

247 F.Supp.3d 753
United States District Court,
E.D. Virginia,
Richmond Division.

SIERRA CLUB, Plaintiff,

v.

VIRGINIA ELECTRIC AND POWER COMPANY
d/b/a Dominion Virginia Power, Defendant.

Civil Action No. 2:15–CV–112

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Signed 3/23/2017

Synopsis

Background: Environmental organization brought citizen suit against operator of coal power plant, alleging violations of Clean Water Act (CWA) based on discharge of arsenic from coal ash piles on plant site into surrounding surface waters, and seeking permanent injunction requiring operator to dispose of the coal ash.

Holdings: Following bench trial, the District Court, [John A. Gibney, Jr., J.](#), held that:

[1] environmental organization had standing to pursue CWA citizen suit against operator;

[2] discharge of arsenic into groundwater violated CWA;

[3] discharges to groundwater hydrologically connected to surface water were covered by CWA;

[4] coal ash piles stored on coal plant site constituted point sources under CWA;

[5] district court would defer to state agency that issued discharge permit to determine whether operator's discharge of arsenic violated the permit; and

[6] permanent injunction requiring operator to move coal ash to landfill was not warranted.

Ordered accordingly.

Attorneys and Law Firms

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OPINION

[John A. Gibney, Jr.](#), United States District Judge

The Sierra Club has sued Virginia Electric and Power Company d/b/a Dominion Virginia Power (“Dominion”) for violations of the Clean Water Act (“CWA”). The violations stem from discharges of arsenic from Dominion's Chesapeake Energy Center (“CEC”) into the surrounding surface waters.

For roughly fifty years, the CEC burnt coal to generate electricity. Dominion *756 stored ash from the burnt coal in piles and lagoons on the CEC site. The piles and lagoons, in turn, conveyed arsenic created in the power plant to groundwater and, through the groundwater, to surrounding surface waters.

Under the CWA, any entity discharging pollutants into the surface waters must secure a permit. Dominion does not have a permit to discharge arsenic. Dominion's consolidation of waste and conveyance of arsenic through groundwater to the surface water forms the primary basis of the Sierra Club's CWA claim.

The Sierra Club has an alternative theory of liability. Dominion does have two discharge permits for wastewater from the CEC site, but neither authorizes the utility to release discharges into groundwater. The Virginia Department of Environmental Quality (the “DEQ”) issued the permits. Although the DEQ has found that Dominion has complied with its permits, the

Sierra Club thinks otherwise. The alleged violations of the permits constitute the plaintiff's alternative theory of liability.

As to the plaintiff's primary theory of liability, the Court finds that Dominion's discharge through groundwater violates the CWA. The Court will defer to the DEQ's judgment, however, and find that the alternative theory of liability does not amount to a violation.

The finding of a violation, however, does not end the inquiry, for the Court must fashion a remedy in this case. The Court finds that Dominion's conduct does not merit the assessment of civil penalties. The Court also finds that the evidence does not justify the draconian injunction the Sierra Club requests; a lesser measure will do.

I. FACTS

After a bench trial, the Court finds the following facts:

The CEC sits on a peninsula surrounded by the Southern Branch of the Elizabeth River ("SBER") on the eastern side, Deep Creek on the southern side, and a man-made cooling water discharge channel ("CWDC") on the western side.

The CEC generated electricity from 1953 until 2014. The CEC burnt coal to make electricity, and created an enormous amount of coal ash. Dominion moved the ash from the plant to several on-site storage facilities. Between 1953 and 1984, Dominion kept the ash in three different settling ponds, collectively known as the Historic Pond. The Historic Pond does not have a liner beneath it. Dominion created the Historic Pond and engineered it with the express intention of using it for coal ash.

