



The Dirty Secrets of Coal Cleaning: Pollution and Enforcement Options at Pennsylvania Coal Preparation Plants

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I. EXECUTIVE SUMMARY

The Environmental Integrity Project (“EIP”) reviewed state pollution documents for four Pennsylvania coal prep plants that together account for more than 95% of the coal preparation capacity in the Commonwealth: Consol’s Bailey Coal Preparation Plant; Alpha Natural Resources’ Cumberland Coal Preparation Plant, Alpha Natural Resources’ Emerald Mine No. 1 and Coal Preparation Plant, and Rosebud’s Dutch Run Coal Preparation Plant. Coal preparation plants release large quantities of particulate matter, volatile organic chemicals, greenhouse gases, and other pollutants into the air every day, and the water pollution problems from these facilities received national attention earlier this year when a spill of toxic coal cleaning chemical 4-methylcyclohexanemethanol (“MCHM”) spilled into the Elk River in West Virginia, shutting off the drinking water supply for over 300,000 people.¹

Our review has revealed numerous and significant deficiencies that likely result in the release of more air and water pollution than the law allows. Specifically, EIP has identified the following major issues:

TOP ISSUES
<i>Water</i>
<ul style="list-style-type: none">▪ EPA’s effluent limitations guidelines for the coal mining industry have not been revised since 1985 and fail to limit toxic coal pollutants or coal cleaning chemicals like MCHM.▪ DEP failed to set limits on common coal preparation metals or common coal cleaning chemicals as required by the Clean Water Act.▪ None of the plants provided a complete list of toxic pollutants or coal cleaning chemicals used, and potentially discharged, by the plants in their permit applications.▪ Although large volumes coal cleaning chemicals are stored on-site and large volumes of coal cleaning wastewater is routed to impoundments, DEP and operators have not accounted for potential discharges, leaks, or spills from these units.▪ Pennsylvania’s mining program issues combined NPDES and mining permits that lack basic public participation requirements of the Clean Water Act.
<i>Air</i>
<ul style="list-style-type: none">▪ Coal prep plants and associated mines are significant sources of methane, a powerful greenhouse gas, and top polluters of other regulated pollutants.▪ The Bailey plant’s Clean Air Act permit expired more than seven years ago and DEP has failed to even confirm whether Consol’s renewal application is complete.▪ Although Alpha applied for federal Clean Air Act permits for both of its plants, a recent Supreme Court decision created a nationwide loophole that sources that are “major” emitters of only greenhouse gases do not qualify for a federal permit.▪ Consol may have violated the Clean Air Act when it increased throughput by 30% without undertaking a “New Source Review” analysis.

¹ See, e.g. Lenny Bernstein, “Chemical spill into W.Va. river spurs closures, run on bottled water,” *The Washington Post* (Jan. 10, 2014).

On a more positive note, we have identified several opportunities to clean up coal preparation plants in Pennsylvania, including opportunities to:

- *Provide public comments on and challenge NPDES permits that fail to include effluent limits for selenium, arsenic, and other metals, as well as coal cleaning chemicals or fail to disclose pollutants potentially discharged from impoundments.*
- *Persuade DEP to commit to a plan to ensure public participation requirements are met for all NPDES permits at coal preparation plants and mine sites.*
- *File a citizen enforcement action against EPA and negotiate a schedule to update the federal effluent limitations guidelines to require limits and monitoring for metals common to coal discharges, including selenium and arsenic, and coal cleaning chemicals.*
- *File citizen enforcement actions for unpermitted discharges of pollutants that were not disclosed in Clean Water Act permit applications where we have evidence of pollution from other reporting requirements or after conducting sampling.*
- *Petition EPA to add to its TRI database coal cleaning chemicals that are not on the list of chemicals required to be disclosed.*
- *Persuade DEP to take action on the Title V permit application for the Bailey plant through the Environmental Hearing Board appeal process or a mandamus action.*
- *If warranted, file suit in federal court for failure to perform a proper new source review analysis when increasing hourly throughput or object to the Title V permit after issuance if it incorporates the weaker throughput limit.*
- *Comment on and challenge Title V and state-only air permits that do not require strong monitoring.*
- *Request that DEP require more emissions data submissions from coal preparation plants and their associated mines and publish more recent data on its online database.*

II. OVERVIEW OF COAL PREP PLANT PERMITS

EIP’s review focused on four of the largest² coal prep plants in Pennsylvania: Consol’s Bailey Coal Preparation Plant; Alpha Natural Resources’ Cumberland Coal Preparation Plant, Alpha Natural Resources’ Emerald Mine No. 1 and Coal Preparation Plant, and Rosebud’s Dutch Run Coal Preparation Plant. A summary of the status of permits for each facility is provided below in Table 1. Notably, only one plant, Consol’s Bailey Plant, is required to have a Title V permit, and that permit expired over seven years ago and DEP has failed to renew the permit in a timely manner. In addition, several of the Clean Water Act permits for operations associated with the coal prep plants are expired.

Table 1: Coal Prep Plant Summary Chart

COAL PREP PLANT	PA COUNTY	COAL SHIPPED 2012 (tons)	TITLE V (AIR) PERMITS		NPDES (WATER) PERMITS	
			TV or SOOP PERMIT #	PERMIT EXPIRES	PERMIT #	PERMIT EXPIRES
Bailey (Consol PA Coal Company)	Greene	12,767,270	TV-30-00072 (Applied for Renewal 1/28/2014)	11/28/2006	PA0213535 PA0092894 PA0235482 PA0235806	8/2017 12/2013 4/2014 6/2015
Cumberland Mine (Alpha Natural Resources)	Greene	5,209,703	No TV Permit (Applied 1/2014 but no longer required) <hr/> SOOP 30-00040	N/A <hr/> 9/27/2011	PA0013511 PA0033551 PA0235440	4/2013 10/2018 12/2012
Emerald Mine No. 1 (Alpha Natural Resources)	Greene	2,849,598	No TV Permit (Applied 7/2012 but no longer required) <hr/> SOOP 30-00087	N/A <hr/> 9/27/2016	PA0213438	7/2016
Dutch Run (Rosebud Mining)	Armstrong	7,169	No TV Permit SOOP 03-305-011	N/A 6/26/2012	PA0214540 PA0214558	7/2018 8/2014

² We selected plants based on data received from Appalachian Voices that was prepared using production rates available on www.opensourcecoal.org. See also U.S. Department of Energy, Energy Information Administration, Historical detailed coal production data (1983-2012), <http://www.eia.gov/coal/data.cfm#production>.

III. ANALYSIS: WATER POLLUTION

Coal preparation plants utilize large quantities of water and chemicals to separate rocks and dirt and the refuse from mined coal and break the coal into marketable sizes. While each plant's processes and chemicals may differ slightly,³ preparation typically involves breaking, screening, and washing. After coal is transferred from a mine to a coal prep plant, breakers crush the coal and screens separate the coal by size. Coal is then placed in a wet wash circuit where large volumes of water, some of which is from mine slurry impoundments, and chemicals from aboveground or underground storage tanks are used to remove refuse using processes and chemicals that vary depending on coal size. Fine coal is cleaned by froth flotation, whereby coal is mixed with water and chemicals known as frothers or flocculants to separate coal from refuse and then dewatered using vacuum filtration.⁴ These chemicals include 4-methylcyclohexanemethanol ("MCHM"), the chemical that spilled in West Virginia, and Shur-Coal 162, one of several patented frothers used at Cumberland.⁵ Coarse coal is cleaned by heavy media density separation, where chemicals such as magnetite separate coal from refuse based on density and gravity.⁶

At all four coal prep plants reviewed in this report, coal preparation waters are recirculated rather than discharged directly to water.⁷ However, at the Bailey, Emerald, and Cumberland Plants, water is dumped into on-site impoundments prior to recirculation, and while some ponds, such as the one at Bailey, are not permitted to discharge, other ponds, including ponds at Cumberland and Emerald, are permitted to discharge select pollutants.⁸

The NPDES permitting process and laws regarding disclosure of releases for coal preparation plants are wrought with problems. Some of the major issues we have uncovered with regard to permitting and releases of pollutants to waterways include:

³ Both processes and chemical compounds can be patented. *See, e.g.* *Stamicarbon, N.V. v. McNally-Pittsburg Mfg. Corp.*, 302 F. Supp. 525 (D.C. Kan. 1969) (holding that a patent for a coal preparation process of separating materials based on gravity was valid and had been infringed upon); and "Shur-Coal 162," World of Chemicals, <http://www.worldofchemicals.com/chemicals/chemical-properties/shur-coal-162.html>.

⁴ *See, e.g.*, Trinity Consultants, Bailey Preparation Plant Title V Operating Permit Renewal Application and Administrative Amendment, at 1.1, Facility Description (prepared for Consol Pennsylvania Coal Company, LLC ("Consol")) (filed Jan. 29, 2014) [hereinafter "2014 Bailey TV Application"].

⁵ KU Resources, Cumberland Coal Resources, LP Revised Title V Operating Permit Application, at Appendix D-1, Potential Emission Summary, Coal Prep Plant. (Jan. 14, 2014) (prepared for Cumberland Coal Resources, LP and Alpha Natural Resources) [hereinafter "2014 Cumberland TV Permit Application"] (listing the use of coal cleaning chemicals Praestol CM-562, Praestol CM-175, and SHUR-COAL).

⁶ *See, e.g.*, 2014 Bailey TV Application, at 1.1.

⁷ *See, e.g.*, Rosebud Mining Company, CMAP 03851601/NPDES Permit No. PA021450 for the Dutch Run Coal Preparation Plant, at Module 10.1 (submitted Mar. 27, 2012) ("facilities are designed to recirculate water from the coal preparation circuit") [hereinafter "2012 Dutch Run CMAP/NPDES Application"]. *See also* Debra Erdley, "Kittanning firm to ship chemical that tainted W.V. water to Pennsylvania," TribLive.com, (Feb. 5, 2014), <http://triblive.com/news/adminpage/5540597-74/freedom-facility-chemicals#axzz3EUFjWimE> (providing that John Poister, DEP's Southwest Regional spokesman, "said MCHM is recycled on site at coal-washing facilities. 'It is not discharged into water.'").

⁸ Dutch Run may also impound coal preparation process waters prior to recirculation in its sedimentation ponds. *See, e.g.*, 2012 Dutch Run CMAP/NPDES Application.

