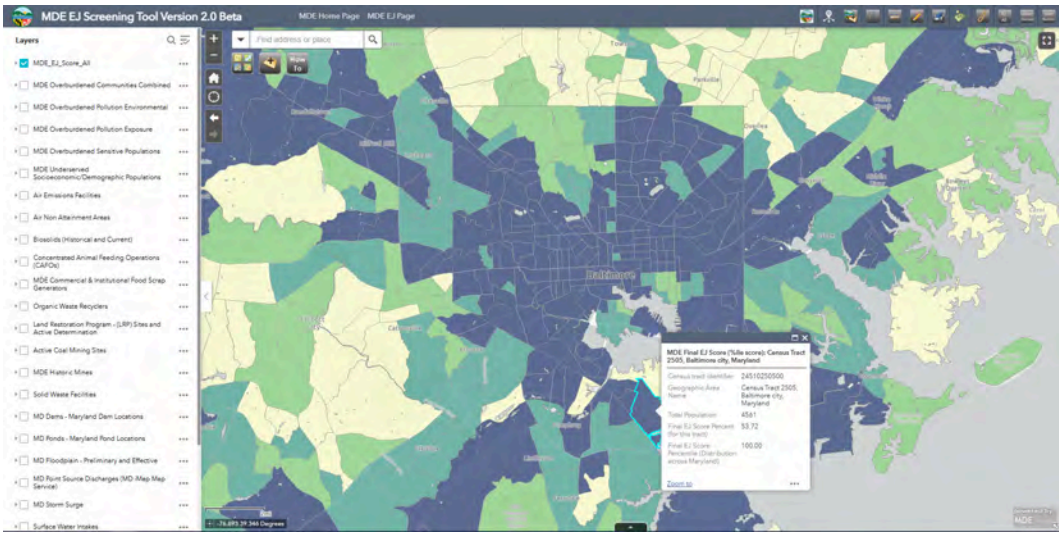
Source: *Frontiers in Epidemiology* September 2023
https://www.frontiersin.org/journals/epidemiology/articles/10.3389/fepid.2023.1198321/full

In the regulatory arena, when there are multiple sources of pollution in an area, it can be difficult to prove that one particular industry is responsible for pollution. This burden of proof is placed on the affected community. In December 2023, a dynamic, collaborative study that has since been peer-reviewed, was released by the Community of Curtis Bay Association, the South Baltimore Community Land Trust, Johns Hopkins University, the University of Maryland, and MDE and confirmed the presence of coal dust in the air of the South Baltimore community of Curtis Bay. In the context of cumulative exposures, this collaboration proved the presence of coal dust, linking potential health harms to the CSX coal export facility. When the study was released, Secretary McIlwain said, "We will let the science and data identified in

this study lead the way as we consider a new permit for the Curtis Bay coal terminal through the lens of environmental justice."

At least in part as a result of the concentration of pollution, and according to MDE data, Curtis Bay has the highest EJ score percentile (distribution across Maryland) in the state (See Figure 2). Living in an area with such a high EJ Score increases residents' vulnerability to additional health and environmental stressors. Living in an overburdened and underserved community in Maryland with a high EJ score should merit additional considerations in state permitting.

Figure 2 MDE's EJ Screening Tool with Curtis Bay's EJ Score Profile Highlighted



Source: https://mdewin64.mde.state.md.us/EJ/

3. **Climate Impacts**

Maryland has the most ambitious short term climate goals in the nation, and has been lauded for making progress on reducing greenhouse gas (GHG) emissions. If fully achieved, Maryland's GHG emissions reductions of 60% by 2031 are expected to achieve $321 million in public health benefits, $4,000 in energy savings per household per year, 27,000 new jobs, and $5.3 billion in GDP growth. At the same time, Baltimore is the second largest coal exporter in the nation. MDE should recognize the climate implications of exporting coal around the world.

4. **Health Impacts of Coal Dust**

Coal dust contains and contributes to particulate matter (PM) pollution in Curtis Bay. PM is classified by regulatory agencies based on the size of the particles, with the smaller particles like PM 2.5 (particles measuring 2.5 micrometers or less) being more dangerous because they can penetrate the lungs more deeply if inhaled. The

health impacts of PM 2.5 are well documented and include premature mortality, heart and lung disease, and asthma attacks. Children and older adults, especially with preexisting lung conditions, are particularly vulnerable to the effects of exposure to PM. A recent study examined the connection between coal storage and handling and increased air pollution, demonstrating that a 10% increase in PM 2.5 from coal stockpiles causes a 1.1% increase in the average adult and a 3.2% increase in infant mortality rates. The study also looked at the cost of local air pollution, finding that a one ton increase in coal stockpiles results in local air pollution costs of $197. These costs are borne by nearby community members. Any permit should include considerations of health burden and economic impacts to communities.

5. **Fees Imposed on Permit Applicant**
   After a 2021 explosion at the CSX facility, CSX entered into a settlement to pay the state $15,000 and the South Baltimore Community Land Trust $100,000. "Federal regulators with the Occupational Safety and Health Administration also fined CSX more than $120,000 last year for numerous violations associated with the explosion." These dollar amounts are high for individuals, but make up a very small percentage of CSX's operating costs and profit margin; CSX revenue for the quarter ending September 30, 2024 was **$3.619B**, a **1.32% increase** year-over-year. To use fees as an incentive to comply with regulations, fees must be set at a level that deters noncompliance.

Thank you for the opportunity to comment on this permit. We appreciate your consideration of these factors in your decision.

Unitarian Universalist Legislative Ministry of Maryland

Testimony in Opposition
Permit No. 510-2263 - CSX Curtis Bay Coal Terminal Air Pollution Permit

To: Shannon Heafey, Maryland Department of the Environment
From: Phil Webster, PhD
Lead Advocate for Climate
Unitarian Universalist Legislative Ministry of Maryland.
Date: November 25, 2024

The Unitarian Universalist Legislative Ministry of Maryland (UULM-MD) strongly opposes **Permit No. 510-2263 - CSX Curtis Bay Coal Terminal Air Pollution Permit**.

The UULM-MD is a statewide faith-based advocacy organization, with over 1,200 members.Our ministry is based on the Principles of Unitarian Universalism including *Interdependence* (honoring the interdependent web of all existence) and *Justice* (where all feel welcome and can thrive).

The conditions at Curtis Bay are a prime example of the continued injustice levied on overburdened and underserved communities for generations. This terminal has long been a source of harmful coal dust emissions, and its operations continue to degrade air quality, jeopardizing the health and well-being of surrounding communities. Significant peer-reviewed research by prestigious Universities and Governmental Agencies have supported this. No amount of this pollution is safe for human health, and Curtis Bay residents have endured it for far too long. Maryland should prioritize the health of its citizens and the air quality of its state, not the interests of polluters.

The Maryland Department of the Environment must act, in the name of justice, to prevent the ongoing coal dust pollution in Curtis Bay caused by the operations of the CSX terminal by denying the request to renew its Permit to Operate.

Phil Webster, PhD

Lead Advocate for the Climate
Unitarian Universalist Legislative Ministry of Maryland

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Healthy Climate Maryland Comments Re: CSX Curtis Bay Piers Permit to Operate, Permit No. 510-2263

1 message

Rebecca Rehr <rrehr@mdlcv.org> Mon, Dec 16, 2024 at 1:27 PM
To: Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Good Afternoon Ms. Heafey,

Attached, please find a PDF copy of comments on MDE's draft permit for the CSX Curtis Bay Piers Permit to Operate from **Healthy Climate Maryland**. The comment form online did not have a way to attach a PDF or indicate organizational comments, so I hope it's OK to email them directly to you as the formal submission.

Thank you.
Cheers,
Rebecca

Help Maryland Lead the Way in Climate Action and Environmental Justice. Donate Today to Keep Maryland Moving Forward



Rebecca Rehr
Director of Climate Policy and Justice
Maryland League of Conservation Voters
Maryland LCV Education Fund
30 West Street, Suite C
Annapolis Maryland 21401
office 410.280.9855 x.109
mobile 443.668.7467

CSX Permit to Operate Curtis Bay Piers_HCM Comments.pdf
81K

EXHIBIT I - 461

December 16, 2024

Christopher Hoagland, Director
Air and Radiation Administration
Maryland Department of the Environment
1800 Washington Blvd, Suite 720
Baltimore, MD 21230

RE: Curtis Bay Piers Permit to Operate, Permit No. 510-2263
Submitted electronically to shannon.heafey@maryland.gov

Thank you for the opportunity to comment on this draft permit. United by a shared commitment to the health and well-being of all Marylanders, our coalition of dedicated public health and medical professionals seeks to address climate change and environmental challenges by focusing on their impacts on public health. We are working to educate, advocate, and build strong partnerships towards a healthier, more sustainable future for Maryland. As part of your considerations regarding this permit, we wanted to submit for the record the health impacts of exposure to coal dust.

Coal dust contains the air pollutant, particulate matter (PM). PM is classified by regulatory agencies based on the size of the particles, with the smaller particles like PM2.5 (particles measuring 2.5 micrometers or less) being more dangerous because they can penetrate someone's lungs more deeply if inhaled. A University of California, Davis study of a coal terminal and nearby rail holding yard in the city of Richmond, CA found that the storage of coal and coal cars at the rail yard significantly increased ambient concentrations of PM2.5. "Terminal operations involving coal transport, storage, and handling significantly increase community exposure to ambient PM2.5. These PM2.5 increments subsequently increase the risk of a wide range of adverse health effects with environmental justice implications."

PM2.5 is one of the world's leading causes of mortality, accounting for over 4 million, or 62%, of the global total estimated 6.7 million premature deaths from air pollution annually. The most vulnerable populations to adverse impacts from air pollution exposure include young children, older adults, those with chronic illnesses, communities of color, and economically disadvantaged communities.

Long term exposure to PM2.5 is associated with premature death from all causes, as well as from cardiovascular, respiratory disease and lung cancer. There is also strong evidence that PM2.5 can cause cardiovascular disease. Other specific conditions associated with PM2.5 include coronary artery disease, hypertension, diabetes, respiratory infections, chronic lung disease, preterm births, new onset asthma, impaired lung development in children, pneumonia incidence, increased preterm birth, low birth weight, Alzheimer, and Parkinson's. Short term exposures are associated with exacerbations of asthma and chronic lung disease, emergency department visits, and strokes.

For the Baybrook/Curtis Bay/Hawkins Point neighborhood, data from 2017 indicate that average lifespan was less than for Baltimore City average lifespan, 69.7 vs 73.6. That is an almost 4 year difference in life expectancy, and the gap is actually 20 years compared to wealthier parts of the city like Roland Park. Age-adjusted mortality rates were higher for cardiovascular disease, all cancer, lung cancer, lower respiratory diseases and stroke compared to the Baltimore City rates, diseases that could be related to PM2.5 and other air pollutant exposure.

Health impacts of PM2.5 in coal dust are costly to both the residents and the city as a whole. These impacts and the resultant quality of life for Curtis Bay residents should be a primary consideration for MDE as you evaluate this permit.

Thank you for your consideration.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Mon, Dec 16, 2024 at 11:46 AM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 12/16/2024 11:45:12 Eastern Standard Time

Response End Time: 12/16/2024 11:46:41 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Alex

2. Last Name:
Herrgott

3. Email:
Alex@permittinginstitute.org

4. Mailing Address:(optional)
[No Answer Entered]

5. Affiliation:(optional)
The Permitting Institute

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
Dear Maryland Department of the Environment,
I am writing on behalf of The Permitting Institute (TPI). TPI is a federal and state-focused non-partisan 501(c)6 nonprofit serving as the authoritative voice on permitting reform to rebuild, expand, and modernize America's aging infrastructure, and a trusted expert resource and education partner for federal and state policymakers and regulators. Collectively, our members and partners support the common goal of accelerating infrastructure improvement across all sectors, including conventional and renewable energy, transportation, water, pipelines, mining, manufacturing, ports, waterways, and broadband. TPI focuses on facts and transparency. Our mission is to rise above the rhetoric, political posturing, and gamesmanship to help drive compromise on legislative solutions that truly modernize the permitting process and to shape effective implementation of guidance and agency processes so everyone wins. We are working across the aisle and across the permitting reform landscape to reduce delays, uncertainty, and costs, while preserving our environmental and cultural resources. For that reason, I am hoping to address concerns that TPI has regarding the permit renewal for CSX's Curtis Bay Piers facility.
As a stakeholder organization we advocate for a permitting process that leverages meaningful public engagement and a comprehensive, thoughtful decision making process in an efficient and transparent manner. Unnecessary delays increase overall project costs; these costs not only impact the permit seeker, but the overall economy of the project's area through lost wages, retail traffic, and rippling supply chain consequences. The CSX Facility's Air Quality State Permit to Operate has now been under consideration for over a year: the original application was received July 18, 2023. While not all

permitting delays are unavoidable, TPI feels that this particular instance demonstrates the kind of unnecessary, spurious, and arbitrary bureaucracy that not only pollutes private-public partnerships, but gives the public a false sense of safety from the very agencies tasked with ensuring it.
The Maryland Department of the Environment (MDE) Air and Radiation Administration issued a report titled Collaborative Investigation of Coal Dust, Air Pollution, and Health Concerns in Curtis Bay, South Baltimore Maryland (Report) which was prepared by a consortium of Curtis Bay community groups, MDE, and local universities. This report serves as the basis for the permitting of Curtis Bay Piers, however, there are preliminary findings that are conclusory in nature and are not supported by the data presented in the Report. Overall, the Report fails to tie CSX's operations to the alleged coal dust found in the area, despite there being three total operators within the broader Port of Baltimore, along with a number of other sources, such as large diesel trucks, regularly operating in the area. The lack of consideration for any other alternative pollution source highlights the potential motivation by some to paint this one operator as the sole source of pollution in the community. This is a troubling precedent for permitting processes in the state going forward, particularly for an industrialized area like Curtis Bay.

In an effort to understand the Report's troubling findings, CSX engaged third party experts to review the report and its findings: they identified a number of concerning errors in the report that served as critical components of the Report's conclusions. Additionally, the report failed to implement standard EPA-approved quality assurance and control measures. An example of this is that black carbon, listed as a key pollutant in the study, primarily comes from diesel truck emissions, not coal storage or handling, making the report's attribution to coal dust from the facility inaccurate and faulty for a basis of expensive mitigation measures as outlined in the draft permit. Another example is the failure to use standard EPA-approved quality assurance and control measures: low-cost sensors that did not meet EPA performance metrics were used to measure critical particulate matter data.