In 1984, the DEQ issued Solid Waste Permit No. 440 ("Solid Waste Permit") to Dominion. The Solid Waste Permit authorized Dominion to construct a lined ash landfill on top of a portion of the Historic Pond. Dominion placed a 20 mil geosynthetic liner, with a thickness of 0.05 centimeters, over the Historic Pond. On top of the liner, Dominion created what it calls the Ash Landfill. The Solid Waste Permit also included provisions dealing with groundwater. The permit requires routine testing of the groundwater and submission of status reports to the DEQ. Dominion submitted an application

to amend the Solid Waste Permit in June 2014, but later withdrew its application.¹

***757** Around the same time that Dominion constructed the Ash Landfill, it dug up a separate part of the Historic Pond to create a settling area, known as the "Bottom Ash Pond and Sedimentation Pond." Unlike the Ash Landfill, the Bottom Ash Pond and Sedimentation Pond do not have impermeable linings beneath them.² In total, the Historic Pond, Ash Landfill, Bottom Ash Pond, and Sedimentation Pond (collectively, "the Coal Ash Piles") currently hold about 2,830,000 cubic yards or 3,396,000 tons of coal ash.

In addition to the Solid Waste Permit, the DEQ has also issued two discharge permits for the CEC.³ These permits identify specific outfalls through which Dominion can discharge wastewater to surface water. The VPDES permits also set conditions that limit the amount of the discharges.

The coal ash contains high levels of arsenic. All told, the CEC site contains approximately 150 tons of arsenic. Through the ponds and landfill, Dominion has conveyed arsenic from the old CEC generator into the groundwater at the CEC.

Groundwater is the water found underground in spaces or pores between soil particles or rock. As reflected in Dominion's submissions to the DEQ in 2014, samples of groundwater from ten wells on the Ash Landfill had arsenic concentrations higher than 10 micrograms per liter, the Groundwater Protection ("GWP") standard set by the Commonwealth of Virginia for arsenic.⁴ Dominion's 2015 Annual Groundwater Report flatly stated that concentrations of arsenic "were at levels above the Groundwater Protection Standards." (Pl. Ex. 44, at 1.) In one well tested at CEC, the arsenic concentration in the groundwater reached as high as 1,287 micrograms per liter. The record contains no evidence that the site, in its natural state, contains arsenic, independent of the waste from the CEC. Thus, the findings in Dominion's own reports show that arsenic from the ponds and landfill enters the groundwater.

In turn, the groundwater around the CEC hydrologically flows to the surface water including the SBER, Deep Creek, and the CWDC. Groundwater moves within and

is stored in “aquifers,” regions containing significant volumes of groundwater. Groundwater in aquifers obeys the principle of “hydraulic continuity.” Hydraulic continuity means that nature maintains a balance so that if water leaves a system then more water enters to recharge that system. Precipitation usually recharges groundwater. The precipitation percolates through the soil to the groundwater and recharges it. Groundwater most commonly discharges to surface water, such as a stream or lake.

Groundwater moves from a condition of high hydraulic head to low hydraulic head. Hydraulic head contains two elements: (1) elevation head and (2) pressure head. Elevation head essentially means that groundwater will move from high elevations to low elevations; it will flow downhill. Pressure head occurs in confined aquifers, where water will move away from the pressure created by an overlying clay layer. Overall, groundwater will move from areas of high hydraulic head to areas of low hydraulic head.

The principles of hydrology and Dominion's reports prove that the groundwater is hydrologically connected to the surface *758 water. Anthony Brown, the Sierra Club's expert on hydrology, testified that the sediments under the Coal Ash Piles have moderate to high conductivity. This conductivity allows groundwater to move freely through the sediment.

The groundwater at the CEC site moves radially outward—toward surface water. The data at CECW-3, an interior testing well located south of the Ash Landfill, helps to demonstrate this. CECW-3 consistently has the highest groundwater elevations of the wells at the CEC, indicating that CECW-3 lies near where the groundwater is being recharged. According to Brown, three sources—seeps from the Bottom Ash Pond, leaks in the liner of the Ash Landfill, and direct rainfall that flows through the inner dike—likely recharge the groundwater. Because this well at the center of the CEC had the highest hydraulic head, the groundwater would move radially outwards towards areas of low hydraulic head. The high hydraulic head (along with the proximity of the edge of the Coal Ash Piles to the surface water) shows that the groundwater flows through the ash and then enters the surface water through a radial outward flow.