- The federal effluent limitations guidelines (“ELGs”) setting nationwide discharge limits for coal preparation plants have not been updated since 1985 and only limit one or two pollutants;
- DEP has failed to use its “best professional judgment” to set effluent limitations to fill the void from the chronically outdated federal ELGs;
- Companies have failed to disclose toxic pollutants common in coal discharges or coal cleaning chemicals in permit applications;
- Although large volumes of coal preparation wastewater is routed to impoundments prior, DEP and operators have not accounted for potential discharges, leaks, or spills from these units; and
- DEP’s mining program reviews and issues mining and NPDES permits jointly, which has hampered public participation and resulted in permits and applications that fail to meet Clean Water Act requirements..

While these do not cover all of the issues identified, our analysis presents the most important issues that state and federal agencies have failed to address. For example, both Alpha plants have been and continue to be in significant noncompliance with permit requirements, but these are in the process of being resolved by DEP and the federal government. Specifically, the United States and DEP sued Alpha in federal court for discharging pollutants including aluminum, iron, sulfate, and manganese either without a permit or in violation of permit limits into waterways at Cumberland and Emerald.⁹ The lawsuit settled in early 2014, but, the following quarter, Emerald still had seven exceedances¹⁰ and Cumberland had 23.¹¹ However, the settlement, which requires Alpha to develop environmental management systems, track and report violations, develop effluent limit violation response plans, install of equipment to cease these illegal discharges with ongoing agency oversight, and pay additional stipulated penalties for ongoing violations of permit limits and settlement requirements, addresses these discharges.¹²

A. Summary of Laws Related to Releases to Water and Land

1. The Clean Water Act

The federal Clean Water Act and the Pennsylvania Clean Streams Law prohibit coal preparation plants from discharging pollutants into waters of the United States and the Commonwealth, respectively, unless an operator has applied for and been granted a National Pollutant Discharge Elimination System (“NPDES”) permit from DEP.

⁹ U.S. v. Alpha Natural Resources et al., Civil Action No. 2:14-11609 (S.D.W.V. Mar. 5, 2014) (Complaint and Consent Decree) (other pollutants included osmotic pressure, total suspended solids, settleable solids, and pH). Many other plants and defendants were also involved.

¹⁰ Alpha, Discharge Monitoring Reports, Emerald Plant CMAP 30841307/NPDES Permit No. PA0213438, Quarter 2, 2014 (2014).

¹¹ Alpha, Discharge Monitoring Reports, Cumberland Plant CMAP 30831303/NPDES Permit No. PA0013511 Quarter 2, 2014 (2014).

¹² U.S. v. Alpha Natural Resources, Civil Action No. 2:14-11609 (S.D.W.V. Mar. 5, 2014) (Complaint and Consent Decree).

Coal prep plant operators must submit a complete NPDES permit application to the DEP.¹³ The application must include a detailed description of the process or operation that contributes wastewater to plant effluent and complete quantitative data for certain pollutants.¹⁴ Applicants must “report quantitative data for every outfall for the following pollutants: Biochemical Oxygen Demand (BOD5), Chemical Oxygen Demand, Total Organic Carbon, Total Suspended Solids, Ammonia (as N), Temperature (both winter and summer), and pH.”¹⁵ Coal prep plants are also required to provide quantitative data for 15 non-organic toxic pollutants, namely cyanide, phenols, and 13 metals: antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc.¹⁶

All applicants must also submit quantitative data on discharges of 112 organic toxics if they have reason to believe these pollutants are discharged¹⁷ and must list “any toxic pollutant which the applicant currently uses or manufactures as an intermediate or final product or byproduct.”¹⁸ DEP has discretion to modify or waive this requirement, but only if an applicant demonstrates doing so would be “unduly burdensome” and DEP has “adequate information to issue the permit.”¹⁹ The Clean Water Act prohibits a company from claiming as “confidential” permits, permit applications, or effluent data.²⁰

The Clean Water Act requires that each NPDES permit issued by DEP must contain effluent limits that “restore” and “maintain” the receiving water body.²¹ At a minimum, DEP must set technology-based effluent limits (“TBEL”) that reflect the ability of available technologies to reduce or eliminate pollution discharges.²² If a discharge could cause or contribute to a violation of water quality standards in the receiving water, DEP must include water quality-based effluent limitations (“WQBEL”) in the NPDES permit to prevent the exceedance.²³

EPA is required to promulgate effluent limits and guidelines (collectively, “ELG”) to control discharges of pollutants into the waters of the U.S. from industrial point sources and to help implement the Clean Water Act’s TBEL requirements.²⁴ When setting TBELs, states look to federal ELGs first.²⁵ Where EPA has not promulgated ELGs for a particular category of discharger, or where the existing ELGs do not address all waste streams or pollutants discharged by a facility, states must use their best professional judgment (“BPJ”) and set TBELs based on

¹³ 40 C.F.R. § 122.21(a)(1) (originally promulgated May 19, 1980).

¹⁴ See 40 C.F.R. §§ 122.21(g)(1)–(7) and (g)(9)–(13).

¹⁵ 40 CFR 122.21(g)(7)(iii). The regulation does provide that “the Director may waive the reporting requirements for individual point sources or for a particular industry category for one or more of the pollutants listed in paragraph (g)(7)(iii) of this section if the applicant has demonstrated that such a waiver is appropriate because information adequate to support issuance of a permit can be obtained with less stringent requirements.” *Id.* § 122.21(g)(7)(iv).

¹⁶ 40 C.F.R. § 122.21(g)(7)(v)(B) & Appendix D, Tbl. III.

¹⁷ 40 C.F.R. § 122.21(g)(7)(vi-viii). See also 46 Fed. Reg. at 2046.

¹⁸ 40 C.F.R. § 122.21(g)(9).

¹⁹ *Id.*

²⁰ 40 C.F.R. § 122.27(b)(2).

²¹ 33 U.S.C. § 1251(a).

²² See 33 U.S.C. §§ 1311, 1342(a)(1).

²³ 33 U.S.C. § 1312(a); 40 C.F.R. § 122.44(d)(1)(i).

²⁴ 33 U.S.C. §§ 1311(b), 1314(b).

²⁵ See *Natural Res. Def. Council v. EPA*, 859 F.2d 156, 183 (D.C. Cir. 1988).

BAT for each pollutant.²⁶ When setting TBELs on a case-by-case basis, states must consider the same factors EPA must consider when promulgating ELGs.²⁷ BAT-based limits “shall require the elimination of discharges of all pollutants if . . . such elimination is technologically and economically achievable.”²⁸ In other words, where technology exists to achieve zero liquid discharge, BPJ standards require that TBELs be set at zero.²⁹

Coal preparation plants are covered under the existing ELGs for the Coal Mining category (“Coal Mining ELGs”) under Subpart B, Coal Preparation Plants and Associated Areas.³⁰ Though these standards must be reviewed and revised if appropriate at least every five years, the regulations for this Subpart were first promulgated in 1975 and have not been revised since 1985.³¹ They only address one to two pollutants, failing to establish limits for the majority of pollutants such as heavy metals, aluminum, and other pollutants commonly found in coal and failing to establish limits for any of the pollutants commonly used in the coal cleaning and preparation process. The applicable ELGs are as follows³²:

For point source discharges with a pH normally more than 6.0 and for alkaline mine discharges, discharge limits after the application of BAT are:

BAT Effluent Limitations		
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
Iron, total (mg/l)	7.0	3.5

ELGs for point sources with a pH normally less than 6.0 include the same iron limits as listed above as well as total manganese limits of 4.0 mg/l (maximum) and 2.0 (30-day average).³³ Other subparts of the regulations for the Coal Mining category may have ELGs applicable to certain discharges at coal prep plants as well.

Prior to issuing a final NPDES permit, DEP is required to provide a draft NPDES permit that includes all applicable effluent limits, compliance schedules, and monitoring requirements³⁴ for public comment, and the draft permit must be accompanied by a fact sheet or statement of basis.³⁵ A fact sheet, in turn, must include at least a summary of the bases for DEP’s proposed

²⁶ *Id.* at 183; 33 U.S.C. § 1311(b)(2)(A); 40 C.F.R. § 122.44.

²⁷ *See* 33 U.S.C. § 1342(a)(1); 40 C.F.R. § 125.3.

²⁸ 33 U.S.C. § 1311(b)(2)(A) (emphasis added).

²⁹ *See* 33 U.S.C. § 1311(b)(2)(A) (emphasis added).

³⁰ 40 C.F.R. § 434.23.

³¹ EPA, Coal Mining Effluent Guidelines, <http://water.epa.gov/scitech/wastetech/guide/coal/index.cfm>. Note that ELGs for the Coal Mining Industry were revised in 2002 to add two new subcategories, but this revision did not revise existing ELGs. *Id.*

³² 40 C.F.R. § 434.23.

³³ *Id.*

³⁴ 40 C.F.R. § 124.6(d).

³⁵ 40 C.F.R. § 124.6(e) (“All draft permits prepared by EPA under this section shall be accompanied by a statement of basis (§ 124.7) or fact sheet (§ 124.8), and shall be based on the administrative record (§ 124.9), publicly noticed (§ 124.10) and made available for public comment (§ 124.11)”); *see also* 40 C.F.R. § 124.6(c) (“If the Director tentatively decides to issue an NPDES or 404 general permit, he or she shall prepare a draft general permit under paragraph (d) of this section.”).

limits.³⁶ These fact sheets are critical to ensure that the public is able to comment meaningfully on draft permits. DEP is prohibited from issuing (or renewing) a permit when the conditions of the permit would not provide for compliance with the requirements of the Clean Water Act.³⁷ NPDES permits last for a period of five years. If an operator wants to discharge from a new location or continue discharging after the five year term, it must apply for a new permit or a renewal permit at least 180 days prior to the commencing the new discharge or prior to the expiration of the current permit.³⁸

2. Other Laws Requiring Disclosure of Chemicals and Releases

In addition to Clean Water Act permitting requirements, other laws require coal prep plant operators to disclose information about pollution. For example, the Resource Conservation and Recovery Act and Pennsylvania's waste and mining laws require coal preparation plants to disclose the types and quantities of chemicals a plant stores in aboveground storage tanks ("ASTs") and underground storage tanks ("USTs"). AST storage data is required to be provided as part of an application for a mining and NPDES permit and UST data is required as part of an application for a waste permit. In addition, the general provisions of Pennsylvania's Clean Streams Law require that coal preparation plant must also submit a Preparedness, Prevention, and Contingency ("PPC") Plan for accidental spills as part of their mining and NPDES permits for all chemicals used or stored on-site.³⁹ When regulated plants release any of a long list of chemicals above certain thresholds, the Emergency Planning and Community Right-to-Know Law ("EPCRA")⁴⁰ requires companies to report the types and quantities of pollutants released, as well as whether the release was to air, water, or land, on-site or off-site, to EPA's Toxic Release Inventory ("TRI"), which is searchable for the public.⁴¹ EPA publishes a list of current chemicals that must be reported to TRI on its website.⁴² In addition, to protect workers from exposures, the Occupational Safety and Health Administration's Hazard Communication Standard requires disclosure of chemicals in Material Safety Data Sheets ("MSDS").⁴³

³⁶ 40 C.F.R. § 124.8(b)(4) (requiring, where applicable, "[a] brief summary of the basis for the draft permit conditions including references to applicable statutory or regulatory provisions").