What TPI finds most concerning about the MDE's report is the failure to consider or thoroughly examine any other alternative pollution source for the Curtis Bay area. TPI supports a permitting process driven by science, best practices, and stakeholder engagement, not what would appear to be an unscientific blame- game that not only misleads the community, but could potentially endanger them. There is ample evidence to support that thorough economic and environmental reviews can be expeditiously executed. The economic impact CSX's Curtis Bay facility for the region is undisputed: it was reported that in 2022 their Baltimore operations provided over 1,400 jobs while bringing significant economic value to the state of Maryland, worth $335 million.

As both a public and private sector stakeholder who served most recently on the Federal Permitting Improvement Steering Council and the White House Council on Environmental Quality, I understand both the work required to review these complex applications, weigh community considerations, and analyze scientific information. However, it is vital that the processes are devoid of bias, unfounded blame and meet the rigorous standards set by the EPA for collecting and reviewing data. When illegitimate data is utilized to justify decisions like this- with massive negative economic impact to a community- it only sets into motion future mistrust by those impacted in the community and the private sector stakeholders who will redirect investment to other places and projects.

Thank you for your time and consideration. I am hopeful for a smooth and swift approval for CSX's Curtis Bay facility.

Sincerely,

Alexander Herrgott

President and CEO

The Permitting Institute

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Thu, Dec 5, 2024 at 3:53 PM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 12/04/2024 12:25:34 Eastern Standard Time

Response End Time: 12/05/2024 15:53:42 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Meredith

2. Last Name:
Chaiken

3. Email:
meredith@greaterbaybrookalliance.org

4. Mailing Address:(optional)
3430 2nd St.

5. Affiliation:(optional)
Greater Baybrook Alliance

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
Greater Baybrook Alliances opposes this permit. The evidence is clear - research produced jointly by scientists at Johns Hopkins School of Public Health, University of Maryland, Maryland Department of the Environment, and with participation from local citizen-scientists confirms the presence of coal dust in the air in the residential community of Curtis Bay.

As noted in the Maryland Department of the Environment release, “Coal particles were identified at all eight community sampling locations and all samples during three different rounds of collection, including at residences, and near businesses, a church, a park, and a school.”

Curtis Bay has a long history of environmental injustices that are unfairly borne by the residents of this community - who are more likely to suffer from asthma, heart disease, and a shortened life span. Coal dust is unsafe at any level.

CSX is enjoying historic profitability. The health and wellbeing of the Curtis Bay community should not be beholden to CSX shareholders, but rather CSX must be held accountable to the health standards established by the public agencies tasked with protecting the health and environment for all Marylanders.

We oppose this permit.

EXHIBIT I - 466

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Mon, Dec 16, 2024 at 10:12 PM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 12/16/2024 20:02:01 Eastern Standard Time

Response End Time: 12/16/2024 22:12:30 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Benjamin

2. Last Name:
Dierker

3. Email:
bdierker@aii.org

4. Mailing Address:(optional)
[No Answer Entered]

5. Affiliation:(optional)
[No Answer Entered]

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
Dear Maryland Department of the Environment,

I am writing on behalf of the Alliance for Innovation and Infrastructure (Aii), an independent national research and educational organization dedicated to identifying our nation's infrastructure needs and finding solutions to critical public policy challenges. We are committed to advancing innovation in both industry and public policy to improve the safety, efficiency, and resilience of our nation's infrastructure.

We wish to express our support for the renewal of CSX's Air Quality State Permit to Operate in Curtis Bay. Rail infrastructure is a cornerstone of our nation's economy, playing a crucial role in countless industries and the global supply chain, while helping reduce the carbon intensity of our transportation network. As one of many industrial operations in Curtis Bay, CSX significantly contributes to both local and state economies by generating approximately $335 million in annual economic value. This operation directly supports roughly 1,000 jobs, while contributing indirectly to nearly 140,000 jobs within the local port system.

Through its direct economic activity, CSX helps advance the region's prosperity. Beyond that, CSX has made significant investments in Maryland's infrastructure. Just in recent years, this has included $113 million contribution towards the modernization of the Howard Tunnel, $5 million donation to the B&O Museum, and $50,000 through the Baltimore

Community Fund for the Maryland Tough Baltimore Strong Key Bridge Fund. These efforts underscore a long-term investment in the community, state, and region. These initiatives to which CSX has committed are crucial for ensuring that Maryland remains a vital hub for commerce and transportation along the Northeast Corridor.

As the needs of the nation evolve, CSX has likewise taken strides forward. With respect to environmental issues, continued investment in innovative solutions and commitment to best practices have ensured the rail leader has met or exceeded permitting and agency requirements of the state and federal levels.

Air quality is critically important to all stakeholders involved and should not be dismissed without intentional review. However, attributing all particulate dust solely to CSX would be an oversimplification given the multitude of industrial activities present in Curtis Bay. CSX remains in federal air quality compliance and recently worked with MDE on its new fence line monitoring system. These proactive measures towards environmental stewardship, and the demonstration of transparency by maintaining publicly accessible real-time monitoring, should be encouraged. Further promotion of innovation and voluntary best practices will likely further improve conditions, while added permit measures may not yield the intended results and likely come with added costs.

Last, and potentially most importantly, Curtis Bay must remain fully functional to continue serving as a vital component of the U.S. freight rail network. Curtis Bay Piers helps CSX in fulfilling its federally mandated obligation to transport coal – a responsibility essential for maintaining energy supplies nationwide. Burdens and restrictions on operations at this facility could ripple throughout winter months into serious and fatal consequences.

In conclusion, we believe renewing CSX's air quality state permit to operate aligns with the broader goals of Maryland and can be done in a prudent manner that sustains economic growth while also ensuring responsible environmental management practices continue being implemented effectively within this region. In approving this permit, a collaborative and less prescriptive approach between the public and private sectors is most likely to yield tangible results for the community without sacrificing safety, health, or economic progress.

Thank you for considering our perspective on this matter.

Sincerely,

Benjamin Dierker
Executive Director
Alliance for Innovation and Infrastructure

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Mon, Dec 16, 2024 at 1:03 PM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 12/16/2024 10:51:58 Eastern Standard Time

Response End Time: 12/16/2024 13:03:39 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Christopher

2. Last Name:
Summers

3. Email:
csummers@mdpolicy.org

4. Mailing Address:(optional)
[No Answer Entered]

5. Affiliation:(optional)
The Maryland Public Policy Institute

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
Dear Maryland Department of the Environment,

Maryland faces a pivotal moment where economic growth and environmental leadership must align to secure a prosperous future for our state. At The Maryland Public Policy Institute (MPPI), we believe partnerships with private companies are essential to addressing our state's economic challenges, while still advancing sustainability goals. CSX's Curtis Bay Piers embodies this synergy, showcasing how business and government can come together for the benefit of Maryland communities.

The rail company's contributions to Maryland's economy and the national supply chain are undeniable. From generating millions in direct business revenue and state and local taxes to modernizing critical infrastructure like the Howard Street Tunnel, CSX plays a vital role in our economy. These initiatives create thousands of good-paying jobs, enhance supply chain efficiency, and reinforce Maryland's position as a commercial hub. The emergency closure of the Port of Baltimore showed just how vital the operations are to the nation as well.

While providing economic output, CSX is simultaneously working towards Maryland's ambitious climate goals. Whether it be investments in innovative technologies like hydrogen-powered locomotives or battery powered engines, these efforts reduce emissions while positioning Maryland as a leader in green freight transportation. CSX has even installed a fence

line monitoring system around Curtis Bay Piers to continuously monitor particular matter along the perimeter of the property, working side-by-side with MDE to ensure the system meets or exceeds requirements. All of these efforts are a demonstration of the company's commitment to progress and environmental stewardship.

Denying CSX's air permit renewal would undermine these achievements, jeopardizing state investments, and stunt sustainability efforts. For those reasons, MPPI strongly urges the Maryland Department of the Environment to approve CSX's permit renewal to protect jobs, drive innovation, and secure our state's economic future.

Sincerely,
Christopher Summers
President and Chief Executive Officer
The Maryland Public Policy Institute

EXHIBIT I - 470

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Mon, Dec 9, 2024 at 10:29 AM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 12/09/2024 09:49:21 Eastern Standard Time

Response End Time: 12/09/2024 10:29:30 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
David

2. Last Name:
Chenowith

3. Email:
David.Chenowith@hostagency.com

4. Mailing Address:(optional)
[No Answer Entered]

5. Affiliation:(optional)
Baltimore Port Alliance

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
Dear Secretary McIlwain,

I am writing to you on behalf of the Baltimore Port Alliance that has called Baltimore, Maryland home for many decades. We serve a group of maritime business representatives and are dedicated to addressing their needs, so they and Maryland's integral maritime industry may continue to thrive. As an active member of the Baltimore community and business advocate, I urge you to approve CSX's air permit for the good of port employees, their families, and – more generally – Maryland's economic well-being.

The Baltimore Port Alliance's advocacy work largely includes sponsoring community and legislative forums, ensuring communication with those who are entrusted to represent us understand what is important – not only to maritime businesses – but our community as a whole.

This leads to why I am writing to you today. As you know, the Port of Baltimore faced serious tribulations this year following the tragic collapse of the Francis Scott Key Bridge. This incident highlighted just how important the Port of Baltimore is to the nation's supply chain, as well as the global logistics network. The port is only in recent months getting back on track. Hundreds, if not thousands, of workers were affected – their families too. Should CSX's air permit be denied, hundreds of Marylanders would once again face similar (unnecessary) economic challenges.

EXHIBIT I – 471

A permit rejection would spur a negative economic shift across the region as the Port of Baltimore, and CSX within that, brings significant value to the state.

According to Maryland Port Administration, the Port of Baltimore generates around $3.3 billion in personal income, supports over 15,000 direct jobs, and contributes to around 139,000 jobs connected to port activities. Similarly, in 2022 CSX's Curtis Bay Piers terminal generated $335 million dollars in economic value and over 1,400 jobs. The impact and importance of the Port and CSX cannot be understated.

In today's economy, Maryland and its Department of the Environment would be wrong to reject a permit that enables a critical Baltimore industry from contributing to Maryland's economy and supporting its dedicated residents. We must strike a balance.

Please feel free to contact me if you have any questions. I can be reached directly at the Host Agency, 410-633-4666 or David.Chenowith@hostagency.com.
Sincerely yours,

David R. Chenowith
Chairman, Baltimore Port Alliance

EXHIBIT I - 472

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Mon, Dec 16, 2024 at 12:49 PM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 12/16/2024 12:38:46 Eastern Standard Time

Response End Time: 12/16/2024 12:49:03 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
David

2. Last Name:
Williams

3. Email:
michael@protectingtaxpayers.org

4. Mailing Address:(optional)
1101 14th St NW, Suite 500, Washington DC 20005

5. Affiliation:(optional)
Taxpayers Protection Alliance

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
December 16, 2024

The Honorable Serena McIlwain
Secretary
Maryland Department of the Environment
1800 Washington Blvd.
Baltimore, Maryland 21230

Dear Secretary McIlwain and the Maryland Department of the Environment,

The Taxpayers Protection Alliance (TPA) is dedicated to advocating responsible and transparent government policies that prioritize efficiency and economic growth. On behalf of taxpayers across the state of Maryland, we urge the Maryland Department of the Environment (MDE) to consider the real economic harm if CSX would not receive their air quality permit renewal for its Curtis Bay Piers facility.

CSX's operations are integral to Maryland's economy, supporting countless local jobs and bolstering millions in annual economic activity. Facilities like the Curtis Bay terminal are cornerstones of industrial progress, connecting Maryland to

national and global markets and maintaining a critical supply chain for industries across the U.S. CSX also needs to be a good steward of the environment because fiscal strength and respect for the environment work hand in hand.

Moreover, the proposed permit will balance economic contributions with environmental responsibility, as evidenced by the protective measures it requires. CSX has also taken steps to improve its operations, such as its fenceline monitoring system. The draft permit's inclusion of dust barriers, enhanced water spray systems, and other mitigative measures strikes the necessary balance between safeguarding public health and sustaining economic vitality. These actions reflect the collaborative spirit Maryland's industrial sector needs to thrive – a partnership between businesses, community stakeholders, and regulators.

Denying this permit would have serious consequences. It would not only jeopardize the economic stability of the Curtis Bay community, but also set a precedent that threatens Maryland's ability to maintain its industrial edge. The potential loss of good jobs would reverberate far beyond Baltimore, affecting taxpayers, families, and businesses statewide – or even nationwide, as shocks are felt through the supply chain.

We strongly support the MDE's efforts to incorporate evidence-based environmental protections and encourage the renewal of this permit. Maryland taxpayers depend on the economic stability, job creation, and industrial leadership CSX's Curtis Bay facility provides.

Thank you for considering our input on this important matter.

Sincerely,

David Williams
President, Taxpayers Protection Alliance

EXHIBIT I - 474

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Mon, Dec 16, 2024 at 6:19 PM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 12/16/2024 18:02:32 Eastern Standard Time

Response End Time: 12/16/2024 18:19:38 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Derrick

2. Last Name:
Max

3. Email:
dmax@thomasjeffersoninst.org

4. Mailing Address:(optional)
PO Box 219, Round Hill, VA 20142

5. Affiliation:(optional)
President, Thomas Jefferson Institute for Public Policy

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
Dear Maryland Department of the Environment,

As President and CEO of the Thomas Jefferson Institute for Public Policy in Virginia, we are concerned about the potential declination of CSX's Curtis Bay Piers permit and the potential impact on Virginia – particularly to our vulnerable communities in the Southwest part of the Commonwealth.

This terminal plays an integral role in Virginia's economic wellbeing. Another disturbance, following on the tragic collapse of the Francis Scott Key Bridge earlier this year, would be tremendously disruptive as a portion of CSX's coal supply is shipped to Newport News.

According to the U.S. Energy Information Administration, "in three of the past five years, annual coal exports from the Port of Baltimore totaled around 20 million short tons." For that amount of supply to be diverted would be unworkable.