Dominion itself has agreed that groundwater moves laterally into the surrounding surface water. Its 2015 Annual Groundwater Report stated that “groundwater movement through the unconfined and confined aquifers is generally lateral with discharge into surrounding water bodies including the SBER and Deep Creek.” (Pl. Ex. 44, at 4.)

But now that Dominion finds itself in a lawsuit about its discharge of arsenic, it changes its tune. Now Dominion argues that the movement of groundwater does not directly connect with the surface water, because the aquifer confines the groundwater and impedes it from reaching the surface water. Dr. Alan Mayo testified that clay was the primary constituent encountered in thirteen of the seventeen wells, which impedes the movement of groundwater both vertically and horizontally. The Court rejects this argument: it runs counter to the geography of the region⁵ and to Dominion's more candid statements made before the pressure of litigation. The evidence supports Brown's conclusion that groundwater moves freely through the sediment.

In addition, Mayo argued that a natural upward gradient at the CEC site reduces the movement of the groundwater outward. The evidence, however, better supports Brown's analysis of groundwater movement. Once again, Dominion's own documents support the analysis that the groundwater moves radially outward from the center of the CEC site to the adjoining surface waters. Additionally, the principles of hydrology suggest that groundwater moves from high hydraulic head to low hydraulic head, which would mean an outward flow from the center of the CEC site, the area with the highest hydraulic head.

In short, the Court finds a direct hydrological connection between the groundwater at the CEC site and the surface water adjacent to the site.

The ponds and landfill convey arsenic directly into the groundwater and, from there, directly into the surface water. As discussed above, the groundwater at the CEC site flows through the coal ash before moving radially outward to the surface water. During this process, arsenic in the coal ash dissolves into the groundwater and travels along with the groundwater to the surface water. The discharge into the *759 surface water contains arsenic at levels higher than the Surface Water Protection (“SWP”)

standard, set by the Commonwealth of Virginia, of 36 micrograms per liter.

Dominion's own data, contained in its 2010 Natural Attenuation of Arsenic Demonstration Report, shows arsenic at levels above the SWP standard in most of the pore water samples collected. Pore water is the water collected from inside the samples of sediment. Specifically, that data shows that all of the samples taken at the sediment-surface water interface have higher arsenic levels than the SWP standard. This data is relevant because the sediment-surface interface is where groundwater discharges into the surface. The discharge into surface water has elevated levels of arsenic, which shows that the natural movement of the groundwater to the surface water has not reduced the arsenic level to below the SWP standard.

Contrary to its own evaluations and reports, Dominion now argues that any arsenic in the surface water surrounding the CEC, or in the sediments at the bottom of those waters, probably comes from other industries in the area. Unquestionably, the CEC lies in an industrial area. Dominion argues that because sediments move upstream and downstream with the tides, it is impossible to tell where the sediments used for the pore water samples originally came from. Although some tidal action may move sediments around, it defies logic to argue that an enormous mound of arsenic does not contribute to the arsenic in soil and water right next to it, especially given the evidence of groundwater movement from the mound outward. The number of samples taken, together with Dominion's own previous reliance on the data in its submissions to the DEQ, also convinces this Court that the data is accurate.⁶

Dominion's expert, Dr. Daniel B. Stephens, argued that the liner under the Ash Landfill is not leaking, so at least the Ash Landfill is not a source of any arsenic that may have reached the surface water. The Sierra Club's experts opined that the liner is leaking. They argued that a liner, such as the one in this case, is commonly understood through the industry to leak to some degree. Brown testified that the data from CECW-3 indicates that the Ash Landfill liner is leaking and contributing to the recharge at that well. The data shows that the groundwater levels at CECW-3 exceed not only the exterior wells, but also other interior wells. This shows that CECW-3 has an additional source of recharge and

arsenic. Brown opined that leaks from the Ash Landfill are the sources of the extra groundwater in CECW-3. The Court finds this theory credible and finds that the Ash Landfill is one of the sources of arsenic that has reached the surface water.