³⁷ 40 C.F.R. § 122.4(a).

³⁸ 40 C.F.R. § 122.21(c), (d).

³⁹ 25 Pa. Code § 92.34. See also DEP, Application for Individual NPDES Permit Associated with Mining Activities, Form 5600-PM-BMP-0032, § F, available at <https://www.google.com/search?q=dep+form+5600-pm-bmp-0032+ppc&ie=utf-8&oe=utf-8&aq=t&rls=org.mozilla:en-US:official&client=firefox-a&channel=sb#> (revised Aug. 2014) (last accessed Oct. 8, 2014); DEP, *Guidelines for the Development and Implementation of Environmental Emergency Response Plans*, No. 400-2200-001 (as amended and updated), <http://www.elibrary.dep.state.pa.us/dsweb/Get/Version-48522/400-2200-001.pdf>.

⁴⁰ See, generally 42 U.S.C. §§ 11023, 11048; 40 C.F.R. § 372. Coal preparation plants with at least 10 full-time employees that process or "otherwise use" any of a long list of chemicals are required to report whenever the releases of chemicals exceed specified thresholds. 40 C.F.R. §§ 372.22(a)–(c), 372.25, 372.27–28.

⁴¹ U.S. EPA, Toxics Release Inventory, <http://www2.epa.gov/toxics-release-inventory-tri-program>.

⁴² See the list here: http://www2.epa.gov/sites/production/files/2014-01/documents/rfi_table_ii_ry2013_112513_abt.pdf (last accessed Oct. 9, 2014).

⁴³ 29 U.S.C. § 1919.1200.

B. Storage of Large Volumes of Chemicals at Coal Preparation Plants

While all four plants reported discharging common coal mining pollutants that they are required to monitor, including aluminum, iron, and manganese,⁴⁴ none of the companies reported discharging coal cleaning chemicals in their NPDES applications, which is discussed at length in the next section. However, other legal reporting requirements regarding chemical storage provides what chemicals are being used on-site, revealing large quantities of many chemicals being stored. For example, chemicals stored in ASTs at Dutch Run are presented in Table 2.

Table 2. Chemicals Stored in ASTs at the Dutch Run Coal Prep Plant (12 tanks total)⁴⁵

CHEMICAL	UNIT	AMOUNT (gallons)
Diesel Fuel	RB106	1,000
	RB107	1,000
	RB116	10,000
	RB118	1,000
Used Oil	RB108	5,000
Kerosene	RB109	250
	RB110	250
Ultra Low Sulfur Kerosene	RB110	550
	RB115	550
FCA-2500 Antifreeze	RB112	7,500
Ultra Low Sulfur Diesel	RB113	1,500
RDC-600	RB114	8,000
ShurFlot 945 G,5	RB117	6,000

More recent files show the current use of ShurFlot 944.⁴⁶ According to the MSDS sheet for Shurflot 944 prepared by Freedom Industries, ShurFlot 944 is a “clear colorless liquid with an alcohol odor,” that “can cause skin and eye irritation,” “is harmful if absorbed through the skin or swallowed,” and from which “vapors, especially upon heating, can cause irritation to eyes and the respiratory tract.”⁴⁷ The product also has “a moderate potential to affect some aquatic organisms.”⁴⁸ Chemical storage reports filed in the wake of the January 2014 Freedom Industries spill in West Virginia state that the tank that spilled actually could have contained either MCHM or ShurFlot 944, and detailed that ShurFlot 944 is actually a mixture that is 65 percent MCHM, as well as nine percent of a chemical called DiPPH and seven percent PPH.⁴⁹

⁴⁴ See generally Consol, Discharge Monitoring Reports for NPDES Permit PA0213535 (2013–2014; Rosebud, Discharge Monitoring Reports for NPDES Permit PA0214540

(2013–2014); Alpha Natural Resources, Discharge Monitoring Reports for NPDES Permit PA0213438 (2013–2014); Alpha Natural Resources, Discharge Monitoring Reports for NPDES Permit PA0013511 (2013–2014).

⁴⁵ 2012 Dutch Run CMAP/NPDES Application, Module 10, Mining Tank Inventory Report form (5600-FM-MR0449).

⁴⁶ Hillcrest Group, Application for Plan Approval and SOOP for Dutch Run Coal Preparation Plant, § 6, Emission Estimates, at § 5, Plan Approval Application, at 16 (Oct. 18, 2013) (prepared for Rosebud Mining Company) [hereinafter “2013 Dutch Run SOOP Application”].

⁴⁷ 2013 Dutch Run SOOP Application, § 6, Emission Estimates, at 5 (Shurflot 944 MSDS Sheet).

⁴⁸ *Id.*

⁴⁹ Dave Boucher, “More Chemical Data Released,” *Charleston Daily Mail* (Mar. 20, 2014), <http://www.charlestondaily.com/News/Kanawha/201403200072>.

At Cumberland, there are at least 57 ASTs listed in the 2007 Mining Tank Inventory Report Form, which is the most recent submittal of this form available.⁵⁰ In addition to storing diesel, used oil, antifreeze, and various other chemicals, Cumberland stores various chemicals, including some presented on Table 3.

Table 3. Select Chemicals Stored in ASTs at Cumberland Coal Prep Plant (57 tanks total)⁵¹

CHEMICAL	UNIT(S)	AMOUNT (gallons)
Flocculant – CM562	035A / AST25	5,400
Caustic	036A / AST26	4,000
	050A / AST40	4,000
	051A / AST41	4,000
	062A / AST50	4,200
	063A / AST51	4,200
	064A / AST52	4,200
	065A / AST53	6,000
Cationic CM 175	039A / AST29	2,200
Defoamer	056A / AST45	550
Frother Reagent - SC162	037A-2 / AST57	3,000

At Emerald, Alpha stated that it uses a chemical froth flotation system to clean the coal at the Emerald Plant and also mentioned the use of three coal cleaning chemicals there as well, Ashland CM-562, Ashland CM-175, and SHUR-COAL 162.⁵² Similarly, Consol stated in its application that “[v]arious frothers and flocculants are used to further enhance the separation process,”⁵³ but specific chemicals were not listed.

Notably, none of the chemicals listed in the AST inventories we reviewed are listed by name among the list of chemicals required to be reported under EPA’s Toxics Release Inventory (“TRI”) under the Emergency Planning and Community Right-to-Know Law. It is possible that there are non-trade names that correspond to these chemicals that may be required to be reported.⁵⁴ If some or all of the coal cleaning pollutants stored at coal preparation plants are not

⁵⁰ Penn. Environmental & Remediation, Inc., Renewal Application for Coal Mining Activity Permit 30831303 and NPDES Permit No. PA0013511, at Mining Tank Inventory Form (prepared for Cumberland Coal Resources, LP) (Sep. 19, 2007) [hereinafter “2008 Cumberland CMAP/NPDES Application”].

⁵¹ *Id.* We are still seeking the MSDS sheets for these pollutants. Also, Alpha mentioned the use of three coal cleaning chemicals (Praestol CM-562, Praestol CM-175, and SHUR-COAL) in its Title V application for the Cumberland Plant as well, which may correspond to these chemicals (the numbers 562 and 175 match chemicals stored and “SC162” may be short for “SHUR-COAL,” although we were unable to confirm this with the data available. 2014 Cumberland TV Permit Application, Appendix D-1, Potential Emission Summary, Coal Prep Plant.

⁵² Letter from Martin L. Hochhauser, PADEP to Air Quality File, Emerald Mine and Coal Preparation Plant, Review of Application for Title V Operating Permit (May 11, 2014); 2012 Emerald TV Permit Application, Appendix D-1, Coal Prep Plant/Surface Facilities, VOC PTE.

⁵³ Consol Pennsylvania Coal Company, Renewal Application for Bailey CMAP 30841306 and NPDES Permit No. PA0213535, at Module 10: Operation Plan, at 10-1 (Oct. 28, 2011) (emphasis added).

⁵⁴ EPCRA requires reporting of a variety of chemicals, and even if chemicals are not added during the coal preparation process, “manufacture also applies to a toxic chemical that is produced coincidentally during the manufacture, processing, use or disposal of another chemical or mixture of chemicals, including a toxic chemical that is separated from that other chemical or mixture of chemicals as a byproduct.” *See, e.g.*, 40 C.F.R. § 372.3.

required to be reported to TRI if released, we can petition EPA to add those chemicals to the list of required pollutants. Coal prep plants may already be reporting releases of many pollutants to TRI, although it is unclear whether these pollutants are or are derived from coal cleaning chemicals or whether the releases can be pinned to the coal prep plants themselves or other parts of the mining complex. For example, in 2011, the “Bailey/Enlow Fork Mining Complex” reported releasing 7,905 pounds of hydrochloric acid, 509 pounds of lead, 11 pounds of mercury, and 28,374 pounds of sulfuric acid, so this would be an expansion of reporting requirements to accommodate additional chemicals.⁵⁵ Bailey was the only facility in the “Coal Mining” category for which TRI data was available for Greene County since 2008, and there were no facilities that reported to TRI from “Coal Mining” category in Armstrong County, meaning no TRI data was available for Emerald, Cumberland, or Dutch Run.

EIP continues to investigate types, quantities, and safety of the coal cleaning chemicals stored at all plants, and is working with Chesapeake Commons to make this information easily accessible to the public online, which is critical given that these tanks are susceptible to leaks and spills, as was evidenced in West Virginia.