Virginia's coal industry contributes billions to the state economy and without Curtis Bay Piers operating at full capacity, the industry – especially its related job market – will feel damaging effects.

In fact, in 2023 Virginia's coal mining industry was responsible for over 2,500 jobs; a job sector that is, unfortunately,

already on the decline.
By rejecting CSX's air permit renewal, you are doing more than just shutting down a Baltimore terminal; You are impacting a much wider network of American jobs – not to mention their dependent families.

I call on the Maryland Department of the Environment to seriously consider this decision's chain reaction – particularly the spillover impact on communities outside of Maryland, especially our economic struggling Southwest communities in Virginia.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Thu, Dec 12, 2024 at 9:17 AM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 12/12/2024 09:13:51 Eastern Standard Time

Response End Time: 12/12/2024 09:17:38 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Heather

2. Last Name:
Hax

3. Email:
hhax@filbertstreetgarden.org

4. Mailing Address:(optional)
[No Answer Entered]

5. Affiliation:(optional)
Filbert Street Garden

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
I am writing as the secretary of the board at the Filbert Street Garden, an organization that provides green space, environmental stewardship, and food access in Curtis Bay. Members of the garden unequivocally opposed MDE's permit renewal for CSX. Not only does the coal dust pollute the air and water in the community, it also puts our beloved residents (animal and human) in danger of increased respiratory illness, cancer, and more. This community has suffered enough at the hands of industry. You have the power to stop this. Please do so.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Mon, Dec 2, 2024 at 10:04 AM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 12/02/2024 10:01:10 Eastern Standard Time

Response End Time: 12/02/2024 10:04:16 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Jay

2. Last Name:
Monteverde

3. Email:
jaymonteverde@namati.org

4. Mailing Address:(optional)
[No Answer Entered]

5. Affiliation:(optional)
Namati US Environmental Justice Program

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
I am a Baltimore County resident and work with the non-profit organization Namati. Namati works with communities impacted by environmental, economic, and other justice issues here in the US and in 6 other countries around the world. I am testifying to support the demands of Curtis Bay residents, the Community of Curtis Bay Association, and the South Baltimore Community Land Trust for clean air and a safe environment.

Compared to when the coal terminal started up over 100 years ago, in 2024, we know so much more about the harms of coal and coal dust. Late last year, the study that MDE supported confirmed South Baltimore residents' lived experiences, that toxic coal dust is blanketing the entire area.

Over the last century, life expectancies on average have risen, but in Curtis Bay and similar communities where industry has been allowed to continue "co-existing" with residents, life expectancy is lagging. Curtis Bay residents have paid a high price for this kind of co-existence in the health, safety, and economic costs they shoulder. Approving this draft permit would perpetuate the unfair harms of the CSX coal terminal, and continue passing them to the next generation, like the students at Ben Franklin HS who are forced to inhale toxic coal dust every day while they are trying to better their futures.

This is a multigenerational justice issue that MDE has the power to address.

EXHIBIT I - 478

This permit renewal is a critical, timely opportunity for MDE to take action on the findings of the report, and demonstrate that MDE hears Curtis Bay residents.

But instead, the draft permit is written so weakly that CSX could meet the letter of its dust control provisions without actually eliminating the coal dust. MDE should deny this permit or at a minimum revise the permit to require effective elimination of the coal dust from spreading through Curtis Bay and surrounding areas, and to make that requirement enforceable.

MDE now knows just how pervasive coal dust is in the area. The agency must do something meaningful about it. Thank you for your time and work to protect residents' clean air, water, and land.

EXHIBIT I - 479

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Mon, Dec 16, 2024 at 10:14 AM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 12/16/2024 10:12:26 Eastern Standard Time

Response End Time: 12/16/2024 10:14:16 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Jeff

2. Last Name:
Fraley

3. Email:
jeff@fraleycorporation.com

4. Mailing Address:(optional)
PO Box 938, Pasadena, MD. 21123

5. Affiliation:(optional)
Baltimore Industrial Group

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
December 5, 2024

Dear Maryland Department of the Environment,
My name is Jeff Fraley, and I am the Chairman of the Board of Directors for Baltimore Industrial Group (BIG). BIG represents several businesses in the manufacturing, transportation, maritime, shipping, and warehousing space. Our members employ 16,000 people across the Baltimore metro area – a serious point of pride for BIG. Our mission centers on growing Baltimore's historical industrial sector so that it may continue to provide jobs for hardworking Marylanders, bolstering the Port and our city. Based on BIG's mission, it should be no surprise that we are writing to you in support of CSX's pending air permit.
We believe CSX is an integral part of our community. It has served as a major employer across the city – not to mention generating millions of dollars for the state. While coal is just around half of the cargo tonnage shipped via the Port of Baltimore, it has played a significant role in making the Port among the busiest and most important hubs in the entire country. As a result, the Port has expanded further, shipping numerous other raw materials across the globe. In fact, just last year the Port ranked first in the nation in shipping automobiles, construction and farm machinery, and more. Long story short: CSX has helped put the Port of Baltimore on the map, and it's helped the people of Baltimore through good-paying jobs and continued economic development. Furthermore, CSX is leading on community environmental health by making air quality data publicly available to the community through fence line air monitoring system.

EXHIBIT J-480

Baltimore is an industrial city – it's who we've always been. The industrial sector and the dedicated workers that comprise it have literally built the city and state we call home. These jobs and the millions of dollars in economic value that CSX's terminal brings to the city are indispensable; To reject CSX's air permit is to put these same individuals' and their families' financial well-being at risk.

For these reasons, and so many more, I encourage you to see what is best for our proud, industrial city by approving CSX's air permit. The Baltimore Industrial Group and our members are counting on it.

Sincerely,

Jeff Fraley

Chairman Baltimore Industrial Group

EXHIBIT I - 481

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Mon, Dec 16, 2024 at 2:11 PM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 12/16/2024 14:10:41 Eastern Standard Time

Response End Time: 12/16/2024 14:11:18 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
John

2. Last Name:
Scheinman

3. Email:
now4better@aol.com

4. Mailing Address:(optional)
[No Answer Entered]

5. Affiliation:(optional)
Coal Kills Baltimore/Attorney General's Environmental Advisory Committee

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
Dear MDE,

I am not going to redundantly call on you to withhold the operating permit for CSX; doing so should be obvious but requires bravery and the willingness to prepare for a likely retaliatory lawsuit by the company.

In the past year, I and my team have urged MDE to be more open about the position it finds itself in with this operating permit renewal, particularly in relation to the I.C.C.T.A. We are going to reiterate that, hopefully more persuasively, in the coming year.

We appreciated our dialogue and interaction with MDE this past year and are glad you found it constructive as well.

Going into 2025, we would like to see MDE engage the communities of Curtis Bay and Brooklyn on the issue of the coal piers far more forcefully, frequently, constructively, and candidly. These engagements also should be conducted with all communities around the state suffering from EJ harms. We would like MDE to lead these engagements, in town halls and other formats, independently, not through or tied to gate-keeping neighborhood associations or land trusts. Dialogue and messaging with communities should be conducted without filter, directly under your own aegis. The responsibility to reach far wider into communities, disseminating information and your position, is yours. You must control your own narrative.

We, as a team, would like to be able to interact with Secretary McIlwain and her staff in constructive dialogue and to get a clearer understanding of thinking, reasoning, and strategy around the destructive (and contested) presence of the piers in the communities, their impacts on local and global environments, and how the state can rationalize the presence of such a impudent and harmful polluter considering its publicly avowed, overarching climate goals.

We don't understand the secretary's reticence to engage with us or directly speak publicly and loudly on the problem of the coal piers. We know it's hard. That's not a great excuse.

Related, we are concerned that MDE officials are being stymied from speaking candidly by higher ups, including the secretary. We are concerned about the corrupting influence of CSX financial donations.

Problems were abundantly apparent this year as the department allowed itself to be a target for community, activist, and academic ire on the piers, when, in fact, preemptive authority of the I.C.C.T.A limits its ability to act. Why, again, is this the preferred tactical response and public face by the state? We want clarity, and instead we get opacity.

In the upcoming year, we believe it is critical for state officials - including the governor and the secretary - to make a greater commitment to speaking out so everyone knows exactly where officials in the state stand, truthfully, on the coal piers. The governor's campaign slogan "Leave no one behind" has not led him to Curtis Bay.

Just because the state may not be able to act without exposing itself to legal challenge doesn't mean officials can't use the force of their bully pulpit.

Even with a hostile new administration and Congress coming to power in Washington, state leaders have a responsibility to speak out about the problems with the I.C.C.T.A. and the inability of residents in the line of deadly carcinogenic exposure to find recourse and justice because of limiting federal law. It's a requirement of your putting more skin in the game. Officials are reps of the people: You should feel compelled to not silently sit up in your offices, whether you can do anything or not. The requirement of agitation should not just fall at the feet of activists. We're all together in this fight against the unfolding global climate crisis.

We suggest the MDE and state officials continue to look deeply into the federal law for vulnerabilities and pathways forward, and to engage the state's delegation to Congress to push for a bill that would modify I.C.C.T.A. Just getting aspirational goals in bills, on record, in the news, and before the people is far better than appearing helpless and silent.

Everyone knows that mitigation built into a new operating permit will not solve the problems of saturating coal dust in the community, its air and water, nor and the impact of burning coal on Earth's rising record temperatures and multiplying weather-related catastrophes.

Coal Kills Baltimore consistently tries to shape the view of the CSX coal piers as both local and global crises. Maryland has put forth ambitious local and global climate goals through the Pathway. Obstacles like the piers cannot be inconvenient, carved-out exceptions.

Finally, in conjunction with the Baltimore Social-Environmental Collaborative, BSEC, Coal Kills Baltimore, plans to test the waters in the vicinity of the coal piers in 2025 to help build a greater record of coal presence, charting its compounding through the years, and, perhaps, harms to the marine world and those who share it, like subsistence fishermen. There haven't been a lot of studies undertaken globally on marine impacts at coal export terminals. We predict this will be strongly complementary evidence to support the 2023 citizen/UMD/Hopkins report on coal dust presence in Curtis Bay.

We wish the project could have been developed in time to submit into this record of evidence and public comment, but we expect it to be produced and shared, no matter the timing.

This testing should be work the state does, to make sure its permitting does not allow the violation of state and federal clean water laws, but we will take it on, pending grants.

In closing, we urge the well-meaning staff of the MDE to commit to going into 2025 with the promise to go forward with a deeper moral imperative in its work, based in science not political expediency. When you do the latter, you betray the personal principles that led most of you into a life in science to begin with.

We aren't climate and EJ activists because we love the work; we do it because we are compelled by moral conscience. It is what is right and necessary in a time of deep crisis and calamity. We need our representative government, particularly in a state that wants to shine as the antithesis of right-wing deregulation and science-denying dogma, to go forward with courage, as well, and fight for what is right.

To reiterate: We are not against CSX and railroading; we are against its insidious and killing coal operations.

EXHIBIT I - 483

Here's to a better new year.

Sincerely,
John Scheinman
co-founder
Coal Kills Baltimore

Coal Kills Baltimore, an environmental justice campaign founded in 2021, envisions a world where a community's right to a clean and healthy environment is acknowledged and protected. We envision a world where fossil fuel industries are replaced with carbon-neutral energy while acknowledging the necessity for a just transition for energy company employees.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Mon, Dec 16, 2024 at 9:04 PM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 12/16/2024 21:00:56 Eastern Standard Time

Response End Time: 12/16/2024 21:04:22 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Matthew

2. Last Name:
Kandrach

3. Email:
Matthew@caseforconsumers.org

4. Mailing Address:(optional)
1800 Diagonal Rd Suite 600 Alexandria, VA 22314

5. Affiliation:(optional)
Consumer Action for a Strong Economy

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
Dear Maryland Department of the Environment,

I am writing on behalf of Consumer Action for a Strong Economy (CASE), an organization dedicated to advocating for free markets, fiscal responsibility, and reasonable consumer protections. We are committed to serving as the voice of American consumers and, in this capacity, we wish to express our support for the fair review and renewal of CSX's air permit in Curtis Bay.

The CSX Curtis Bay Piers facility is not only a vital component of Maryland's infrastructure, but also an integral part of the nation's economic fabric – and subsequently, consumers. Rail transport more broadly is a vital component of Maryland's infrastructure, providing an efficient and reliable means of moving goods across the state and beyond. Any disruption or minimization in rail operations could have far-reaching consequences not only for businesses, but also for consumers who rely on these goods.

CSX Transportation has been a member of the Baltimore community for nearly two centuries, contributing significantly to both the regional and state economies. A prior economic impact study showed CSX provided $335 million in economic value to the state of Maryland, with over $21 million in state and local taxes. This obviously has a massive impact on local and state economies, and consumers. As we know, a local economy directly impacts consumers by influencing

purchasing power, the availability of goods and services, job opportunities, and overall quality of life. Overregulating Curtis Bay Piers will only have a domino effect on consumers.

Beyond monetary contributions, CSX directly employs nearly 700 Marylanders and supports an overall port system that provides approximately 140,000 local jobs. These contributions are essential not only for sustaining economic growth, but also for ensuring energy security by supplying coal critical for electricity generation and metallurgical processes. A reduction in operations due to harsh permitting could lead to substantial job losses among those directly employed at the piers, as well as ancillary sectors such as logistics, manufacturing, and retail. This would severely impact the local economy by reducing household incomes and decreasing consumer spending power.

More broadly, it's also important to recognize that the Curtis Bay community is heavily industrialized with numerous businesses contributing emissions through various operations. Diesel truck emissions and other industrial activities significantly impact air quality, therefore, attributing particulate matter primarily and solely to CSX's operations would be misleading. Third-party experts have even noted that several pollution sources were seemingly overlooked in reports used as bases for permitting decisions. We should not put questionable data ahead of consumer and economic needs.

We urge you to consider these factors when reviewing CSX's permit renewal. Maintaining robust rail services is essential not only for preserving jobs but also for safeguarding economic stability within our communities. A harsh permitting process could deter other businesses from investing in Maryland – businesses that bring good-paying jobs and economic stimulation. Nobody wants that.

Thank you for considering our perspective on this matter.