While the evidence shows that Dominion does discharge some arsenic into the surface waters surrounding the CEC, it does not show how much. The Court cannot determine how much groundwater reaches the surface waters, or how much arsenic goes from the CEC to the surrounding waters. It could be a few grams each day, or a much larger amount. What the Court does know, however, is that the discharge poses no threat to health or the environment. All tests of the surface waters surrounding the CEC have been well below the water quality criteria for arsenic.⁷ This *760 fact, however, does not indicate that a miniscule amount of arsenic reaches the water. The CEC is surrounded by an enormous amount of water, and even a large arsenic discharge would amount to a drop in the bucket. But this fact does demonstrate the absence of significant environmental harm. Dr. Christopher Teaf testified for Dominion that he had reviewed surface water, sediment, pore water, and fish tissue data (including bottom feeders), and found no "human health or environmental concerns around the CEC facility." The Sierra Club offered no evidence to dispute Teaf's testimony.

Notwithstanding the lack of environmental harm, the Sierra Club's witnesses testified that the only remedy available to the Court is an order directing Dominion to dig up all the coal ash and move it miles away to a lined municipal landfill. Significantly, the plaintiff's witnesses did not know whether the municipal landfill would accept over three million tons of coal ash, how long it would take to move the ash to the landfill, the amount of ash that might spill during moving, or how much it would cost. Dominion's evidence shows that the process would cost over \$600 million.

For its part, Dominion offers a completely ineffective "solution" to the CEC problems. Dominion offered evidence about the process of "monitored natural attenuation" ("MNA"). MNA is a scientific or regulatory term that means, "Do nothing." Essentially, Dominion would keep an eye on the amount of arsenic at the site, while waiting for the arsenic to bond chemically with naturally occurring iron in the sediments at CEC. The

resulting molecules are apparently not poisonous. The evidence shows, however, that MNA has not occurred so far, that if MNA does work it will take a very long time, and that MNA may never get rid of the arsenic in the groundwater.

* * *

Finally, the Court also finds that the DEQ has decided to regulate discharges of pollutants into groundwater under the Solid Waste Permit. James Golden, the DEQ's Director of Operations, testified that the DEQ regulated discharges of pollutants from industrial waste into groundwater under the Solid Waste Permit. Golden specifically cited Condition I.D.7 of the Solid Waste Permit, which addresses industrial waste like coal ash. Since 1983, Dominion has provided groundwater monitoring reports to the DEQ under the Solid Waste Permit.

As noted above, the DEQ has issued Dominion two VPDES discharge permits for the site, which apparently regulate wastewater that goes to the river through outfall pipes. The DEQ has never found Dominion in violation of its VPDES permit.

II. ANALYSIS

A. CWA Claim

[1] [2] [3] [4] The CWA is the primary federal statute controlling pollution of the nation's waters. 33 U.S.C. § 1251 *et seq.* In relevant part, the CWA says, “except as in compliance with [certain sections] of this title, the discharge of any pollutant by any person shall be unlawful. 33 U.S.C. § 1311. Further, “the term discharge of a pollutant and the term discharge of pollutants each means (A) any addition of any pollutant to navigable waters from any point source, (B) any addition of any pollutant to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft.” 33 U.S.C. § 1362 (internal quotation marks omitted). Arsenic is a pollutant as determined by Environmental Protection Agency (“EPA”) regulation under the CWA. 40 C.F.R. § 401.15.⁸

[5] To comply with the CWA, entities that discharge pollutants into navigable waters must obtain a permit

from the EPA, or a state, such as Virginia, designated by the EPA to issue discharge permits.⁹ 33 U.S.C. § 1342(a), (b). The CWA defines navigable waters as “the waters of the United States, including the territorial seas.” 33 U.S.C. § 1362. Any discharges of pollutants into navigable waters without a permit or in violation of the terms of the permit are illegal.