C. Incomplete Permit Applications that Fail to Disclose Metals and other Coal Pollutants in Permit Applications

The most recent permit applications at all of the four plants were incomplete and failed to comply with the CWA by failing to disclose the types or quantities of common coal pollutants that would be discharged from the coal prep plant. The Clean Water Act requires persons applying to discharge pollution into surface waters to submit a complete application that includes concentrations of pollutants proposed to be discharged *before* the discharge occurs so that the permitting agency has enough information to make a reasoned decision to limit pollution and protect surface waters.⁵⁶ It is impossible for DEP to set appropriate technology and/or water quality-based standards for the plant where an applicant has not provided the required pollution data. Yet DEP issued permits at all four plants in the absence of such important information.

Specifically, the Clean Water Act requires that applicants must “report quantitative data for every outfall for the following pollutants: Biochemical Oxygen Demand (BOD5), Chemical Oxygen Demand, Total Organic Carbon, Total Suspended Solids, Ammonia (as N), Temperature (both winter and summer), and pH.”⁵⁷ A NPDES application must also disclose anticipated discharges of a variety of pollutants, including thirteen metals, namely antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc,⁵⁸ and 112 organic toxic pollutants if they are expected to be present,⁵⁹ and “any toxic

⁵⁵ See EPA, Toxics Release Inventory, <http://www2.epa.gov/toxics-release-inventory-tri-program>, and specifically http://iaspub.epa.gov/triexplorer/release_fac_profile?TRI=15377BLYNL332EN&year=2011&trilib=TRIQ1&FLD=&FLD=RELLBY&FLD=TSFDSP&OFFDISPD=&OTHDISPD=&ONDISPD=&OTHOFFD=.

⁵⁶ See 40 C.F.R. §§ 122.21(g)(1)–(7) and (g)(9)–(13).

⁵⁷ 40 CFR 122.21(g)(7)(iii). The regulation does provide that “the Director may waive the reporting requirements for individual point sources or for a particular industry category for one or more of the pollutants listed in paragraph (g)(7)(iii) of this section if the applicant has demonstrated that such a waiver is appropriate because information adequate to support issuance of a permit can be obtained with less stringent requirements.” *Id.* § 122.21(g)(7)(iv). However, the application offers no indication that such a waiver has been extended.

⁵⁸ 40 C.F.R. § 122.21(g)(7)(v)(B) & Appendix D, Tbl. III.

pollutant which the applicant currently uses or manufactures as an intermediate or final product or byproduct.”⁶⁰

All four plants failed to submit this required NPDES permit application data in their most recent NPDES permit applications. For example, while Consol submitted volumes of documents for its Bailey mining and NPDES application, there was no separate or incorporated NPDES permit application in the materials, and none of the “Modules” submitted in the mining application included the components required for an NPDES permit application. Consol did submit limited monitoring data with the mining permit application on excel spreadsheets, but these monitoring results only included 10 pollutants, acidity, alkalinity, aluminum, pH, iron, pH (lab), manganese, suspended solids, specific conductance, and sulfate. There is no evidence that any other pollutants were monitored or reported in that application, and there was no narrative explanation accompanying this information. Arsenic and selenium, in particular, are commonly found in coal preparation plant discharges,⁶¹ yet there is no information provided on these pollutants.

Similarly, the 2008 Cumberland mining and NPDES Application fails to include any monitoring data or pollutant names or concentrations at all. While it includes Module 12, which is the mining application form for “NPDES Information,” Alpha’s Form 12 only includes a listing of outfalls and their receiving streams, with no information about pollutant discharge concentrations.⁶²

Rosebud similarly failed to provide any monitoring data for common coal pollutants in its 2013 mining and NPDES Permit Application. The Draft NPDES permit for Dutch Run states:

The applicant's 12.1A form indicates that all three outfalls have the capability to add “chemicals as necessary,” therefore the discharge limitations and monitoring assigned are based on the presumption that the passive treatment and sedimentation control facility will discharge a combination of coal refuse discharges and runoff as a result of precipitation events. TMOL concerns are also addressed with pH and suspended solids limits as well as TOS monitoring.⁶³

DEP apparently used inferences but not monitoring data or expected discharge concentrations to draft the NPDES permit for Dutch Run. This information is not sufficient to establish effluent limitations and comprehensive monitoring data indicative of expected effluent discharge concentrations must be submitted by an applicant under the NPDES program.

⁵⁹ 40 C.F.R. § 122.21(g)(7)(vi–viii). *See also* Consolidated Permit Regulations; NPDES Application Requirements for Coal Mines, 46 Fed. Reg. 2045, 2046 (Jan. 8, 1981) (codified at 40 C.F.R. pt. 122).

⁶⁰ 40 C.F.R. § 122.21(g)(9).

⁶¹ *See, e.g.*, Appalachian Voices, “West Virginia Patriot Slurry Spill MCHM Test Results” (Feb. 25, 2014) (stating that arsenic and selenium are found at coal prep plants).

⁶² *See generally* 2012 Cumberland CMAP/NPDES Permit.

⁶³ DEP, Draft NPDES Permit for Rosebud Mining Company’s Dutch Run Coal Prep Plant, CMAP 03851601/NPDES PA021450 (Mar. 6, 2013) [hereinafter “2013 Dutch Run Draft NPDES Permit”]; *see also* 2012 Dutch Run CMAP/NPDES Application.

The Clean Water Act's imperative to list "any toxic pollutant which the applicant currently uses or manufactures as an intermediate or final product or byproduct"⁶⁴ would cover all coal cleaning chemicals, whether recycled or not, yet none of the four plants provide even a basic listing of such pollutants in the available documents, although this information may be provided in Preparedness, Prevention, and Contingency ("PPC") plans. In addition, although the provision of the regulations requiring this list of toxic pollutants used provides an exemption whereby DEP can waive or modify the requirement if an applicant demonstrates that it would be "unduly burdensome" to identify such pollutants, EIP did not uncover any waiver requests by the operators of any of these four coal prep plants averring that doing so would be burdensome at all.

Furthermore, while coal preparation processes and chemical compounds can be patented and trademarked,⁶⁵ that would not excuse an operator from Clean Water Act requirements to list the chemicals used in NPDES application materials, and, in fact, this chemical data has already been reported pursuant to many other laws, as presented above.

Thus, it appears that the coal prep plants have failed to provide required information regarding discharges of metals and a variety of other coal pollutants from their discharges.⁶⁶ When we discussed this with DEP staff, we were told that discharge information may have been submitted with the *original* NPDES/mining applications many decades ago, but pollutant concentrations from decades ago are not an accurate or reliable indicator of what pollutants are anticipated to be discharge in the next five years, and these renewal applications are clearly deficient.

The failure to disclose these discharges as part of the permit application violates the CWA and deprives the public of information regarding the contents of the discharges flowing from the plant. Furthermore, without this information regarding which pollutants are expected to be discharged, DEP cannot perform its duties to evaluate technology- or water-quality-based effluent limitations.

There is a clear opportunity here to hold companies accountable for disclosing the pollutants discharged and used by coal preparation plants. EIP can comment on incomplete applications as they are filed and challenge permits that DEP issues without this information. EIP could also investigate a possible citizen enforcement action to help shine a spotlight on dangerous discharges from these types of facilities. In fact, plaintiffs in a recent citizen suit succeeded in having the judge confirm that coal prep plants are required to disclose metals in their NPDES permit applications. In that case, an environmental group had sampled discharges downstream of a plant and found selenium in the water, and the court ruled that the operator could not assert as a defense that it had obtained an NPDES permit because it had never disclosed to the agency that selenium was present in its discharges.⁶⁷

⁶⁴ 40 C.F.R. § 122.21(g)(9).

⁶⁵ See, e.g. *Stamicarbon, N.V. v. McNally-Pittsburg Mfg. Corp.*, 302 F. Supp. 525 (D.C. Kan. 1969) (holding that a patent for a coal preparation process of separating materials based on gravity was valid and had been infringed upon); and "Shur-Coal 162," World of Chemicals, <http://www.worldofchemicals.com/chemicals/chemical-properties/shur-coal-162.html>.

⁶⁶ See, e.g., 40 C.F.R. § 122.21, Appendix D, Tbl. III.

⁶⁷ *Southern Appalachian Mountain Stewards v. A & G Coal Corp.*, 13-2050, 2014 WL 3377687 (4th Cir. July 11, 2014).

D. No Limits for Metals or Coal Cleaning Pollutants Commonly Discharged or Used at Coal Prep Plants

DEP has failed to set TBELs for toxic pollutants discharged from the four coal preparation plants we reviewed. As discussed above, where EPA has failed to set federal discharge standards for a specific point source and/or pollutant, DEP must set these standards in individual permits on a case by case basis. Coal preparation plants discharge heavy metals including arsenic and selenium, but the federal ELGs only limit iron and manganese.⁶⁸ Despite this, DEP has failed to control discharges of these and other dangerous pollutants in the Bailey Coal Prep Plant NPDES Permit⁶⁹ the Cumberland NPDES Permit,⁷⁰ the Emerald NPDES Permit,⁷¹ or the Dutch Run NPDES Permit.⁷²

At Bailey, the Draft Permit authorizes Consol to discharge wastewater from 24 outfalls to several streams and tributaries. The discharges originate from a variety of sources at the Bailey Coal Prep Plant, including discharges from the various sedimentation ponds at the site and surface runoff from the prep plant and refuse areas.⁷³ The 24 outfalls have limits for a virtually identical set of pollutants – flow, iron, manganese, aluminum, and either suspended or settleable solids.⁷⁴ However, there are no monitoring requirements—much less effluent limits—for selenium, arsenic, and the many other chemicals that are in wastewater discharged from coal mines and coal preparation plants. Similarly, DEP failed to set limits for toxic metals like arsenic, coal cleaning chemicals, or other pollutants used in coal preparation in the permits for the Cumberland, Emerald, and Dutch Run, although DEP does require monitoring of one of these pollutants, selenium, from all outfalls at Cumberland and some outfalls at Emerald.⁷⁵

Not only is coal prep plant pollution not being adequately controlled as required by the Clean Water Act at these sites, but DEP’s failure to even impose monitoring requirements for many pollutants means the public is denied information about what and how much the plant is discharging to local waters.