Sincerely,

Matthew Kandrach
President
Consumer Action for a Strong Economy (CASE)

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Thu, Oct 10, 2024 at 4:18 PM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 10/10/2024 16:13:39 Eastern Standard Time

Response End Time: 10/10/2024 16:18:15 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Michael

2. Last Name:
Middleton

3. Email:
Executivedirector@sb7coalition.org

4. Mailing Address:(optional)
[No Answer Entered]

5. Affiliation:(optional)
SB7 Coalition Inc.

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
Permit requirements do not go far enough.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Mon, Dec 16, 2024 at 4:40 PM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 12/16/2024 13:21:57 Eastern Standard Time

Response End Time: 12/16/2024 16:40:30 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Rebecca

2. Last Name:
Rehr

3. Email:
rrehr@mdlcv.org

4. Mailing Address:(optional)
[No Answer Entered]

5. Affiliation:(optional)
Maryland League of Conservation Voters

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
Good Afternoon - Please find the text of Maryland LCV's comments below. We emailed a PDF copy with images and links meant to be included to Ms. Shannon Heafey.

December 16, 2024

Christopher Hoagland, Director
Air and Radiation Administration
Maryland Department of the Environment
1800 Washington Blvd, Suite 720
Baltimore, MD 21230

RE: Curtis Bay Piers Permit to Operate, Permit No. 510-2263
Submitted electronically to shannon.heafey@maryland.gov

Thank you for the opportunity to comment on MDE's draft permit to operate for the CSX Curtis Bay Coal Terminal. The Maryland League of Conservation Voters (Maryland LCV) is a non-partisan non-profit organization whose vision is a

EXHIBIT L-488

healthy environment for everyone in Maryland.

As MDE determines whether to grant this permit, we urge consideration of the following:

Community Input and Engagement
During the Moore/Miller Administration and under the leadership of Secretary Serena McIlwain, MDE has supported the approach of applying an environmental justice lens to all of its work. Among the foundational 17 principles of environmental justice are the fundamental right to political, economic, cultural, and environmental self-determination of all peoples and the right to participate as equal partners at every level of decision-making (numbers five and seven). The residents of Curtis Bay, where the coal export facility is located, and surrounding communities are overwhelmingly in favor of denying this permit. Their testimonials about living next to a coal export facility that handles seven million tons of coal per year include health impacts, economic impacts, and quality of life impacts. Governor Moore has repeated the adage, "Those closest to the problem are closest to the solution" as his administration's core value in decision-making, which is fully aligned with using an environmental justice lens. Taking an environmental justice approach would prioritize requests of the affected community.

Cumulative Impacts
In Maryland law, "environmental justice" means equal protection from environmental and public health hazards for all people regardless of race, income, culture, and social status. There is a disconnect between this definition and the way MDE approaches permitting, which assesses one facility (and sometimes one pollutant) at a time. To be protected from environmental public health hazards, regulatory processes should include the scenarios that reflect people's lived experiences. Curtis Bay is the location for several regulated polluting facilities (see Figure 1) as well as being bordered and intersected by major roadways trafficked by diesel trucks regulated under a different system than stationary pollution sources. While any one facility may be in compliance with state and federal regulations, when there are so many sources in close proximity, the cumulative impact is much greater and higher than safe exposure levels. Without considering these cumulative measures, MDE is falling short of achieving the state's definition of environmental justice.

Figure 1. Clustering of Maryland Department of the Environment-regulated stationary sources of air pollution (red dots) in the Curtis Bay area.

Source: Frontiers in Epidemiology September 2023 https://www.frontiersin.org/journals/epidemiology/articles/10.3389/fepid.2023.1198321/full

In the regulatory arena, when there are multiple sources of pollution in an area, it can be difficult to prove that one particular industry is responsible for pollution. This burden of proof is placed on the affected community. In December 2023, a dynamic, collaborative study that has since been peer-reviewed, was released by the Community of Curtis Bay Association, the South Baltimore Community Land Trust, Johns Hopkins University, the University of Maryland, and MDE and confirmed the presence of coal dust in the air of the South Baltimore community of Curtis Bay. In the context of cumulative exposures, this collaboration proved the presence of coal dust, linking potential health harms to the CSX coal export facility. When the study was released, Secretary McIlwain said, "We will let the science and data identified in this study lead the way as we consider a new permit for the Curtis Bay coal terminal through the lens of environmental justice."

At least in part as a result of the concentration of pollution, and according to MDE data, Curtis Bay has the highest EJ score percentile (distribution across Maryland) in the state (See Figure 2). Living in an area with such a high EJ Score increases residents' vulnerability to additional health and environmental stressors. Living in an overburdened and underserved community in Maryland with a high EJ score should merit additional considerations in state permitting.

Figure 2 MDE's EJ Screening Tool with Curtis Bay's EJ Score Profile Highlighted

Source: https://mdewin64.mde.state.md.us/EJ/

Climate Impacts
Maryland has the most ambitious short term climate goals in the nation, and has been lauded for making progress on reducing greenhouse gas (GHG) emissions. If fully achieved, Maryland's GHG emissions reductions of 60% by 2031 are expected to achieve $321 million in public health benefits, $4,000 in energy savings per household per year, 27,000 new jobs, and $5.3 billion in GDP growth. At the same time, Baltimore is the second largest coal exporter in the nation. MDE should recognize the climate implications of exporting coal around the world.

Health Impacts of Coal Dust
Coal dust contains and contributes to particulate matter (PM) pollution in Curtis Bay. PM is classified by regulatory agencies based on the size of the particles, with the smaller particles like PM 2.5 (particles measuring 2.5 micrometers or less) being more dangerous because they can penetrate the lungs more deeply if inhaled. The health impacts of PM 2.5 are well documented and include premature mortality, heart and lung disease, and asthma attacks. Children and older adults, especially with preexisting lung conditions, are particularly vulnerable to the effects of exposure to PM. A recent

study examined the connection between coal storage and handling and increased air pollution, demonstrating that a 10% increase in PM 2.5 from coal stockpiles causes a 1.1% increase in the average adult and a 3.2% increase in infant mortality rates. The study also looked at the cost of local air pollution, finding that a one ton increase in coal stockpiles results in local air pollution costs of $197. These costs are borne by nearby community members. Any permit should include considerations of health burden and economic impacts to communities.

Fees Imposed on Permit Applicant
After a 2021 explosion at the CSX facility, CSX entered into a settlement to pay the state $15,000 and the South Baltimore Community Land Trust $100,000. “Federal regulators with the Occupational Safety and Health Administration also fined CSX more than $120,000 last year for numerous violations associated with the explosion.” These dollar amounts are high for individuals, but make up a very small percentage of CSX’s operating costs and profit margin; CSX revenue for the quarter ending September 30, 2024 was $3.619B, a 1.32% increase year-over-year. To use fees as an incentive to comply with regulations, fees must be set at a level that deters noncompliance.

Thank you for the opportunity to comment on this permit. We appreciate your consideration of these factors in your decision.

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Mon, Dec 16, 2024 at 5:20 PM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 12/16/2024 17:14:02 Eastern Standard Time

Response End Time: 12/16/2024 17:20:09 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Rich

2. Last Name:
Nolan

3. Email:
jmullins@nma.org

4. Mailing Address:(optional)
101 Constitution Ave, NW Washington DC 20001

5. Affiliation:(optional)
National Mining Association

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
December 16, 2024

Maryland Department of the Environment:

The National Mining Association (NMA) is the only national trade organization that serves as the voice of the U.S. mining industry and the hundreds of thousands of American workers it employs before Congress, the federal agencies, the judiciary and the media, advocating for public policies that will help America fully and responsibly utilize its vast natural resources. We work to ensure America has secure and reliable supply chains, abundant and affordable energy, and the American-sourced materials necessary for U.S. manufacturing, national security and economic security, all delivered under world-leading environmental, safety and labor standards. Given that, we are writing today to urge thorough consideration of how impactful CSX's Curtis Bay Piers are to the industry, state and regional economy, and broader supply chain, and to raise our concerns with several of the proposed conditions in the draft operating permit.

The Curtis Bay Piers at the Port of Baltimore has shown a commitment to environmental and safety standards, maintaining operations that have enabled the Curtis Bay community to meet the U.S. Environmental Protection Agency's (EPA) National Ambient Air Quality Standards (NAAQS) for PM2.5 and PM10, while serving as a critical component of our

EXHIBIT 15 491

interstate transportation network. Doing so enables the facility to play a critical role in the supply chain, ensuring Maryland and the nation have access to the resources that fuel our industries, support infrastructure projects, and sustain thousands of families. This facility alone contributes $335 million in annual economic value and supports over 1,400 jobs to just the state of Maryland, but its impact extends to states such as Pennsylvania and West Virginia who utilize the facility to enable coal mined in those states to reach international markets.

The NMA is concerned that MDE's efforts to incorporate new requirements into the draft permit does so in several ways that could potentially negatively impact interstate commerce, as well as be cost prohibitive to the industry and beyond, without providing any additional environmental benefit. For example, the draft proposal's requirement to install physical barriers or wind screens is not sufficiently clear. Additionally, the draft proposal's duplicative requirement to respray coal as it reaches the facility could be cost prohibitive and inefficient to the transportation of coal. CSX has already invested in long-term systems to ensure safety and improve dust control. On top of that, CSX has already installed a fence line monitoring system to continuously monitor particular matter along the perimeter of the facilities and works with MDE to ensure they're meeting the permitting and agency requirements.

Additionally, these proposed conditions seem informed by just one community-based report. The report cited a number of common pollutants like PM2.5, total suspended particles (TSP), and black carbon that are not specific to coal. None of these pollutants are exclusive to coal operations, making the association between the facility and this type of air pollution that the permit is attempting to address unsubstantiated. For example, black carbon, which some activists have identified as potentially being coal dust, is more likely and commonly associated with diesel truck traffic. The inclusion of proposed conditions to address pollutants more commonly associated with other mobile sources in the area is a problematic precedent for the MDE to establish, and we urge that they be struck from the final operating permit.

The NMA is committed to ensuring all aspects of the U.S. mining industry thrive. We believe there is a way to provide a fair permit that supports both environmental and economic goals. CSX's Curtis Bay Piers is more than a coal transfer site; it is a cornerstone of industrial progress, and energy and economic security for the nation.

We urge the Department to reexamine the proposed conditions and reaffirm Maryland's leadership in sustainable industrial development by adopting a final permit that is in line with past operational permits issued to CSX.

Sincerely,

Rich Nolan
National Mining Association

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

New response for survey 'MDE Determination and Draft Permit Form'

1 message

webmaster@maryland.gov <webmaster@maryland.gov> Mon, Dec 16, 2024 at 10:13 PM
Reply-To: webmaster@maryland.gov
To: shannon.heafey@maryland.gov

GENERAL RESPONSE INFORMATION

Respondent: Anonymous

Completed Survey: Yes

Response Start Time: 12/16/2024 22:12:58 Eastern Standard Time

Response End Time: 12/16/2024 22:13:46 Eastern Standard Time

SURVEY RESPONSES

SCORE: 0

1. First Name:
Timothy

2. Last Name:
Lee

3. Email:
tlee@cfif.org

4. Mailing Address:(optional)
3050 Chain Bridge Road, Suite 200, Fairfax, VA 22030

5. Affiliation:(optional)
[No Answer Entered]

6. Comments on the Department's Determination and Draft Air Quality Permit to Construct:
The Center for Individual Freedom (CFIF) submits the following Comment regarding CSX Transportation's application to renew its Curtis Bay facility's air quality state permit to operate. CFIF isa non-partisan organization established in 1998 with the mission of defending the rule of law and individual freedom as guaranteed by the United States Constitution and constitutional and statutory protections at the federal, state and local levels.

Pursuant to that mission, CFIF submits this Comment in support of a fair and swift renewal process regarding CSX Transportation's application. By doing so, this Department can ensure that it respects the constitutional right of due process and protect the vitality of the local economy and broader supply chain across Maryland.

As an initial concern, the reliance upon data from "community scientists" in the Collaborative Report upon which the permitting process heavily relies in the permitting process – even noted on the permit website – fails to meet those basic standards of due process, fairness, factual integrity and rule of law. The report reaches a number of conclusions unsupported by fact, which could create issues for permitting processes in Maryland if overly relied upon in making final regulatory decisions. For example, the permit includes several costly conditions aimed at attempting to reduce coal dust in the community, and some public comments cite the report to allege the necessity of unreasonable conditions to address dust. Already, however, Curtis Bay Piers comply with applicable United States Environmental Protection Agency National (EPA) Ambient Air Quality Standards (NAAQS).

More generally, a fairer balancing of environmental stewardship and economic vitality must govern consideration of renewal of CSX's air permit. While environmental regulations can obviously serve an important purpose, they must be applied in a manner that does not unduly infringe upon applicants' due process rights or stifle economic progress. Further, regulatory decisions must be reached on the basis of sound science and evidence-based assessments, as well as consideration of the economic significance of the operations at issue.

The importance of Curtis Bay Piers to the local and Maryland economies cannot be understated, and for that reason this Department should work to seek an appropriate middle ground. CSX has proven throughout its presence in the area to be both a leader in the industry for environmental innovation, as well as a good corporate neighbor. For example, CSX has already unveiled the first hydrogen-powered locomotive, is partnering to fund three battery electric locomotives and chargers in Curtis Bay and reported various goals aimed at reducing the company's carbon footprint and enhancing operational efficiency through innovative practices in their latest ESG report.

Accordingly, this Department cannot allow an extreme environmental agenda to overpower the vital output that Curtis Bay Piers contributes to the community and beyond. We therefore urge you to renew CSX's air permit, which is in no way mutually exclusive with compliance with applicable environmental standards.

Sincerely,

Timothy Lee
Senior Vice President of Legal and Public Affairs

Maryland

Shannon Heafey -MDE- <shannon.heafey@maryland.gov>

Curtis Bay Piers Permit to Operate, Permit No. 510-2263

1 message

Gwen DuBois <bikenotbomb@gmail.com> Sun, Dec 15, 2024 at 4:35 PM
To: shannon.heafey@maryland.gov

Christopher Hoagland, Director
Air and Radiation Administration
Maryland Department of the Environment
1800 Washington Blvd, Suite 720
Baltimore, MD 21230

RE: Curtis Bay Piers Permit to Operate, Permit No. 510-2263
Comments in Opposition to the CSX Curtis Bay Coal Terminal Air Pollution Permit No. 510-2263
Maryland Department of the Environment

Dear Director Hoagland,

As president of Chesapeake Physicians for Social Responsibility, an organization of 900 supporters whose mission includes addressing the climate crisis, pollution related morbidity and mortality as well as health disparities in Maryland, we strongly oppose the proposed draft Air Pollution Permit to Operate for the CSX coal terminal in Curtis Bay and urge you to reject it.

In Curtis Bay, CSX has been exposing its neighbors to fugitive coal dust from its terminal for years. Although air pollution has no boundaries, the non-combusted coal dust spreads locally and the people, families, especially children who live in Curtis Bay are the most heavily exposed. Residents had to experience the frightening explosion from the terminal in 2021. They have been observing the frequent dark plumes rising over their neighborhood from the terminal. They live with the black dust that coats the outside and inside of their houses. This coal dust is in addition to other sources of air pollution in their neighborhood, once the 8th most affected zip code in the nation from stationary sources of air pollution.

Now a recent peer reviewed, community-university partnership study provided proof that the dust coating their homes is indeed from coal. Coal dust contains the air pollutant, particulate matter (PM) and the most significant air pollutant is the smallest PM particle PM2.5 (particles 2.5 micrometers or less). A University of California, Davis study of a coal terminal and nearby rail holding yard in the city of Richmond, Ca. found that the storage of coal and coal cars at the rail yard significantly increase ambient concentrations of (PM2.5). “Terminal operations involving coal transport, storage, and handling significantly increase community exposure to ambient PM2.5. These PM2.5 increments subsequently increase the risk of a wide range of adverse health effects with environmental justice implications.” It is these small particles, the PM2.5 that are one of the world’s leading causes of air pollution related premature mortality, accounting for over 4 million or 62% of the global total estimated at 6.7 million premature deaths from air pollution annually. The most vulnerable populations include the young, the old, those with chronic illnesses, minorities and economically disadvantaged.

Health effects of exposure to PM2.5

EXHIBIT I - 495

Long term exposure to PM2.5 is associated with premature death from all causes, as well as from cardiovascular, respiratory disease and lung cancer. The evidence is so strong that it is believed it can cause cardiovascular disease. Other specific conditions associated with PM2.5 include coronary artery disease, hypertension, diabetes, respiratory infections, chronic lung disease, new onset asthma, impaired lung development in children, increase in pneumonia incidence, preterm birth, and low birth weight. In addition, there is the association with neurodegenerative diseases, Alzheimer, and Parkinson's. Short term exposures are associated with exacerbations of asthma and chronic lung disease, ER visits, and strokes.

For the Baybrook/Curtis Bay/Hawkins Point neighborhood, data from 2017 indicate that average lifespan was less than for Baltimore City average lifespan, 69.7 vs 73.6 years. Age-adjusted mortality rates were higher for cardiovascular disease, all cancer, lung cancer, lower respiratory diseases and stroke compared to the Baltimore City rates, diseases that could be related to PM2.5 and other air pollutant exposures.

The coal dust that blankets Curtis Bay not only affects the quality of life for the citizens of Curtis Bay. It is likely making people sick and shortening the collective lifespan of the community. A recent study estimated " the handling and storage at coal stockpiles "increased adult and infant mortality by .11 % and .32 %, respectively, for every 1 % increase in PM2.5 generated within an approximately 40 km radius." There is no greater good for which these families are suffering since CSX is shipping its product across the ocean to pollute other countries and exacerbate the climate crisis worldwide causing harm locally as well as to all of us on this planet.

Chesapeake Physicians for Social Responsibility therefore urge MDE to reject the proposed air permit for CSX to transport and store coal at the Curtis Bay terminal. The people of Curtis Bay have suffered long enough and it is past time to extend to them the protection all Marylanders deserve.

Respectfully submitted,

Gwen L. DuBois MD, MPH
President Chesapeake Physicians for Social Responsibility
https://www.chesapeakepsr.org/
December 13, 2024
Gdubois@jhsph.edu

RE.cpsrcoal1216 commentsdocx.pdf
103K

EXHIBIT I - 496

My name is Dr. Gwen DuBois and I am President of Chesapeake PHysicians for Social Responsibility , an organization with 900 followers committed to addressing climate crisis and pollution, both of which are causing illness, injury and premature death. I am also a resident of Baltimore and know that the emissions from this terminal effect all of us as air has no boundarie. ~~However~~, it is mostly ~~the~~ people, families, children who live here in Curtis Bay. This coal dust is is in addition to air polluted from the biggest medical waste incinerator in the country and in the shadow of Brescoe. The injustice is literally breath taking that the air that the people of Curtis Bay raise their families in and breath night and day is being contaminated by industry whose owners and regulators live elsewhere likely able to raise their loved ones in places where the air is fresh and life sustaining.

- **Coal Exports and Handling**: The CSX terminal in Curtis Bay handled **7.1 million tons of coal in 2022** and **8.6 million tons in 2021**, contributing to significant coal dust pollution in the area.
- **Coal Dust**: Coal dust contains **particulate matter (PM)** in both **PM2.5** and **PM10** size ranges. It also contains traces of toxic **elements** such as **arsenic**, **mercury**, and **lead**, which pose additional health risks.

UC Davis study of coal terminals found the same results Levin Terminal and nearby rail holding yard in the City of

Richmond, California.: Storage of coal and coal cars at the rail yard significantly increases ambient concentrations of pm2.5

Terminal operations involving coal transport, storage, and handling, significantly increase community exposure to ambient PM2.5

hese PM2.5 increments subsequently increase the risk of a wide range of adverse health effects with environmental justice implications

It is the smallest particles, the pm2.5 that are the most dangerous
PM2.5 is one of the world's leading causes of mortality, accounting for nearly 12% of the global total.
PM2.5 is causally associated with serious health outcomes and significant healthcare utilization and

productivity impacts. The World Health Organization and US Environmental Protection Agency indicate no known safe level of PM2.5;
https://ucdavis.app.box.com/s/sh55sgeix0r39k07zfsai1tcamux8qpw
Health effects from pl.2.5 include the following
outcomes: premature mortality from all causes, cardiovascular and respiratory diseases; infant mortality; life expectancy; myocardial infarction; cerebrovascular diseases; diabetes; hospitalization for cardiovascular or respiratory disease; emergency room visits; asthma induction and exacerbation; adverse birth outcomes including low birth weight, prematurity, and
birth defects; neurodevelopmental effects; cognitive impacts on adults (dementia, Parkinson's, Alzheimer's) and children (ADHD, autism, IQ); work and school loss and restrictions in activity (WHO 2021). In addition, many studies have reported associations with lung cancer and, more recently, several other organs

According to the most recent data, fine particulate matter, or $PM_{2.5}$, is responsible for nearly 4 million deaths globally from cardiopulmonary illnesses such as heart disease, respiratory infections, chronic lung disease, cancers, preterm births, and other illnesses.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9223652/

EXHIBIT J

Thomas Frey Verified Statement

BEFORE THE
SURFACE TRANSPORTATION BOARD

Finance Docket No. 36886

CSX TRANSPORTATION, INC. –
PETITION FOR DECLARATORY ORDER

REPLY OF THE MARYLAND DEPARTMENT OF THE ENVIRONMENT IN OPPOSITION TO CSXT'S PETITION FOR DECLARATORY ORDER

VERIFIED STATEMENT OF THOMAS FREY

I, Thomas Frey, hereby affirm that:

1. I am an Air Quality Data Analyst in the Air Monitoring Program of the Maryland Department of the Environment ("Department"). The facts set out in this verified statement are based on my personal knowledge and/or my review of records maintained by the Air Monitoring Program and the Department in the ordinary course of business, and are true to the best of my knowledge, information, and belief.

2. I am over eighteen (18) years of age and if called upon to do so, could testify competently about the facts set forth in this Verified Statement.

3. I have been employed by the Department since March 10th, 2021.

4. In my role as an Air Quality Data Analyst, I obtain, compile, and analyze data for evaluation purposes for a wide range of activities managed by the Program, and regularly prepare reports on such data.

5. I am familiar with the Curtis Bay Piers coal transfer facility currently operated by CSX Transportation, Inc. ("CSXT") and located at 1910 Benhill Ave, Baltimore, MD 21226

("Facility"). I have been generally familiar with the Facility since moving to a nearby area around 1997. Since joining the Department in 2021, I have spent significant time on understanding the Facility and its impact on air quality.

6. Throughout my time working at the Department, I have attended weekly data analysis and discussion calls (attended by Department staff, the Curtis Bay Community Association, Johns Hopkins University ("JHU") and University of Maryland students and faculty, and sensor manufacturers) regarding a community-driven effort to study the presence of coal dust and other pollutants within the Curtis Bay community and the impacts on public health. In April of 2022, I toured collection location sites for the JHU air monitoring network in Curtis Bay, set up to study and characterize air quality around the terminal, Reply Ex. X (Final Determination, Appx. D), and in August 2022 I started working with data from those sensors.

7. In November 2022, I started work in relation to the EPA's American Rescue Plan Competitive Grant for Enhanced Air Quality Monitoring, which includes Curtis Bay in addition to three other communities in Maryland. The grant provides support for air quality monitoring of the community impacted by operations at the Facility. In March 2023, I toured the Facility with staff. In June 2023, I started working with data provided by the Facility from its new Fenceline Monitoring Network and the data from that network. In December 2023, I attended the Curtis Bay community's meeting on the Facility and air quality. In January 2024, I met with CSXT staff at the Curtis Bay Facility to hear their response to that meeting. Analysis of data from JHU's study of the area, American Rescue Plan grant-funded monitoring, and/or the Facility's fenceline network has continued until present.

8. Data from these studies from the community near the Facility and CSXT's own Fenceline Monitoring Network is informative with regards to the Facility's impact on the air quality around the Facility. The National Ambient Air Quality Standards ("NAAQS") are federal exposure standards for certain harmful air pollutants called "criteria pollutants" that are established under the Clean Air Act. The Environmental Protection Agency ("EPA") sets a standard for each criteria pollutant based on public health and welfare protection. States are then charged with ensuring levels of each criteria pollutant do not exceed that standard. One criteria pollutant is particulate matter ("PM"). Particulate matter can be designated as PM10 (diameter of 10 microns or less) or PM2.5 (diameter of 2.5 microns or less) based on the size of the particulate. The annual NAAQS level for PM2.5 is 9 micrograms per cubic meter.

9. The Department utilizes the NAAQS level for PM2.5 as a metric for exposure of the Curtis Bay community to particulate matter above levels that are safe for public health. Since the NAAQS standard is set at a level EPA determined to be protective of public health, measurements of particulate matter *above* the NAAQS level are indicative of a health and safety risk to the community. Using data made available to the Department from JHU, the Department was able to determine the average amount of PM2.5 in the Curtis Bay community is near the NAAQS standard of 9 micrograms per cubic meter. JHU researchers published their own findings reflecting a correlation between activities at the Coal Terminal and air quality impacts to neighboring areas. Reply Ex. E (Aubourg et al., Community-driven research and capacity building to address environmental justice concerns with industrial air pollution in Curtis Bay, South Baltimore, Front. Epidemiol., 3:1198321 (2023) https://doi.org/10.3389/fepid.2023.1198321). Contributions of particulate pollution from CSXT operations, particularly near the Facility, often

cause a localized burden of total PM2.5 at or above the PM2.5 NAAQS standard. Reply Ex. F (Deanes et al., Relation of wind direction and coal terminal activity patterns with air pollution burden in a community bordering a coal export terminal, Curtis Bay, Maryland, USA, Air Quality, Atmosphere & Health, 18:2805–2821 (2025), https://doi.org/10.1007/s11869-025-01773-w).

10. This data, however, cannot support formal findings of NAAQS violations. A NAAQS violation is based on whether a three-year average of the measured level of a particular criteria pollutant is above the NAAQS level. Formal findings must also be based on data collected from Federal Reference Methods (FRMs) or Federal Equivalent Methods (FEMs) within the Maryland Ambient Air Monitoring Network. FRMs and FEMs are EPA-designated methods for monitoring NAAQS compliance. The data regarding particulate matter in Curtis Bay was not collected over the required three years nor was it collected by FRMs or FEMs within the Maryland Ambient Air Monitoring Network. Nevertheless, using the NAAQS level as a benchmark for pollution exposure is still instructive.

11. These findings of particulate matter above the NAAQS standard are further supported by data from CSXT's own Fenceline Monitoring Network. CSXT's fenceline monitoring is conducted separately from the community-driven monitoring undertaken in collaboration with university researchers.

12. In 2023, CSXT installed a Fenceline Monitoring Network on the perimeter of the Facility to monitor emissions, including emissions of particulate matter. The Fenceline Monitoring Network consists of a combination of air quality sensors and FEM monitors. While the sensors provide a versatile method for capturing local air quality data, only a few, rather than all, are designated FEM by the EPA. MDE, however, cannot make formal findings of NAAQS

violations because a formal assessment requires three years of data and CSXT's fenceline monitoring network sensors are not within the Maryland Ambient Air Monitoring Network used to make formal assessments of NAAQS violations. But here too the NAAQS level is instructive as a benchmark for pollution exposure. The data from the Fenceline Monitoring Network is valuable because it provides the Department with the ability to characterize fine-scale, source-specific pollutant behavior.

13. CSXT is required to provide the Fenceline Monitoring Network data to the Department. The Department's Air Monitoring Program analyzed 21 months of data from the Fenceline Monitoring Network and made observations about the emission of particulate matter from the Facility. Fenceline Monitoring has conclusively shown that the western, community facing side of the facility had higher PM2.5 concentrations. Additionally, the Air Monitoring Program found that average concentrations of fine particulate matter at some sensors measured above the NAAQS, and that when the sensors were downwind of the coal piles, these concentrations were higher and often exceeded the NAAQS levels.

14. Although sub 24-hour spikes of PM2.5 or PM10 pollution containing coal dust from the Facility are not a NAAQS violation per se, because they were not registered monitors within the Maryland Ambient Air Monitoring Network over a three-year average, these spikes nevertheless demonstrate recurrent instances of punctuated exposure to higher particulate concentrations containing coal dust and moving into and affecting the community.