The paucity of meaningful permit limits for a wide range of pollutants common in coal, coal mining, and coal preparation discharges provides several avenues for action. First, EIP can

⁶⁸ See, e.g., Appalachian Voices, “West Virginia Patriot Slurry Spill MCHM Test Results” (Feb. 25, 2014) (stating that arsenic and selenium are found at coal prep plants).

⁶⁹ 2012 Bailey CMAP/NPDES Permit, at A.

⁷⁰ See generally DEP, Pollution Report, Cumberland Mine, NPDES Permit No. PA0013511 (for application received Apr. 8, 2008) (Sept. 13, 2011); DEP, NPDES Draft Permit Fact Sheet, Cumberland Mine, NPDES Permit No. PA0013511 (undated); and 2012 Cumberland CMAP/NPDES Permit.

⁷¹ See DEP, Coal Mining Activity Permit No. 30841307 and NPDES Permit PA0213438, Issued to Emerald Coal Resources, LP (a subsidiary of Alpha Natural Resources) for the Emerald No. 1 Mine (Sept. 16, 2013) [hereinafter “2013 Emerald CMAP/NPDES Permit”]; see also DEP, NPDES Draft Permit Fact Sheet, Emerald No. 1 Mine, NPDES Permit PA02134138 (Sept. 16, 2013).

⁷² DEP, Coal Mining Activity Permit No. 03851601 and NPDES Permit No. PA0214540, Issued to Rosebud Mining Company for the Dutch Run Coal Prep Plant (July 31, 2013) [hereinafter “2013 Dutch Run CMAP/NPDES Permit PA021450”].

⁷³ See generally 2012 Bailey CMAP/NPDES Permit, Part A: Effluent Limits.

⁷⁴ *Id.*

⁷⁵ See generally 2012 Cumberland CMAP/NPDES Permit, 2013 Emerald CMAP/NPDES Permit.

file a lawsuit (i.e. deadline suit) to force EPA to take long overdue action to update federal discharge rules for coal preparation plants. In addition, EIP can participate in permit proceedings for coal preparation plants to strengthen weak permits and challenge those that do not comply with the Clean Water Act and Pennsylvania law.

E. Failure to Anticipate Potential Coal Preparation Chemical Discharges from Impoundments

Despite the common practice of storing coal preparation wastewater in slurry impoundments prior to recirculating the water at the plant, DEP and plant operators have largely failed to account for the potential release of any coal cleaning pollutants or heavy metals like arsenic in NPDES permits, applications, or surface or groundwater monitoring requirements. The DEP's Southwest Regional spokesperson even told reporters in the wake of the spill in West Virginia earlier this year that MCHM is recycled on site at coal-washing facilities, stating, "It is not discharged into water."⁷⁶ However, DEP did not provide an explanation for why coal cleaning chemicals routed to impoundments would not be anticipated to be discharged along with other pollutants being discharges or why limits for these pollutants should not have been established. At the very least, monitoring requirements should be established to detect the presence of these pollutants.

While some plants, like Bailey, do not permit any discharges from its impoundment, this oversight is particularly troubling at Emerald and Cumberland, which both have permitted outfalls to discharge waters from their impoundments. At Emerald, Outfall 002 is a discharge from "prep plant ponds."⁷⁷ At Cumberland, Outfall 006 discharges from the "Prep. Plant Surface Runoff Sedimentation Pond" into Whiteley Creek intermittently at an average rate of 0.14 million gallons per day ("MGD"), and Outfall 015 discharges from the "Prep. Plant Emergency Pond" into Whiteley Creek continuously at an average rate of 0.05 MGD.⁷⁸

In addition to discharges to surface waters, there is also the potential for leaking or seepage of pollutants from impoundments. It is very unlikely that these ponds are lined, and the groundwater monitoring that is required for these plants does not require monitoring for toxic coal pollutants like arsenic or any coal preparation chemicals. Monitoring and oversight of these ponds is especially important because even plants like Bailey that do not permit discharges from the impoundments can still leak.

The near absence of toxic coal pollutants or coal cleaning chemicals among pollutants listed in NPDES permit applications and NPDES permit limits and monitoring requirements provides an opportunity to engage in the permit process to ensure compliance with the Clean Water Act and press for disclosure of coal and coal cleaning chemicals that may be released from these impoundments.

⁷⁶ Debra Erdley, "Kittanning firm to ship chemical that tainted W.V. water to Pennsylvania," TribLive.com, (Feb. 5, 2014), <http://triblive.com/news/adminpage/5540597-74/freedom-facility-chemicals#axzz3EUFjWimE>.

⁷⁷ 2013 Emerald CMAP/NPDES Permit, at A-1-002.

⁷⁸ 2008 Cumberland CMAP/NPDES Permit Application, Module 12, at Form 12.A1, NPDES Information.

F. DEP's Failure to Comply with the Clean Water Act's Permitting or Public Participation Requirements

DEP reviews, processes, and issues NPDES and mining permits for a coal prep plant jointly, which has resulted in applications for NPDES permits that are lacking requisite application information, NPDES permits that fail to comply with the Clean Water Act, the issuance of multiple NPDES permits for a single site, and other diversions from the typical NPDES permit process that result in a lack of transparency in the public review process. All of the plants' NPDES permits were issued by DEP's mining division and subsumed within mining permits.⁷⁹

When NPDES and mining permits have been combined, the result is NPDES permits and applications for coal prep plants that do not comply with the most basic requirements of federal and state law. For example, DEP has accepted incomplete applications. None of the plants' NPDES permit applications included data disclosing the names and concentrations of all pollutants anticipated to be discharged from each outfall, as discussed above.

In addition, DEP has allowed permittees to submit applications that, instead of including all relevant information, simply refer back to previous permits or applications. The 2008 Cumberland mining and NPDES Application, for example, answered a question about describing coal preparation processes by stating, "Coal preparation plant is not proposed as part of this permit renewal application. This Cumberland preparation plant is an existing permitted area. Refer to the approved application on file at PADEP."⁸⁰ The permit elsewhere makes clear the Prep Plant is covered by the permit, stating, for example, that the discharge points covered by this application include "Prep Plant Surface Runoff (Sedimentation Pond)" discharges and "Prep Plant Emergency Pond" discharges,⁸¹ and stating that the coal preparation plant constitutes a 51-acre surface activity area for this permit.⁸² Yet DEP accepted this application despite this reference to an unspecified document and lack of a response to the question at hand. Submitting incomplete applications that refer back to previous documents creates an administrative and practical headache for members of the public who are reviewing the files, as it can be difficult to decipher what or where information or requirements are. DEP must require that application submit stand-alone applications and DEP must issue stand-alone permits so reviewers do not have to dig through the incredibly cumbersome files to determine the status of permit requirements or application information.

⁷⁹ See, e.g., DEP, Coal Mining Activity Permit No. 30841316 and NPDES Permit No. PA0213535, Issued to Consol PA Coal Company for the Bailey Mine and Prep Plant, at M-1 (Aug. 12, 2012) [hereinafter "2012 Bailey CMAP/NPDES Permit"]; DEP, Coal Mining Activity Permit No. 30831303 and NPDES Permit No. PA0013511, Issued to Cumberland Coal Resources, LP (a subsidiary of Alpha Natural Resources) for the Emerald Mine, at 1 (Sept. 16, 2013) [hereinafter "2013 Cumberland CMAP/NPDES Permit"]; DEP, Coal Mining Activity Permit No. 30841307 and NPDES Permit No. PA0213438, Issued to Emerald Coal Resources, LP (a subsidiary of Alpha Natural Resources) for the Emerald Mine, at 1 (Sept. 16, 2013) [hereinafter "2013 Emerald CMAP/NPDES Permit"]; DEP, Coal Mining Activity Permit No. 03851601 and NPDES Permit No. PA00214540 Issued to Rosebud Mining Company for the Dutch Run Coal Preparation Plant, at 1 (July 31, 2013) [hereinafter "2013 Dutch Run CMAP/NPDES Permit"].

⁸⁰ 2008 Cumberland CMAP/NPDES Permit Application, Module 10, at Form 10.1, Operation Plan.

⁸¹ *Id.* at Form 12.1A, NPDES Information.

⁸² *Id.* at Module 1, Attachment 2, Section C.

At the Bailey Plant, DEP did not publish a draft permit or fact sheet for public review and comment, which makes it nearly impossible for the public to evaluate whether a proposed NPDES permit complies with state and federal law and is protective of public health and the environment. DEP only published proposed effluent limitations in the Pennsylvania Bulletin,⁸³ but failed to include “all conditions,” and “all monitoring requirements.”⁸⁴ The Fact Sheet was not publicly noticed and did not explain how DEP arrived at the proposed permit limits in most cases, stating only that limits were set based on “DEP policy.” In addition, DEP only set limits or a reporting requirement for a handful of parameters from all outfalls, namely iron, manganese, aluminum, pH, total suspended solids or total settleable solids, and, in some cases, total osmotic pressure and/or sulfate.⁸⁵ DEP set no effluent limits for other coal prep pollutants, such as selenium, arsenic, or any potentially toxic coal preparation chemical.⁸⁶ The limited information published does not constitute a draft NPDES permit, and falls far short of what the law requires.⁸⁷

In addition, the Bailey and Cumberland Coal Prep Plants, in addition to having their NPDES Permits subsumed within mining activity permits, have more than one NPDES permit per site. For example, there are four separate NPDES Permits for the mining, coal preparation, and disposal activities associated with the Bailey Site. The Cumberland⁸⁸ plant and associated mines have three combined mining/NPDES permits. This piecemeal permitting—which means multiple permitting proceedings on different timelines—makes it difficult for DEP to evaluate the impact of the Site as a whole and for members of the public to effectively comment on permits that impact their communities. For example, reviewing four separate permitting files is cumbersome and time-consuming, tracking multiple permits is challenging, and citizens may not be able to find time to participate in multiple hearings and proceedings for one site.

DEP’s mining program may not have the same command of Clean Water Act and Pennsylvania law that the DEP water program has. Although DEP has recognized the need to improve NPDES permits at mine sites going forward and recently issued a guidance document detailing applicable NPDES program requirements,⁸⁹ and although more recent permits appear to be incorporating more thorough input from DEP’s water program staff, DEP has failed to identify a comprehensive plan to review and revise existing permits or demonstrate how it will improve the public review process and comply with the Clean Water Act.