15. Furthermore, the Fenceline Monitoring Network generates data in 1-minute increments, but CSXT only provides the Department with hourly averages. Since 2023, CSXT has provided this quality-controlled, hour-resolution data from the Fenceline Monitoring Network

to the Department. CSXT does not provide the raw or 1-minute-resolution data. Without the raw data the Department is unable to verify the flagged data. Without the 1-minute-resolution data, the Department may also be missing higher concentrations of particulate matter that occur over short time frames and reflect acute events of coal dust leaving the Facility. Additionally, the Department quality-controlled the data by removing impacts of intense wildfire smoke from the analysis.

16. The data obtained from CSXT's Fenceline Monitoring Network demonstrates that increased operational conditions in the permit are needed to mitigate coal dust leaving from the Facility. The Air Monitoring Program presented conclusions based on this data to the Air Quality Permit Program and Department leadership.

17. Due to the health impacts of increased fine particulate matter and the toxic air pollutants associated with coal dust, the Department decided to impose additional coal dust control measures.

I solemnly affirm this 30 day of January, 2026, under the penalties of perjury that the contents of this document are true to the best of my knowledge, information, and belief, and that I am qualified and authorized to file this verified statement.

/s/ Thomas Frey
Thomas Frey
Air Quality Data Analyst
Air Monitoring Program
Air and Radiation Administration
Maryland Department of the Environment

EXHIBIT K

CSX Transportation, Inc., Request for a Contested Case Hearing

SEND TO: OFFICE OF ADMINISTRATIVE HEARINGS
ADMINISTRATIVE LAW BUILDING
11101 GILROY ROAD, UNIT E/CLERK'S OFFICE
HUNT VALLEY, MARYLAND 21031
(410) 229-4281
FAX (410) 229-4266

TRANSMITTAL FOR MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPEALS

Air and Radiation Administration (ARA)

Name of Individual Transmitting Appeal: Suna Sariscak Telephone Number: 410-537-4129

Date Request for Hearing Received: August 13, 2025

Expected Number of Days Needed for Hearing: 10 Business Days

Special Requests: (Court reporter; mandatory hearing site; handicapped accommodations, etc.) N/A

Name of Case: IN THE MATTER OF THE CSX TRANSPORTATION, INC. – CURTIS BAY PIERS PERMIT-TO-OPERATE RENEWAL PERMIT NO. 510-2263

Appellant Counsel (Provide Appellant's address if no counsel):

Schmitt (Last) Daniel (First) E. (MI) Telephone No: 902-359-1126

Address: 500 Water Street
J150
Jacksonville, FL 32202

AAG Representing State:

Lange (Last) Doris (First) N. (MI) Telephone No: 410-537-3038

Address: Maryland Department of the Environment
1800 Washington Boulevard
Suite 6048
Baltimore, Maryland 21230

Delegated Decision Making Authority:

____ Final Decision Making Authority

_X_ Proposed Decision Making Authority

Circle Appeal Category:

007 Asbestos Removal Training Approval Action
008 Asbestos Removal/Encapsulation License Action (6-415, 416)
009 Air Quality Control Corrective Order/Show Cause Order (2-603, 2-604)
011 Air Quality Control Complaint/Order/Administrative Penalty (2-610.1)
012 Operating Permit Action (26.11.02.07; 26.11.02.14, 26.11.03.11) ☑
013 Construction Permit Action (26.11.02.14)
014 Noise Control Corrective Order/Variance Application
046 Radiological Materials Action (26.12.01.01)
047 Radioactive Materials License Action (26.12.01.01)
048 Radiation Machine Certification/Registration Action (26.12.02)
049 Radiation Machine Inspector Certification Action (26.12.02)
050 Other (please specify): _____

PLEASE ATTACH A COPY OF THE AGENCY'S ACTION WHICH PRECIPITATED APPEAL & THE REQUEST FOR HEARING

OAH-CO-E31 (Rev. 1/11/10)

EXHIBIT K - 1

EXHIBIT K - 2

THE STATE OF MARYLAND
DEPARTMENT OF THE ENVIRONMENT
IN THE MATTER OF THE
CSX TRANSPORTATION, INC. – CURTIS BAY PIERS
PERMIT-TO-OPERATE RENEWAL
PERMIT NO. 510-2263

REQUEST FOR A CONTESTED CASE HEARING

CSX Transportation, Inc. ("CSXT") respectfully requests a Contested Case Hearing on the above referenced Air Quality State Permit to Operate in accordance with COMAR 26.11.02.14F.

1. CSXT owns and operates Curtis Bay Piers ("Curtis Bay Piers" or the "Terminal"), a coal transloading facility, located at 1910 Benhill Avenue, Curtis Bay, Maryland 21226.

2. The person filing this Request is Daniel Schmitt, attorney and authorized representative for CSXT. My contact information is below:

   a. Mailing address: 500 Water Street, J150 Jacksonville, FL 32202

   b. Telephone: 904-359-1126

   c. Email: Daniel_Schmitt@csx.com

3. The Maryland Department of the Environment ("MDE") made a final determination to renew CSXT's Air Quality State Permit to Operate ("Permit to Operate" or "Permit") for the Terminal on July 29, 2025. Part D of the Permit includes the following conditions:

Part D- Physical Barrier and Dust Control Requirements

(1) The Permittee shall construct a windscreen to minimize coal dust being transported from any coal storage piles on the site into the surrounding community. The windscreen must at a minimum surround all coal storage piles, either individually or in a single enclosure within the facility's property boundary, except where openings are needed to allow vehicular access into and out of the interior of the structure or where necessary to allow for the movement of coal into or out of the structure via conveyors or rail. The maximum coal pile height shall be maintained at a level that is less than the height of the windscreen at all times.

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(2) Within 120 days following the issuance date of this Permit to Operate, the Permittee shall send a notification to and seek approval from the Department on the type of windscreen that it intends to use to satisfy the Part D(1) requirement of this Permit to Operate. The notification shall include revisions to the Fugitive Dust Plan applicable when the windscreen chosen to satisfy the Part D(1). requirement is in operation. Once approved by the Department the revisions will be incorporated into the Permit to Operate.

(3) Within 18 months of the Department's approval of the Permittee's windscreen, unless a different timeline is specified in the Department's approval, the Permittee shall complete construction and place in operation the windscreen required under the Part D(1) requirement of this Permit to Operate.

4. CSXT appeals Permit conditions D(1)-(3) and requests a contested case hearing because these conditions are not "reasonable precautions" for controlling fugitive dust that State law authorizes MDE to impose, are preempted by federal law, and are based on flawed data and decision-making.

Background on State Permits to Operate

5. Maryland law authorizes MDE to "adopt regulations that require a permit or registration before a person constructs, modifies, operates, or uses a source that may cause or control emissions into the air." Md. Code, Env't § 2-401.

6. MDE by regulation requires minor sources of air emissions to obtain state permits to operate. COMAR 26.11.02.14. Curtis Bay Piers is a minor source of air emissions.

7. State permits to operate are typically valid for five years. COMAR 26.11.02.04C(1). A minor source permittee must apply to renew their state permit to operate at least 60 days before the permit's expiration date. COMAR 26.11.02.14D.

8. Before issuing or renewing a state permit to operate, MDE must be satisfied that the source will comply with applicable air quality laws and regulations. COMAR 26.11.02.06C. MDE may consider the "past history of the applicant or source" to determine if a source will comply in the future. COMAR 26.11.02.06D(2).

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9. COMAR explicitly provides that state permit to operate renewals "are not subject to public notice, informational meetings, public hearings, or other public participation procedures which pertain to permits to construct and approvals subject to Regulations .11 and .12 of this chapter and to Part 70 permits." COMAR 26.11.02.14E.

10. Permit renewal for minor sources should be a short and straightforward process. The entirety of the renewal application is a one-page form provided by MDE.[1] MDE then "reviews the application and inspects the company to determine compliance with all applicable operating conditions required by permits to construct or orders, and all applicable state and federal air pollution control regulations."[2] If MDE is satisfied that the source and permittee will comply, it reissues the permit with any "additional or revised conditions that enable the Department to ensure the company is operating in compliance with all applicable" requirements.[3] MDE's standard turnaround time for issuance or renewal of a minor source permit to operate is four months.[4]

Background on CSXT and Curtis Bay Piers

11. CSXT is a Class I rail carrier that operates railroad transportation facilities across 26 states east of the Mississippi River (including Maryland), the District of Columbia, and two Canadian provinces. As a common carrier, CSXT is required by federal law to provide "transportation or service on reasonable request" to shippers, including to coal shippers. 49 U.S.C. § 11101(a). Federal law gives the federal Surface Transportation Board ("STB") exclusive

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[1] MDE, Application for Permit to Operate Process Equipment, available at https://mde.maryland.gov/programs/permits/Documents/Permit%20Applications/Air/Air%20Quality%20Permit%20to%20Operate%20-%20Process%20Equipment%20-%20Form%2026%20-%20ARA.pdf (last accessed Aug. 13, 2025).

[2] MDE, 1.05 Air Quality State Permit to Operate Fact Sheet, available at https://mde.maryland.gov/programs/permits/Documents/2008permitguide/ARMA/1.05.pdf (last accessed Aug. 13, 2025).

[3] *Id.*

[4] MDE, Maryland Department of the Environment FY24 Standard Application Turnaround Times, available at https://mde.maryland.gov/programs/permits/Documents/FY24%20Standard%20Application%20Turnaround%20Times%20-%20Google%20Docs.pdf (last accessed Aug. 13, 2025).

jurisdiction over rail transportation. *Id.* § 10501(b). This protects common carriers like CSXT from a patchwork of state-by-state regulations that would make operating interstate rail networks costly, burdensome, inefficient, impractical, and in many cases impossible.

12. CSXT conducts coal transloading operations at Curtis Bay Piers, where coal is transferred from trains to ships and barges that deliver it locally and to ports around the world. Curtis Bay Piers is located in the Curtis Bay Industrial Area, part of the Maritime Industrial Zoning Overlay District, and has operated continuously for over 125 years.

13. The Terminal is a minor source of particulate matter emissions and operates under State Permit to Operate No. 510-2263. The stationary source subject to the Permit to Operate is the existing coal transloading facility. The Terminal does not include any coal processing equipment and does not combust coal. Mobile sources that transport coal to and from Curtis Bay Piers, including locomotives and vessels, are not subject to any state permitting requirements.

14. In accordance with Maryland regulations, EPA guidance, and best practices, Curtis Bay Piers uses a variety of dust control measures, which are described in the Terminal's MDE-approved Fugitive Dust Plan, proven to minimize fugitive dust during coal loading and temporary storage operations. These measures include covered conveyors, dumper sheds, telescoping chutes, and a sophisticated wet suppression system that uses real time weather data to prevent coal dust from becoming airborne during operations.

15. Curtis Bay Piers complies with air quality rules and does not endanger public health. A 2022 analysis of toxic air pollutant ("TAP") emissions from the Terminal demonstrated that all TAP emissions, including coal dust and silica emissions, are at levels that are protective of public health. MDE evaluated and approved this analysis, concluding that the Terminal "is expected to comply with all applicable state and federal air quality regulatory requirements" and

that the Terminal's TAPs emissions did not exceed allowable emission rates based on conservative screening levels and are therefore protective of public health.[5] No changes to the Terminal's operations have occurred since MDE made this determination. In its Final Determination renewing CSXT's State Permit to Operate, MDE reiterated its 2022 finding, stating: "Premises wide toxic air pollutant emissions of coal dust, crystalline silica, chromium, cadmium, arsenic, mercury, nickel, copper, selenium, beryllium, cobalt, manganese, antimony and barium were evaluated and determined to be in compliance with applicable air toxics regulations designed to be protective of public health."[6]

16. As further evidence of the adequacy of the Terminal's existing fugitive dust controls, CSXT has submitted 21 months of quality-assured fenceline monitoring data—collected from a network of air monitors surrounding the Terminal—to MDE. The data from the fenceline monitoring system are also available to the public in real time on CSX's air monitoring website.[7] The fenceline monitors demonstrate that particulate matter concentrations at the Terminal's fenceline are below the 24-hour primary and secondary National Ambient Air Quality Standards ("NAAQS") for PM10 and PM2.5, which are health-based standards set by EPA based on the latest scientific knowledge.

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[5] CSXT, Comments on Renewal of State Permit to Operate No. 510-2263 for CSX Transportation Curtis Bay Piers at Appendix 13 (MDE, Fact Sheet, Air Quality to Construct for CSX Transportation – Curtis Bay Piers at 1, 4), available at https://mde.maryland.gov/programs/permits/AirManagementPermits/Documents/CSX/Appendix%20C%20-%20Comments%20from%20CSX.pdf#page=294 (Dec. 16, 2024); *id.* at Appendix 14 (MDE, Response to Comments Regarding an Air Quality Permit to Construct for CSX Transportation – Curtis Bay Piers at 1 (Sep. 6, 2022)), available at https://mde.maryland.gov/programs/permits/AirManagementPermits/Documents/CSX/Appendix%20C%20-%20Comments%20from%20CSX.pdf#page=300 ("CSXT Draft Permit Comments").

[6] MDE, Final Determination Concerning Renewal of an Air Quality State Permit to Operate for CSX Transportation, Inc. – Curtis Bay Piers at 8, available at https://mde.maryland.gov/programs/permits/AirManagementPermits/Documents/CSX/FinalDeterminationandResponsetoComments.pdf (last accessed Aug. 13, 2025) ("Final Determination and Response to Comments").

[7] CSX, Curtis Bay Piers Facts, available at https://www.csxcurtisbayfacts.com/monitoring/ (last accessed Aug. 13, 2025).

17. Curtis Bay Piers is also in compliance with the applicable visible emissions regulations in COMAR 26.11.06.02 and particulate matter requirements in COMAR 26.11.06.03.

18. MDE has not issued any notices of violation with respect to fugitive dust from the Terminal's coal handling or storage operations, and there have been no verified reports of visible emissions from coal handling operations.

MDE's Renewal of Permit No. 510-2263

19. On July 18, 2023, CSXT submitted a timely application to renew the Terminal's Permit to Operate, which was issued October 1, 2018 and set to expire September 30, 2023.

20. Rather than following the minor source permit to operate renewal process prescribed by COMAR, MDE developed an unprecedented permit renewal process for Curtis Bay Piers that is inconsistent with Maryland law, the Agency's published guidance and timelines for renewing state minor source permits to operate, and MDE's treatment of other permitted facilities located in environmental justice areas.

21. MDE initially delayed issuance of the permit by several months to allow citizens' groups opposed to the continued operation of the Terminal additional time to complete a community-led air monitoring project. In December 2023, six months after CSXT submitted its permit renewal application, MDE announced the release of a community-led study titled *Collaborative Investigation of Coal Dust, Air Pollution, and Health Concerns in Curtis Bay, South Baltimore Maryland* ("community study") that purported to show that coal dust from the Terminal is present in the Curtis Bay community. In a press release accompanying the community study, MDE announced its intention to have the study "lead the way as [MDE] consider[s] a new permit

for the Curtis Bay coal terminal through the lens of environmental justice."[8] Environmental justice is not a relevant factor for renewing a state minor source permit to operate. *See* COMAR 26.11.02.06C–D. MDE also performed an environmental justice screening even though state permits to operate are not subject to them. Md. Code, Env't § 1-601.1(a).

22. The community study that MDE used to delay renewing CSXT's permit was deeply flawed. These flaws include but are not limited to (1) using unreliable sampling and statistical analysis to measure "putative" (supposed) coal dust rather than actual, verifiable coal dust; (2) failing to implement standard quality assurance and quality control procedures for air monitoring data; (3) improper use of one-minute monitoring data to make conclusions about overall air quality in the Curtis Bay community; and (4) ignoring the contributions of other significant sources of air emissions in Curtis Bay. Put simply, the community study did not show that the Terminal is a source of actionable levels of coal dust in the community. The study relied on measurements obtained from non-regulatory grade air quality sensors, which according to the U.S. EPA cannot be used as a basis for making permitting decisions. *See* 40 C.F.R. Pt. 50 Appendices; U.S. EPA, Air Now: Citizen Science and Sensors, ("Air sensors are a valuable educational tool, although they do not replace regulatory monitors, which have met rigorous scientific review."). There is no precedent in Maryland or federally for basing facility-specific permit conditions on air monitoring data obtained from non-regulatory grade sensors located in a nearby community.

23. CSXT retained nationally recognized experts in particulate matter speciation, air quality monitoring, and toxicology to perform a scientific review of the community study. These

[8] MDE, New Scientific Study Confirms Airborne Coal Dust in Curtis Bay Community, available at https://news.maryland.gov/mde/2023/12/14/new-scientific-study-confirms-airborne-coal-dust-in-curtis-bay-community/ (Dec. 14, 2023).

experts developed a formal response to the community study, titled *CSX Response to the Collaborative Investigation of Coal Dust, Air Pollution, and Health Concerns in South Baltimore, Maryland* ("CSXT expert response"), which was submitted to MDE in February 2024. CSXT's expert response detailed how the community study relied on flawed analytical methods to draw unfounded conclusions about air quality in Curtis Bay. To date, MDE has not addressed the deficiencies raised by CSXT in its expert response to the community study.

24. On August 29, 2024, more than a year after CSXT submitted its renewal application, MDE made the draft Permit available for review and public comment and scheduled a public meeting. State permit to operate renewals are not subject to public notice, informational meetings, public hearings, or other public participation procedures. COMAR 26.11.02.14E.

25. The draft Permit included unprecedented conditions requiring CSXT to construct a physical barrier to prevent coal dust from being transported from any coal storage piles on the site into the surrounding community and to apply water to railcars loaded with coal at the Terminal boundary.[9] The draft Permit conditions required that the physical barrier surround the coal storage piles completely and be taller than the maximum height of the coal piles at all times. This overly prescriptive construction requirement is a significant departure from the monitoring and recordkeeping requirement typically included in a state permit to operate for a minor source of particulate matter emissions.

26. In issuing the draft Permit, MDE did not consider the technical feasibility, practicality, economic impact, or environment consequences of such an unprecedented physical barrier structure. MDE did not consider fenceline monitoring data from the regulatory grade air quality monitors it required CSXT to install at the Terminal, which show that particulate matter

[9] MDE removed the requirement to apply water to loaded railcars at the Terminal boundary from the final Permit.

concentrations within the Terminal boundaries do not exceed EPA-set health-based 24-hour NAAQS. Nor did MDE consider CSXT's history of compliance with air quality rules and its recent evaluation of TAP emissions showing that emissions of coal dust are at levels that are protective of public health. Instead, MDE considered only the findings of the community study in its determination that the Terminal's current dust control measures are inadequate and additional dust controls are required.

27. CSXT participated in the public meeting held on October 10, 2024 and submitted written comments on the draft Permit on December 16, 2024. These comments are incorporated herein by reference and are publicly available on MDE's website.[10]

28. In its comments, CSXT objected to the draft Permit conditions requiring construction of a physical barrier completely surrounding the coal piles that is taller than the coal piles at all times and the application of water to railcars loaded with coal at the Terminal boundary because these conditions were not "reasonable precautions" to control fugitive dust that MDE could impose. Maryland air quality regulations prohibit facilities from causing airborne particulate emissions from unconfined sources without taking "reasonable precautions to prevent particulate matter from becoming airborne." COMAR 26.11.06.03C(1). In determining whether certain dust control measures constitute "reasonable precautions," MDE must consider "technological feasibility, practicality, economic impact, and the environmental consequences of the decision." *Id.* CSXT provided technical memoranda from multiple engineering firms demonstrating that a 100-foot physical barrier completely surrounding and taller than the maximum height of the coal piles would be technically, economically, and logistically infeasible if not impossible to construct;

[10] *See* CSXT Draft Permit Comments, available at https://mde.maryland.gov/programs/permits/AirManagementPermits/Documents/CSX/Appendix%20C%20-%20Comments%20from%20CSX.pdf (last accessed Aug. 13, 2025).

severely disrupt operations at Curtis Bay Piers; and likely have negative environmental, safety, and community impacts. CSXT observed that these conditions attempted to impose a zero-emission requirement on the Terminal even though the reasonable precautions standard is not a zero-emission standard and cutting particulate matter emissions to zero would be unattainable.

29. CSXT also objected to MDE's reliance on the flawed community study as the basis for the draft conditions and highlighted the fact that MDE failed to consider the study's numerous methodological and logical flaws, which CSXT had previously communicated to MDE in the February 2024 CSXT expert response. The community study found no evidence to support the conclusion that coal particles from the Terminal have a substantial impact on air quality in the Curtis Bay community. CSXT argued that a minor source permit to operate renewal must be based on a facility's compliance with air quality rules, not deeply flawed community studies, and that a permitting decision based on the community study is arbitrary and capricious and contrary to Maryland law. CSXT attached its February 2024 expert response to the community study with its comments on the draft Permit.

30. CSXT also objected on the basis that MDE's physical barrier and railcar watering conditions were preempted by federal law. The federal Interstate Commerce Commission Termination Act ("ICCTA") provides that "[t]he jurisdiction of the [STB] over . . . *transportation* by rail carriers, and the remedies provided [by ICCTA] with respect to rates, classifications, rules (including car service, interchange, and other operating rules), practices, routes, services, and facilities of such carriers . . . *is exclusive*." 49 U.S.C. § 10501(b) (emphasis added). ICCTA further provides that "the remedies provided under [ICCTA] with respect to regulation of rail transportation are exclusive and preempt the remedies provided under Federal or State law." *Id.*

31. ICCTA defines "transportation" to "include[] (A) a locomotive, car, vehicle, vessel, warehouse, wharf, *pier*, dock, yard, property, facility, instrumentality, or equipment of *any kind related to the movement of passengers or property*, or both, by rail, regardless of ownership or an agreement concerning use; and (B) services related to that movement, including receipt, delivery, elevation, *transfer in transit*, refrigeration, icing, ventilation, *storage*, handling, and interchange of passengers and property." *Id.* § 10102(9). This definition applies directly to the movement, transfer, and storage of coal at Curtis Bay Piers.

32. CSXT argued that the draft permit conditions requiring construction of a physical barrier, which gives MDE the power to approve operational decisions by imposing restrictions on the height of the coal piles, and requiring watering of rail cars in transit were preempted by ICCTA because they manage or govern rail transportation, unreasonably burden or interfere with rail transportation, and apply in a manner that discriminates against rail operations. *Norfolk S. Ry. Co. v. City of Alexandria*, 608 F.3d 150, 157–58 (4th Cir. 2010); *Ass'n of Am. R.R. v. S. Coast Air Quality Mgmt. Dist.*, 622 F.3d 1094, 1097–98 (9th Cir. 2007). Indeed, it is well-settled that ICCTA categorically preempts state or local permitting or preclearance requirements, including environmental and land use permitting requirements, that could be used to deny or unreasonably delay a railroad from engaging in rail and rail-related operations. *Green Mt. R.R. Corp. v. Vermont*, 404 F.3d 638, 643, 645 (2d Cir. 2005).

33. CSXT also disputed MDE's conclusions that the Terminal creates a nuisance. CSXT argued that the community study, which MDE used to justify the draft Permit conditions, does not support MDE's statements in the fact sheet accompanying the draft Permit that the

Terminal has created a nuisance.[11] Curtis Bay Piers has operated for decades without any finding of it being a nuisance, and there have been no changes to facility operations that would support such a finding. CSXT observed that such a finding could not be the basis for the onerous physical barrier and railcar watering conditions that MDE had proposed.

34. CSXT also objected based on MDE's failure to follow proper procedure in issuing the Permit. CSXT argued that MDE predetermined the outcome of the permitting process by improperly relying on public comment and a flawed community study instead of the Terminal's record of air quality permit compliance supported by fenceline monitoring data obtained from regulatory-grade monitors. CSXT also argued that MDE violated COMAR and ordinary Agency practice by requiring public comment and an environmental justice screening and by imposing an arbitrary and physically unattainable zero-emission standard on the Terminal.

35. On July 29, 2025, after a delay of 22 months, MDE issued the final Permit to Operate. Similar to the draft, the final Permit requires CSXT to install a physical barrier, specifically a windscreen, that surrounds all coal storage areas and that is taller than the maximum height of the coal piles at all times. The final Permit also requires CSXT to seek approval from MDE on the type of windscreen it plans to construct and to complete construction within 18 months of receiving MDE's approval. And like in the draft Permit, MDE did not address the flaws in the community study in its Final Determination and Response to Comments on the final Permit.

36. In the Final Determination and Response to Comments, MDE states that it is requiring construction of a windscreen surrounding the coal piles based on academic literature that found coal dust is being transported from the Terminal to the community, including a December

[11] MDE, Fact Sheet and Tentative Determination, CSX Transportation – Curtis Bay Piers, Renewal of State Permit to Operate at 6, available at https://mde.maryland.gov/programs/permits/AirManagementPermits/Documents/CSX/Fact Sheet-RenewalPermitCSX.pdf (last accessed Aug. 13, 2025).

2024 academic journal article. *See* Final Determination and Response to Comments at 8–9, 12. The December 2024 article relied on the same flawed data as the community study and actually found that coal dust is present only in trace concentrations in Curtis Bay. *See* CSXT Draft Permit Comments at Appendix 4.

37. MDE also stated that it analyzed the fenceline monitoring data and that its analysis indicates that coal dust is being transported from the facility to the community. Final Determination and Response to Comments at 6–7. MDE's evaluation of the fenceline monitoring data, provided for the first time in the Final Determination, is flawed and inconsistent with federal regulations governing PM2.5 NAAQS comparisons. CSXT's fenceline network is ineligible for comparison to the annual NAAQS for PM2.5, and MDE's analysis of upwind and downwind concentrations, while flawed and failing to properly account for background concentrations, shows that the average net increase of PM2.5 is within the margin of error of the air monitors being used. When the fenceline data are evaluated consistent with federal regulations and EPA guidance, they demonstrate that particulate matter at the Terminal is adequately controlled by existing dust control measures.

38. Constructing a 100-foot windscreen that surrounds all the coal piles, as the final Permit demands, will require the Terminal to temporarily shutdown and/or reduce operations during construction, causing significant disruptions to existing coal storage and handling operations. The addition of a 100-foot windscreen surrounding all coal storage areas will result in permanent reductions to the Terminal's storage capacity and the need to relocate existing aboveground and underground infrastructure, and may impact operational safety. The requirement to construct a physical barrier taller than all material storage piles has not been included in any

other state permits for material handling facilities, coal-fired power plants, or other transloading facilities in Maryland.

39. CSXT therefore appeals Conditions D(1)–(3) requiring it to install a windscreen surrounding the coal storage areas and permanently maintain the coal piles at a lower height than the windscreen for the following reasons:

a. These conditions are not reasonable precautions. *First,* they are not necessary and are based on flawed studies. The Terminal's emissions do not exceed health-based air quality standards, and the Terminal has no documented history of air permit violations relating to the discharge of fugitive dust from the Terminal's coal storage piles. Maryland regulations provide examples of reasonable precautions to prevent fugitive particulate matter emissions from unconfined sources and materials handling, many of which are already in place at Curtis Bay Piers. The reasonable precautions standard does not require that a facility's emissions be zero. *Second,* the requirement to construct a windscreen surrounding and taller than the coal piles, effectively 100 feet or more, raises technical and practical challenges and will limit CSXT's operations. These challenges were documented in CSXT's comments on the draft Permit to Operate but were not addressed in MDE's Final Determination and Response to Comments.