⁸³ 42 Pa.Bull. 3618 (June 23, 2012).

⁸⁴ 40 C.F.R. §§ 124.6(d)–(e), 124.8.

⁸⁵ 42 Pa.Bull. 3618 (June 23, 2012).

⁸⁶ *See, e.g.*, Appalachian Voices, “West Virginia Patriot Slurry Spill MCHM Test Results” (Fe. 25, 2014) (stating that arsenic and selenium are found at coal prep plants).

⁸⁷ 40 C.F.R. § 124.6(d) (If a state decides to prepare a draft permit, then the draft permit must contain: “(1) All conditions under § 122.41 and 122.43; (2) All compliance schedules under §§ 122.47; (3) All monitoring requirements under §§ 122.43; and (4) For . . . (v) NPDES permits, effluent limitations, standards, prohibitions, standards for sewage sludge use or disposal, and conditions under §§ 122.41, 122.42, and 122.44, including when applicable any conditions certified by a State agency under § 124.55, and all variances that are to be included under § 124.63.”).

⁸⁸ PA0013511 (part of the coal mining activity permit); PA0033511 (part of the Coal Refuse Disposal Area (“CRDA”) No. 1 mining permit); and PA0235440 (part of the CRDA No. 2 mining permit).

⁸⁹ DEP, Developing National Pollutant Discharge Elimination System (NPDES) Permits for Mining Activities, Document No. 563-2112-115 (June 22, 2013), <http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-99499/563-2112-115%20Allen%201.pdf>. This was originally noticed in 2012. 42 Pa. Bull. 7208 (Nov. 24, 2012).

IV. ANALYSIS: AIR POLLUTION

Major emissions from coal prep plants typically come from the wet wash circuit, breaking and screening, coal storage operations, transfer operations, roads, and process heaters,⁹⁰ tanks and generators,⁹¹ and mines located at the coal prep plants. While thermal dryers are a major source of emissions at some plants, all four of the plants reviewed here either did not install, or decommissioned, their thermal dryers.⁹²

EIP's review of the air records at the four coal prep plants revealed many permit, application, program, and public participation deficiencies. For example, even though three of the plants emit high amounts of pollutants, only one, Consol's Bailey Coal Preparation Plant ("Bailey"), is required to obtain a federal Clean Air Act permit, and that permit expired more than seven years ago.⁹³ Although both Alpha Natural Resources, Inc. ("Alpha") plants had applied for federal operating (i.e. Title V) permits because they had qualified as "major" sources of air pollution due to the high greenhouse gas emissions from their mines, a recent Supreme Court ruling created a pivotal new loophole that prevents EPA or DEP from issuing these permits because these plants are not *also* emitting other pollutants at "major" source levels. Now these plants and the fourth plant, Rosebud's Dutch Run Coal Preparation Plant, which did not include mine emissions data in its air permitting files to DEP, will only remain subject to the weaker limits and monitoring requirements contained in state-only air permits.

In addition, DEP agreed in a consent order to increase hourly throughput at the Bailey plant by 30% but may not have conducted a new source review ("NSR") determination for associated emissions increases and Consol is requesting that this increase be added to the Title V permit, monitoring requirements were not sufficient to ensure compliance at the Bailey plant, and Alpha requested a waiver of monitoring requirements without supporting information at its Cumberland plant.

As in the water section, above, this analysis focuses on the most important deficiencies, and so some major noncompliance issues that are being addressed were not highlighted. For example, Rosebud illegally installed a Froth Flotation Unit at Dutch Run in March 2011 and operated it for years without notifying or receiving authorization from DEP.⁹⁴ The new Froth Flotation Unit introduced Shurflot 944, manufactured by Freedom Industries, to the plant.⁹⁵ However, DEP issued Rosebud a series of Notices of Violation from 2011 to 2013 related to this

⁹⁰ See, e.g., Letter from Martin L. Hochhauser, PADEP to Air Quality File, Emerald Mine and Coal Preparation Plant, Review of Application for Title V Operating Permit (May 11, 2014); KU Resources, Cumberland Coal Resources, LP Revised Title V Operating Permit Application, at Appendix D-1, Potential Emission Summary, Coal Prep Plant. (Jan. 14, 2014) (prepared for Cumberland Coal Resources, LP and Alpha Natural Resources) [hereinafter "2014 Cumberland TV Permit Application"]; Consol, Bailey Prep Plant Title V Operating Permit Renewal Application (submitted Jan. 28, 2014) [hereinafter "2014 Bailey TV Application"].

⁹¹ See, e.g., 2013 Dutch Run SOOP Application, at 2; and Hillcrest Group, SOOP Renewal Application, Dutch Run Coal Preparation Plant, at §§ 5, 6 (Jan. 31, 2012) (prepared for Rosebud Mining Company).

⁹² See, e.g., 2014 Bailey TV Application, at 3.

⁹³ *Id.*

⁹⁴ 2013 Dutch Run SOOP Application, § 1.

⁹⁵ 2013 Dutch Run SOOP Application, at § 5, Plan Approval Application, at 16.

unit and Rosebud submitted an updated SOOP application in October 2013 to incorporate the Froth Flotation process into its permit, which was approved by DEP.⁹⁶

Major outstanding deficiencies that remain unaddressed are discussed below.

A. Summary of Applicable Clean Air Act Requirements

The Clean Air Act contains a variety of requirements designed to reduce air pollution from coal prep plants, and each applicable requirement must be incorporated into a Title V permit for all “major sources” of pollution. In Greene and Armstrong Counties, major sources are those that emit: 10 tons per year (“tpy”) of any hazardous air pollutant (“HAP”); 25 tpy of any combination of HAPs; 100 tpy of any other regulated pollutant (namely carbon monoxide (CO), lead (Pb), nitrogen oxides (NOx), ozone (O₃), particulate matter (PM_{2.5} and PM₁₀), or sulfur dioxide (SO₂);⁹⁷ or 50 tpy of volatile organic compounds (“VOC”).⁹⁸ In addition, pollution sources with the potential to emit 100,000 tpy of greenhouse gases (expressed in carbon dioxide equivalent emissions, or “CO_{2e}”)—including the Bailey, Cumberland, and Emerald facilities—became major sources under EPA’s Greenhouse Gas Tailoring Rule in 2010.⁹⁹ This past summer, however, the Supreme Court struck down portions of the rule and held that EPA cannot require a source that emits more than 100,000 tpy of greenhouse gases to obtain a Title V permit unless that source is also a major source for at least one other regulated pollutant besides greenhouse gases.¹⁰⁰ As a result of this ruling, it appears that the Bailey Plant is the only facility that must obtain a Title V permit.

For major sources, the Clean Air Act requires EPA to set National Ambient Air Quality Standards (“NAAQS”) for six “criteria pollutants”: CO, Pb, NOx, O₃, SO₂, and particle pollution (measured as PM_{2.5} and PM₁₀).¹⁰¹ EPA must designate areas as either “attainment” or “non-attainment” with the NAAQS.¹⁰² When a new “major” air pollution source is proposed or an existing facility proposes to make a “major modification” with significant emissions that result in

⁹⁶ DEP’s notice of intent to issue this plan approval was just published to the Pennsylvania Bulletin. 44 Pa. Bull. 6235 (Oct. 4, 2014).

⁹⁷ 42 U.S.C. § 7661(2) (citing the definitions at 42 U.S.C. §§ 7412(a)(1), 7602(j)); 25 Pa. Code § 121.1 (see definition of “Major facility”).

⁹⁸ See 42 U.S.C. § 7511(c) (establishing the OTR in the Northeast under Section 184 of the Clean Air Act); 25 Pa. Code § 121.1 (see definition of “Major facility”). Neither Greene nor Armstrong County is in “severe” or “extreme” nonattainment for ozone, which could trigger an even lower VOC or NOx threshold. See U.S. EPA, Current Nonattainment Counties for all Criteria Pollutants, <http://www.epa.gov/oaqps001/greenbk/ancl.html#Notes> (last accessed Sept. 29, 2014).

⁹⁹ 40 C.F.R. § 70.2 (see definition of “Subject to regulation”). Alpha submitted Title V permit applications for Cumberland in January 2014 and Emerald in July 2012 after both plants became “major” sources of pollution upon passage of EPA’s Greenhouse Gas Tailoring Rule on May 13, 2010 because the vast CO_{2e} emissions released by the mines at both plants exceed the major source threshold of 100,000 tpy.

¹⁰⁰ Utility Air Regulatory Group (UARG) v. EPA, 134 S.Ct. 2427 (June 23, 2014) (holding that sources who only meet the major source threshold for greenhouse gases emissions and no other pollutants do not qualify for federal Clean Air Act permits).

¹⁰¹ 42 U.S.C. § 7409. Note that EPA also establishes National Emissions Standards for Hazardous Air Pollutants (“NESHAP”) for major sources of HAPs, but there are no NESHAPs specific to coal prep plants. 42 U.S.C. § 7412; 40 C.F.R. § 63; 25 Pa. Code § 124.

¹⁰² 42 U.S.C. § 7407(d).

a net emissions increase beyond specified thresholds, “New Source Review” (“NSR”) is required to see if more stringent requirements must be imposed.¹⁰³

EPA has established specific operating standards known as “New Source Performance Standards” (“NSPS”) for coal preparation plants.¹⁰⁴ Any new or “modified” source of pollution at a coal prep plant must comply with applicable NSPS limits.¹⁰⁵ For example, coal prep plant conveyors constructed or modified before April 28, 2008 like those at the Bailey Plant may not emit gases with 20% or greater opacity, while similar sources constructed or modified after that date are restricted to a more stringent opacity of 10%.¹⁰⁶

The Clean Air Act requires each state authorized to implement the federal CAA, including Pennsylvania,¹⁰⁷ to include all of its laws incorporating federal Clean Air Act requirements into a State Implementation Plan (“SIP”). Pennsylvania’s SIP imposes additional requirements on coal emissions sources, including standards for fugitive emissions, PM, sulfur compounds, visible emissions, and odor.¹⁰⁸ In addition, the SIP sets some ambient air quality standards more stringent than the NAAQS, known as SAAQS.¹⁰⁹

For coal preparation plants that are major sources like the Bailey Plant, federally enforceable Title V operating permits must include all of these emission limitations, as well as monitoring requirements that ensure the plant complies with the limits.¹¹⁰ The requirement to obtain a federal operating permit is significant. In addition to the statutory mandate to include monitoring sufficient to assure compliance with emission limits, violations of permit limits can be enforced by citizens in federal court.¹¹¹ Title V of the Clean Air Act also provides a process for citizens to petition EPA to object to a state-issued permit that does not comply with federal law.¹¹² EPA must respond to the citizen petition within 60 days and is required by the statute to object to the permit if it does not comply with the Clean Air Act.¹¹³

Title V permits are issued for a term of five years,¹¹⁴ and an operator must submit a timely and complete application for renewal at least six months prior to the date of permit expiration.¹¹⁵ Once a complete renewal application has been submitted, the existing permit is

¹⁰³ Contemporaneous increases and decreases in emissions at the plant are considered together to determine whether a “net” increase has occurred. *See* 40 C.F.R. § 52.21(b)(3)(ii).

¹⁰⁴ 40 C.F.R. §§ 60.250–60.258 (Subpart Y, “Standards of Performance for Coal Preparation and Processing Plants”). These regulations were adopted in their entirety in the PA SIP. 25 Pa. Code § 122.

¹⁰⁵ 42 U.S.C. § 7411(a)(4).

¹⁰⁶ 40 C.F.R. § 60.254(a), (b).

¹⁰⁷ Clean Air Act Final Full Approval of Operating Permits Program, Commonwealth of Pennsylvania, 61 Fed. Reg. 39,597 (July 30, 1996).

¹⁰⁸ *See* 25 Pa. Code § 123.

¹⁰⁹ 25 Pa. Code § 131.

¹¹⁰ *See id.*

¹¹¹ 42 U.S.C. § 7604.

¹¹² 42 U.S.C. § 7661d(b)(2).

¹¹³ *Id.*

¹¹⁴ 40 C.F.R. § 70.6(a)(2); 25 Pa. Code § 127.446(a).

¹¹⁵ 40 C.F.R. § 70.5(a)(1)(iii); 25 Pa. Code § 127.446(e).

administratively extended until DEP issues a new permit.¹¹⁶ DEP's failure to issue or deny a new permit prior to the expiration date of the previous permit for which a timely renewal application has been submitted is an action that is appealable to the Environmental Hearing Board.¹¹⁷

For plants that are not major sources like the Cumberland, Emerald, and Dutch Run facilities, Pennsylvania issues State Only Operating Permits, or "SOOPs".¹¹⁸ As discussed above, the U.S. Supreme Court's recent ruling striking down the portion of the rule that would have required Alpha to obtain a Title V permit for the Cumberland and Emerald facilities as major sources of greenhouse gas emissions will make it more difficult for citizens to hold Alpha and Rosebud accountable for compliance with air pollution laws. Like Title V permits, SOOPs are supposed to include all applicable air pollution requirements. However, there is no mandate to include sufficient monitoring requirements in these permits; Pennsylvania courts can be hostile to citizen actions; and citizens have no formal process to invoke federal oversight where a permit is deficient.

B. Prep Plants are Top Emitters of Regulated Pollutants and On-Site Mines are Large Emitters of Greenhouse Gases

The Bailey, Cumberland, and Emerald coal preparation plants and associated mines are among the top polluters in Greene County¹¹⁹ and are large sources of methane, a powerful greenhouse gas. According to emissions data on DEP's website, these three plants are consistent top emitters even though emissions of other pollutants may not have always been high enough to trigger "major source" status (100 tpy of regulated pollutants or 50 tpy VOCs). For example, Bailey, Cumberland and Emerald were all listed among the top ten VOC, PM₁₀, and PM_{2.5} emitting facilities in Greene County in 2012, and Bailey was a top three emitter in Greene County for all five pollutants reviewed. *See* Table 4.

¹¹⁶ See 40 C.F.R. § 70.7(b); 25 Pa. Code § 127.446(c); *see also* 40 C.F.R. § 70.7(a)(2) ("[T]he program shall provide that the permitting authority take final action on each permit application (including a request for permit modification or renewal) within 18 months . . . after receiving a complete application."); 25 Pa. Code § 127.421(b).

¹¹⁷ 25 Pa. Code § 127.446(d).

¹¹⁸ See PADEP, Application for State-Only Permit, at 1 (revised Aug. 2009), <http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-76428/01%20Instructions%202700-PM-AQ0013.pdf>.

¹¹⁹ See DEP, "Facility Emissions," http://www.ahs.dep.pa.gov/eFACTSWeb/criteria_facilityemissions.aspx (select Greene County and pollutant) (last accessed Sept. 30, 2014). Emissions data for the Dutch Run coal preparation plant is not available online.

Table 4. 2012 Emissions of Select Pollutants Reported on DEP’s eFacts Database and Rank Among County Emitters

PLANT	POLLUTANT	ACTUAL EMISSIONS (tpy)	RANK AMONG COUNTY FACILITIES
Bailey (Greene County)	NOx	60.75	3
	PM ₁₀	70.19	2
	PM _{2.5}	13.26	2
	SO ₂	94.33	2
	VOC	124.774	1
Cumberland (Greene County)	NOx	1.706	11
	PM ₁₀	8.54	3
	PM _{2.5}	1.808	6
	SO ₂	3.987	3
	VOC	27.738	4
Emerald (Greene County)	NOx	0.4	13
	PM ₁₀	5.2639	4
	PM _{2.5}	0.8816	8
	SO ₂	0.0263	12
	VOC	13.3594	8

In addition, the mines associated with the Bailey, Emerald, and Cumberland Plants¹²⁰ are enormous sources of greenhouse gas pollution. Estimated emissions from these mines far exceed 100,000 tpy,¹²¹ the federal major source threshold for greenhouse gases. *See* Table 5. However, as discussed in the preceding section, despite very high greenhouse gas emissions at both Alpha plants, neither plant is required to obtain a Title V permit after a recent Supreme Court decision held that a source that only exceeded major source threshold for greenhouse gases could not be required to obtain a Title V permit unless a major source threshold for another pollutant was also exceeded.

Table 5. Coal Preparation Plant Potential Greenhouse Gas Emissions

PLANT	POTENTIAL TO EMIT CO ₂ e (tpy)
Consol’s Bailey Plant¹²²	6,791,311
Alpha’s Cumberland Plant¹²³	1,035,415
Alpha’s Emerald Plant¹²⁴	304,650

¹²⁰ Because Rosebud did not submit a Title V application for its Dutch Run plant and has not otherwise submitted mine emissions data, we do not have an estimate of greenhouse gas emissions from any associated coal mines.

¹²¹ *But see* Utility Air Regulatory Group (UARG) v. EPA, 134 S.Ct. 2427 (June 23, 2014) (holding that sources that meet only the major source threshold for greenhouse gases emissions and no other pollutants are not required to obtain federal Clean Air Act permits). *See* discussion *infra*.

¹²² *See* Consol, Bailey Prep Plant Title V Operating Permit Renewal Application, at 7 (submitted Jan. 28, 2014) [hereinafter “2014 Bailey 2014 TV Application”].

¹²³ Alpha Natural Resources, Cumberland Coal Resources, LP, Revised Title V Operating Permit Application, at Appendix D-1, Coal Prep Plant Potential Emission Summary (submitted Jan. 30, 2014) [hereinafter “2014 Cumberland TV Application”].

The vast majority of these greenhouse gases are methane emitted from coal mines associated with the coal prep plants.¹²⁵ Methane is potent greenhouse gas that has a global warming potential over 20 times that of carbon dioxide.¹²⁶ While there have been media reports that at least one company—Consol—is developing plans to capture a greater portion of methane emissions, it is not clear from our review how realistic this proposal is or when this will be implemented.¹²⁷

C. Chronically Expired Title V Permit at the Bailey Plant

Consol’s Bailey Coal Preparation Plant, located in Greene County, is the second largest coal preparation plant in the nation and is a major source of PM₁₀, VOCs, and greenhouse gases.¹²⁸ The current Title V permit for the Bailey facility became effective in 2001 and expired in December of 2006. That permit has not been renewed since because DEP never made a final decision on a 2006 permit renewal application submitted by Consol.¹²⁹ Consol recently submitted an updated permit application, but DEP has not processed this newer application either.

Consol submitted an application to renew its current permit in in May of 2006. DEP should have issued or denied the renewal permit by November of 2007.¹³⁰ However, almost seven years later, DEP still has not renewed the permit. On January 28, 2014, Consol withdrew its old application and submitted a new one that addresses requirements that have become applicable to the plant between 2006 and 2014. While the new application is a step in the right direction, it appears that DEP is dragging its feet again. DEP was required to determine whether Consol’s application was complete or incomplete by March 29, 2014.¹³¹ However, according to documents that we have received and DEP’s own website,¹³² DEP still has not made this completeness determination. This determination is especially important because, within 18 months of receiving a complete application, DEP must issue approve or deny the application and issue the final permit.¹³³

¹²⁴ See, e.g., Letter from Martin L. Hochhauser, PADEP to Air Quality File, Emerald Mine and Coal Preparation Plant, Review of Application for Title V Operating Permit, at 5, 2 (May 11, 2014).

¹²⁵ Because Title V permit applications are supposed to disclose all potential emissions from a source, mine emissions are included at coal prep plants where they are part of the same facility.

¹²⁶ See U.S. EPA, “Greenhouse Gas Emissions,” <http://epa.gov/climatechange/ghgemissions/gases/ch4.html>.

¹²⁷ Consol has already been capturing methane emissions at the Bailey and Enlow Fork Mines http://www.biofpr.com/details/news/537237/Largest_ventilation_air_methane_abatement_project_in_U_S_.html . However, other plants are not capturing methane. See, e.g., 2014 Cumberland TV Application, Addendum 3, CAM Applicability Worksheet for Sources, at 2 (stating that “there are no sources which employ a “control device” to reduce emissions of a regulated air pollutant. Instead, passive control *measures* include water sprays, partial enclosures, full enclosures, and dust suppressants”).

¹²⁸ *Id.*

¹²⁹ 2014 Bailey 2014 TV Application.

¹³⁰ See 25 Pa. Code § 127.421(b) (requiring permit issuance within 18 months of submission of a complete application).

¹³¹ 25 Pa. Code § 127.421(a).