CSXT's structural engineers evaluated the design and construction feasibility of a semi-permeable physical barrier (such as a windscreen) and found that construction of a 100-foot windscreen will require installation of relatively deep foundations and pose significant challenges related to subsurface development, lack of space for construction equipment staging, and operational disruptions. *See* CSXT Draft Permit Comments at Appendix 8. A 100-foot windscreen could also pose other environmental and safety risks that have not been

fully evaluated. MDE acknowledges in its Final Determination and Response to Comments that it made the decision to require a windscreen without complete information, admitting that it has only "limited information regarding specific site characteristics, such as subsurface conditions affecting foundation constraints and pollution control and safety requirements needed when enclosing an active coal storage operation." Final Determination and Response to Comments at 13. The Final Determination and Response to Comments does not reference any type of technical feasibility analysis performed to support the final Permit conditions. With incomplete information and disregard for the logistical and operational concerns with barrier construction raised by CSXT and its multiple engineering experts, MDE's decision to require a windscreen taller than the maximum height of the coal piles fails to satisfy the reasonable precautions standard because MDE failed to consider all relevant factors.

b. The Part D conditions are preempted by ICCTA under both a categorical and as-applied analysis. The physical barrier requirement is a permitting and preclearance condition that will unreasonably interfere with rail transportation and unduly burden Terminal operations and discriminates against CSXT. The physical barrier requirement will allow MDE to effectively limit the size of CSXT's coal piles, constraining its operations and its ability to fulfill its statutory common carrier obligations. MDE stated in a press release that the Permit "is one of the most stringent in state history" and the Agency was "holding CSX to a higher standard."[12] Issuing a historically restrictive permit to CSXT and imposing a higher standard on an interstate rail carrier is the type of burdensome and discriminatory conduct that courts have consistently held that ICCTA preempts.

[12] MDE, Maryland Department of the Environment Issues Most Protective Permit With New Pollution Controls for CSX Coal Facility in Response to Community Concerns, available at https://news.maryland.gov/mde/2025/07/29/maryland-department-of-the-environment-issues-most-protective-permit-with-new-pollution-controls-for-csx-coal-facility-in-response-to-community-concerns/ (July 29, 2025).

c. The Terminal's operations do not create a nuisance. In issuing the draft Permit, MDE asserted that the Terminal has created a nuisance and suggested that enclosure of the coal piles was justified to abate nuisance conditions. To the extent that MDE has determined that a physical barrier is necessary to abate nuisance conditions, this determination is not supported by the Final Determination or draft Permit fact sheet. The fenceline monitoring data also show that particulate matter concentrations at the fenceline are below the primary and secondary 24-hour NAAQS, and based on the Air Quality Index, air quality surrounding the Terminal is satisfactory. Curtis Bay, like the rest of Baltimore City, is in attainment with the NAAQS for PM10 and PM2.5. There is no indication that CSXT's emissions create a nuisance that justifies the severe logistical and operational constraints that constructing a physical barrier surrounding the coal storage area and taller than the maximum height of the coal piles would impose.

d. MDE's permitting renewal process and decision was arbitrary and capricious and did not follow either the required procedures for minor source permit to operate renewals or ordinary Agency practice.

First, MDE improperly based the physical barrier conditions on a flawed community study and subsequent literature based on the same flawed data. *E.g.*, Final Determination and Response to Comments at 7 (MDE's analysis "complements and confirms the findings of analysis performed by community scientists, university scientists, and MDE scientists that indicates coal dust is being transported from the facility to the community."), *id.* at 9 ("The Department agrees there is factual and adequate evidence that coal dust is being transported from the facility to the community. The Department's analysis of data from the facility's fenceline network complements that finding conveyed in these comments and published in

scientific literature . . . ."). There is no precedent in Maryland or federally for basing permitting decisions on air monitoring data obtained from nonregulatory-grade low-cost sensors located in a nearby community. Low-cost sensors are not used for regulatory monitoring and are not suitable for comparison or compliance demonstrations with the NAAQS. Community study findings based on non-regulatory grade air quality sensors and environmental justice concerns are not criteria that MDE may use to issue or deny a state permit to operate under COMAR 26.11.02.06.

Second, MDE subjected the Permit to information-gathering, public comment, and environmental justice screening requirements that are neither required by MDE regulations nor ordinarily imposed on other minor sources. MDE used the flawed community study to justify departing from ordinary minor source permit renewal procedures, claiming that "the public" needed to "have a voice in the development of the permit" because "recent scientific findings have confirmed that additional measures should be taken to mitigate the facility's impact." Final Determination and Response to Comments at 13. The Agency also stated that it viewed CSXT's operations "through an EJ lens" even though minor source permits to operate are not subject to environmental justice screening requirements. *Id.* at 16.

Third, MDE failed to fully explain its decision to require a physical barrier. MDE's response to comments lacks crucial information. For example, MDE says that it conducted its own analysis of CSXT's fenceline monitoring data and concluded that the data show some measurements above the annual NAAQS for PM2.5. *Id.* at 6, 12. However, federal regulations state that PM2.5 data from a single facility's fenceline monitoring network are not eligible for comparison to the annual PM2.5 NAAQS. *See* 40 C.F.R. § 58.30(a) ("PM2.5 measurement data from monitors that are not representative of air-wide air quality but rather of relatively

unique micro-scale, or localized hot spot, or unique middle-scale impact sites are not eligible for comparison to the annual PM2.5 NAAQS"). MDE has not made its analysis available for public review, and its reference to "recent scientific findings," which as discussed above appears to refer to the community study and academic scholarship based on the same data, is also vague and may refer to additional documents that were either not in the record or have not been disclosed to the public.

Fourth, MDE continues to subject Curtis Bay Piers to a zero-emission standard that applies to no other minor source, has no regulatory basis, and is physically unattainable. MDE's Final Determination and Response to Comments explains that the amount of coal dust reaching the community and its concentration are unknown. Final Determination and Response to Comments at 9. Nonetheless, MDE concluded that any amount of coal dust within the community requires the imposition of additional dust controls: "The toxic air pollutant constituents within coal dust, *regardless of its mass or its concentration within ambient air*, and the ability of fine particulate matter to cause health impacts at concentrations above the national ambient standard, form a basis on which the Department is imposing additional dust control measures in the operating permit to limit coal dust from leaving the terminal." *Id.* at 10 (emphasis added). Requiring CSXT to construct a physical barrier taller than the coal piles, which could necessitate construction of a 100-foot windscreen, is just another attempt to force CSXT's emissions to zero, which goes well beyond what the reasonable precautions standard requires and has no basis in Maryland law.

40. Therefore, CSXT hereby requests a Contested Case Hearing to challenge Permit Conditions D(1)–(3). These conditions should be removed from the final Permit to Operate, and MDE's Final Determination should be revised accordingly.

EXHIBIT L

ALJ January 13, 2026 Order

IN THE MATTER OF	*	**BEFORE ANGELA C. DIEHL,**
CSX TRANSPORTATION, INC.	*	**AN ADMINISTRATIVE LAW JUDGE**
CLAIMANT	*	**OF THE MARYLAND OFFICE OF**
	*	**ADMINISTRATIVE HEARINGS**
	*	**OAH No.: MDE-ARMA-012-25-25750**

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RULING ON CSX TRANSPORTATION, INC.'S MOTION TO STAY

On July 29, 2025, the Maryland Department of the Environment (MDE or Department), made its final determination to renew CSX Transportation Inc.'s (Appellant) Air Quality State Permit to Operate (Permit) for the Curtis Bay Piers (Curtis Bay). Part D of the Permit included language that required the Appellant to construct a windscreen to surround all coal storage piles and maintain the windscreen at the height of the coal pile. The MDE further required that within 120 days of the issuance of the Permit that the Appellant shall seek approval of the type of windscreen it intended to use. Additionally, within eighteen months of the Department's approval of the windscreen, the Appellant must complete construction of said windscreen. On August 13, 2025, the Appellant filed a request for a hearing with the OAH regarding the Permit requirements.

On November 19, 2025, the Appellant filed a Petition for Declaratory Order (Petition) with the federal Surface Transportation Board (STB) to issue a declaratory order finding that certain conditions in Maryland's operating permit requirements for the Appellant are preempted by the Interstate Commerce Commission Termination Act, 49 U.S.C. § 10501(b).

On December 1, 2025, the Appellant filed a Motion to Stay (Motion) the above proceedings because of the Petition before the federal Surface Transportation Board. On December 11, 2025, the Department filed their response to the Motion. On December 22, 2025, the Appellant filed their reply to the Department's response in support of its Motion.

ISSUE

(1) Should the Appellant's Motion to stay these proceedings be granted?

SUMMARY OF EVIDENCE

The Appellant attached the following exhibits in support of its Motion:

App. Exh. 1. - Control No. 07950 Permit to the Appellant from the Department, July 29, 2025 with accompanying index
App. Exh. 2 - Petition to the federal STB, November 19, 2025

The Department did not attach any exhibits to its response.

DISCUSSION

Both parties have cited to COMAR 28.02.01.11(A)-(B) that allows administrative law judges to "regulate the course of the hearing and the conduct of the parties and authorized representatives." COMAR 28.02.01.11(A)-(B). Those powers allow an administrative law judge to continue or postpone a matter. COMAR 28.02.01.11(B)(7). No regulations were cited by either party regarding motions to stay. Based upon my research, it appears there is no regulation guiding motions to stay in this case type.

Therefore, I will construe this Motion as a motion for a postponement or a continuance. A request for postponement will be granted only if good cause exists. COMAR 28.02.01.16(C). The term "good cause" is not defined in the applicable regulations, but it is generally defined to mean "[a] legally sufficient reason." *Black's Law Dictionary,* 275 (12th ed. 2024).

Given the unique contentions raised in the Motion and responses, I find it appropriate to look at other areas of law in the lens of motions to stay regarding good cause. The Court in *Williford v. Armstrong World Industries, Inc.*, 715 F.2d 124, 127 (1983),[1] provides guidance and held that a "party seeking a stay must justify it by clear and convincing circumstances outweighing potential harm to the party against whom it is operative." In *International Refugee Assistance Project v. Trump*, 323 F. Supp 3d 726 (2018),[2] the Court stated that "[w]hen considering a discretionary motion to stay, courts typically examine three factors: (1) the impact on the orderly course of justice, sometimes referred to as judicial economy, measured in terms of the simplifying or complicating of issues, proof, and questions of law which could be expected from a stay; (2) the hardship to the moving party if the case is not stayed; and (3) the potential damage or prejudice to the non-moving party if a stay is granted." *Id.* at 731.

In this case, looking at judicial economy, the STB has exclusive jurisdiction:

The jurisdiction of the Board over--

> **(1)** transportation by rail carriers, and the remedies provided in this part with respect to rates, classifications, rules (including car service, interchange, and other operating rules), practices, routes, services, and facilities of such carriers; and **(2)** the construction, acquisition, operation, abandonment, or discontinuance of spur, industrial, team, switching, or side tracks, or facilities, even if the tracks are located, or intended to be located, entirely in one State,
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> is exclusive. Except as otherwise provided in this part, the remedies provided under this part with respect to regulation of rail transportation are exclusive and preempt the remedies provided under Federal or State law. 49 U.S.C. § 10501(b).

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[1] This case involved an interlocutory appeal granted by the District Court to the defendants and certain co-defendant. The District Court refused to stay its trial of the case pending the resolution of proceedings in bankruptcy filed by four of the defendants.

[2] Individuals and organizations brought action against the President of the United States, seeking preliminary injunctive relief from a Presidential Proclamation that sought to ban entry of nationals from certain designated countries into the United States. The District Court granted a preliminary injunction in part. The government requested the court stay enforcement of the preliminary injunction until the Supreme Court rendered a decision in a related action.

It is clear that from the above statute that the STB has exclusive jurisdiction over operation and facilities of railroad carriers. Part D of the Permit by MDE involves the operation and facilities of the Appellant by requiring a windscreen to cover any coal dust at their facilities. The building of any windscreen would impact the operation of the Appellant's facilities. While there is no case law on this issue in Maryland, the cited cases by the Appellant in *Grafton and Upton R. Co. v. Town of Milford*, 337 F. Supp.2d 233 (D. Mass. 2004) and in *Vill. Of Ridgefield Park v. New York*, 318 N.J. Super 385, 404 (App. Div. 1999), modified, 163 N.J. 446 (2000) are persuasive in demonstrating that other jurisdictions have deferred to STB on issues dealing with the railroad. The *Grafton* case cited *Boston and Maine Corp. v. Town of Ayer*, 330 F.3d 12 (1st Cir. 2003) where the court endorsed the decision of the STB to limit local environmental regulation to the extent that it does not interfere with the railroad conducting its regulation. Based upon the Petition, that is exactly what the Appellant is seeking from the STB. Therefore, I find the first factor regarding judicial economy has been met as this is an area that the STB oversees.

As to the second factor of whether there is a hardship by the moving party. The Appellant is the moving party of this Motion. The Appellant has argued that having this matter before the Office of Administrative Hearings (OAH) and the STB is a hardship of resources. The hearing currently set before the OAH is set for fourteen days. For both parties, the hearing would entail lengthy and costly hours of preparation, expert retention, and the time away from other matters for the actual hearing. The Appellant would also need to prepare for dual hearings potentially unnecessarily. Therefore, I find that the Appellant would suffer a hardship if the stay is not granted.

The last factor to be considered is whether the non-moving party would suffer any damage or prejudice. The Department has argued that the Curtis Bay community, where the CSX facility is located, would suffer harm from the issuance of a stay. Again, in the instant case, I am not issuing a stay rather, I am solely considering the applicability of a postponement. As a result, I have considered the question of harm/damage through the lens of the procedural history before me. Per the record, the current appeal stems from a renewal application filed on July 18, 2023. The Department did not grant said permit until July 29, 2025, nearly two years later. Such a length of time does not suggest urgent harm/prejudice to the Community that arguably would be furthered by a postponement. To that end, as the Appellant has continued operations notwithstanding this, a stay in this instant action does not further prejudice or damage the Curtis Bay community any more than the two-year period for the Department's review of the Permit or the undesignated Department's approval period of any screen and then the eighteen-month implementation period.

After reviewing the three factors outlined in the *International Refugee Assistance Project v. Trump*, I have balanced the three factors and I find good cause and will postpone this matter.

CONCLUSION OF LAW

I conclude that having construed the Appellant's Motion to Stay as a motion for postponement, I find good cause to postpone this matter.

ORDER

I **ORDER** that the hearing dates currently scheduled at the Office of Administrative Hearings for May 5 to May 18, 2026 and the motions hearing scheduled for April 7, 2026 be **CANCELLED;** and I further

ORDER that on May 5, 2026 at 9:30 a.m., the parties will convene for a status conference on the Webex video teleconferencing platform. A separate notice will be issued to the parties.

January 13, 2026
Date Decision Issued

Angela C. Diehl
Angela C. Diehl
Administrative Law Judge

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