¹³² See DEP, “Permit Review Standard Task Information” for Consol major air operating permit, *available at* http://www.ahs.dep.pa.gov/eFACTSWeb/eNOTICE_Manage.aspx?AuthID=1011646&Action=s (last accessed October 9, 2014).

¹³³ 25 Pa. Code § 127.421(b).

The status of the current application presents an opportunity for EIP to bring a lawsuit in state court seeking a determination that the application is complete and that DEP must issue the permit within 18 months. Pennsylvania law sets a low bar for what is considered a complete application, requiring only sufficient information to begin processing the application, completion of applicable sections, and a signature by a responsible official.¹³⁴ Therefore, based on our review, Consol's application should be considered complete,¹³⁵ and DEP should be required to move forward with issuing the permit. If this occurs, EIP will have the opportunity to comment on substantive permit deficiencies during the public comment portion of the permit renewal, and, if deficiencies persist, to challenge the permit to the U.S. EPA.

DEP's pattern of delay in renewing the permit for the Bailey plant is particularly significant because the plant has become subject to a number of new requirements in recent years. For example, since the permit was last renewed and updated in 2001, new federal regulations ratcheted down opacity limits on certain coal prep plant sources from 20% to 10%. These regulations would limit the opacity at four of the Bailey plant's units (coal conveyors, transfer point, and breaker) to 10% because they were erected after these new regulations were promulgated.¹³⁶ Three of these four units were built as part of a "plant expansion" that was authorized on February 21, 2012.¹³⁷ In addition, new requirements in the permit for this expansion (i.e. Plan Approvals) are not incorporated into the current Title V permit. Although these emission limits are applicable now even if they are not in the Title V permit, citizens are less likely to be able to identify these newer limits and evaluate whether Consol is in compliance because they are not listed in the Title V permit and may not have sufficient monitoring requirements.

Thus, securing a new permit is critical to ensure that the Bailey plant's federal permit accurately reflects applicable new requirements and limits, includes good monitoring requirements so that the public can bring citizen enforcement actions on the basis of representative monitoring data, and enables citizens to enforce any violations in federal court.

D. Large Throughput Increase and Potential Failure to Comply with New Source Review Requirements at Bailey

Consol and DEP may not have complied with the Clean Air Act's new source review requirements when it authorized an increase in hourly throughput by more than 30%. In January of 2014, after Consol repeatedly violated its 6,300 tons per hour throughput limit for over a year, DEP increased the limit to 8,200 tons per hour, which was the level that Consol was operating at the year the violations occurred.¹³⁸ Through a consent decree, DEP weakened the existing

¹³⁴ 25 Pa. Code § 127.421(a)

¹³⁵ Federal regulations provide that an application "shall be deemed complete" unless, within 60 days of receipt, the state has determined it to be incomplete or requested additional information from the applicant. 40 C.F.R. § 70.7(a)(4).

¹³⁶ See Bailey 2014 TV Application.

¹³⁷ *Id.*

¹³⁸ DEP, Consent Order and Agreement, In the Matter of Consol Pennsylvania Coal Co, Air Pollution, 25 Pa. Code § 127.444 (Jan. 10, 2014) [hereinafter 2014 COA].

hourly throughput limit and required Consol to pay a meager penalty.¹³⁹ Because much of the pollution from a coal preparation plant is directly tied to how much coal is processed, increasing the throughput effectively increases pollution.

The hourly throughput increase may be due to a recent expansion of the Bailey facilities that was authorized by DEP in February of 2012. DEP evaluated the potential emissions increases from the proposed expansion and concluded that the project did not trigger federal NSR because Consol shut down its thermal dryer and “offset” the increase in pollution from the expansion.¹⁴⁰ Ultimately, DEP concluded that the net emissions changes would be a 16.61 tpy increase in PM and a 0.34 tpy net decrease in PM₁₀.¹⁴¹ However, based on the documents we have in our possession, it is not clear whether DEP accounted for the 30% increase in hourly throughput when it undertook this analysis.

EIP is continuing to investigate whether DEP improperly authorized an increase in hourly throughput for the Bailey Plant through additional file reviews. In the event this change did trigger new source review, EIP can file a citizen suit in federal court to enforce this requirement or ask EPA to object to a Title V permit that illegally incorporates the weaker hourly throughput limit.

E. Inadequate Monitoring at the Bailey Plant

The Clean Air Act requires that Title V permits must include monitoring requirements sufficient to assure compliance with all applicable emission limits and standards.¹⁴² Yet the Bailey Prep Plant permit does not include adequate monitoring requirements for certain emission limits. For example, the Title V permit limits total emissions of VOCs from the wash plants to 280 tons in any 12-month period.¹⁴³ However, the permit lacks a clear requirement to monitor VOC emissions from the wash plants.¹⁴⁴ EIP has the opportunity to bring this issue to DEP’s attention and review other permits for this deficiency as well.

F. Requesting Waiver of Monitoring Requirements with No Plant-Specific Justification at the Cumberland Plant

Alpha’s 2014 Cumberland Title V Application requests that DEP waive fugitive emission testing requirements used to monitor opacity from various sources at Cumberland without including the specific language or reasons for the waiver. More specifically, Alpha states that it was granted a waiver of opacity monitoring requirements in the SOOP for a separate plant – the Emerald Plant – and requests an identical waiver of requirements in the Cumberland Title V permit by incorporation of the “Emerald language,” without stating why this is justified or even for which exact sources this waiver would apply. Cumberland’s Title V Application included a request that, “[f]or uniformity and for thoroughness,” DEP should insert “Emerald language,”

¹³⁹ See 2014 COA, at 3 (providing for an \$8,400 fine, as well as stipulated penalties).

¹⁴⁰ *Id.*

¹⁴¹ *Id.*

¹⁴² 42 U.S.C. § 7661c(c).

¹⁴³ Bailey TV permit, at 60.

¹⁴⁴ See *id.* at 21, 15, and 14.

which DEP had “worked out” with Emerald, for work practice requirements for conveyor belts.¹⁴⁵ The 2014 Cumberland Title V Application further directs DEP and the public to “See Section C.VI. #021 of that permit.”¹⁴⁶

As an initial matter, whether or not this “Emerald language” may be appropriate for Cumberland, Alpha’s failure to disclose for the public in this permit application what that language is renders this application incomplete and further encumbers a cumbersome public review process by necessitating additional file reviews to figure out what language Alpha is requesting. Because we happened to also be reviewing the Emerald files, we were able to review the specific “Emerald language” adopted in the most recent Emerald SOOP.

The waiver requested by Alpha would waive federal performance testing requirements associated with the 20% opacity limit for fugitive emissions from processing and conveying equipment¹⁴⁷ as long as Alpha complied with certain Pennsylvania regulations.¹⁴⁸ The federal requirements require opacity to be measured by adhering to “Method 9,” a specific process for recording visible emissions under prescribed circumstances, for one hour using ten 6-minute average readings (or 30 minutes if all readings in the first 30 minutes are less than half the opacity limit).¹⁴⁹ In contrast, the Pennsylvania regulations on point simply prohibit fugitive emissions from all but certain listed sources (none of which apply) and allow DEP to permit fugitive emissions from other sources where: “(i) The emissions are of minor significance with respect to causing air pollution” and “(ii) The emissions are not preventing or interfering with the attainment or maintenance of an ambient air quality standard.”¹⁵⁰ The Cumberland Title V permit application states that compliance with the Pennsylvania regulations would be demonstrated by “through a daily site observation to determine the presence of visible emissions and/or malodors.”¹⁵¹

A “daily site observation” is not equivalent to a Method 9 evaluation of opacity in terms of deciding whether air pollution is significant or whether an air quality standard is being maintained. While this waiver of this requirement may have been warranted for Emerald, it may not be appropriate for Cumberland, which is a separate plant with separate emissions. Alpha failed to identify exactly which units would be exempted, so it is difficult to calculate whether fugitive emissions from those sources “are of minor significance with respect to causing air pollution” or are interfering with” the attainment of an air quality standard. The application for Cumberland states that the waiver would include “coal processing and/or conveyance equipment sources,” as well as “equivalent” sources, “includ[ing] two conveyor belts, two belt feeders, one stacker tube, one raw coal stockpile, and four associated transfer points,” but the identification numbers for these sources are not provided.¹⁵² Alpha did provide information that shows that emissions from these sources are not insignificant, so identifying each affected source is critical to ensure that the emissions at issue are neither “significant” nor interfere with an air quality

¹⁴⁵ 2014 Cumberland Title V Application, at Attachment E, Requested Changes to Permit Language, at 1.

¹⁴⁶ *Id.*

¹⁴⁷ The performance testing requirements at issue can be found at 40 C.F.R. § 60.257 (referencing *id.* §§ 60.8, 60.9).

¹⁴⁸ 25 Pa. Code § 123.1.

¹⁴⁹ 40 C.F.R. §§ 60.257 & Appendix A-4, Test Methods 6 through 10B, Method 9.

¹⁵⁰ *Id.*

¹⁵¹ 2014 Cumberland Title V Application, at Attachment E, Requested Changes to Permit Language, at 1.

¹⁵² *Id.*

standard as required for DEP's waiver. For example, transfer operations alone at Cumberland emit 10.92 tpy of PM, and breaking and screening emit another 9.30 tpy of PM.¹⁵³ The major source threshold for a regulated pollutant such as PM is 100 tpy. Combined with the other sources to which the waiver would extend, the emissions related to this waiver could be significant or interfere with an applicable air quality standard. DEP needs to conduct a specific review for Cumberland to determine whether the waiver is appropriate for this particular plant.

V. NEXT STEPS

Coal preparation plants in Pennsylvania are releasing a toxic soup of pollutants into the air and waters of the Commonwealth, yet DEP has failed to properly regulate or curb these releases through the Title V or NPDES permitting processes and established procedures and taken actions that have public access to information. EIP has identified some of the most pressing deficiencies that have enabled coal preparation plants to foul the air and water with more pollution than federal and Pennsylvania laws allow. As discussed in the Summary, there are many opportunities to help clean up the plants that we can pursue as our funding allows. In addition, we are coordinating closely with Chesapeake Commons to develop a web-based platform for sharing critical permit, chemical storage, and release data with the public in an easily digestible format. We will provide updates on the progress of that effort in our Final Report and at the end of the grant term.

Thank you for your support of this important work.

¹⁵³ 2014 Cumberland Title V Application, Attachment D-1, Potential Emission Summary, Coal Prep Plant.