In this suit, the Sierra Club argues that Dominion has violated its VPDES permit and the CWA by unlawfully discharging arsenic into the groundwater which has a direct hydrological connection to the surrounding surface waters. Dominion argues that the CWA does not apply to this discharge because (1) the CWA does not regulate groundwater, and (2) the Coal Ash Piles do not meet the statutory definition of point sources.

i. Discharge of Pollutants from Hydrologically Connected Groundwater to Surface Water

[6] [7] [8] The CWA regulates the discharge of arsenic into navigable surface waters¹⁰ through hydrologically connected groundwater. Courts have disagreed on whether the CWA encompasses groundwater if it is hydrologically connected to surface water.¹¹ As discussed in its ruling on *762 Dominion's motion to dismiss, this Court finds most persuasive the line of cases that hold that discharges to groundwater hydrologically connected to surface water are covered by the CWA. (Dk. No. 21.) Congress intended the CWA to protect the water quality of the nation's surface water. Where the facts show a direct hydrological connection between ground water and surface water, that goal would be defeated if the CWA's jurisdiction did not extend to discharges to that groundwater.

In addition, the EPA, the agency charged with enforcing the CWA, has a longstanding view that the CWA covers discharges of pollutants to groundwater that flow to surface waters through a direct hydrological connection. In 1991, the EPA stated, in its preamble to a final rule, that “the affected groundwaters are not considered waters of the United States but discharges to them are regulated because such discharges are effectively discharges to the directly connected surface waters.” *Amendments to the Water Quality Standards Regulation That Pertain to Standards on Indian Reservations*, 56 FR 64876-0; *see also National Pollutant Discharge Elimination System Permit Regulation and Effluent*

Limitations Guidelines and Standards for Concentrated Animal Feeding Operations, 66 FR 2960–01 (requiring a NPDES permit to address risk of contamination through groundwater with a direct hydrological connection to surface water for animal feeding operations.).

Dominion argues that the Court should not give deference to the EPA's pronouncements in the preamble of final rules. This Court need not determine what type of deference the EPA's pronouncements merit because, even viewing the preamble as simply persuasive authority, the combination of the case law and minimal deference leads this Court to conclude that discharges to groundwater that is hydrologically connected to surface water are covered by the CWA.¹²

ii. Point Source

[9] The CWA regulates discharges from “point sources.” The Court finds that the Coal Ash Piles constitute point sources under the CWA. The Coal Ash Piles channel and convey arsenic into groundwater that eventually discharges into the surrounding surface waters.

[10] [11] *763 The CWA defines a point source as “any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged.” 33 U.S.C. § 1362. Congress intended the definition of a point source to be interpreted broadly, as indicated by the statute's “including but not limited to” language. See *United States v. Earth Sci., Inc.*, 599 F.2d 368, 373 (10th Cir. 1979) (“The concept of a point source was designed to further this scheme by embracing the broadest possible definition of any identifiable conveyance from which pollutants might enter the waters of the United States.”). In determining whether a conveyance is a point source, “the ultimate question is whether pollutants were discharged from discernible, confined, and discrete conveyance [s] either by gravitational or nongravitational means.” *Ohio Valley Envtl. Coal., Inc. v. Hernshaw Partners, LLC*, 984 F.Supp.2d 589, 599 (S.D. W. Va. 2013); see also *Sierra Club v. Abston Const. Co., Inc.*, 620 F.2d 41, 45 (5th Cir. 1980).

The Coal Ash Piles do precisely that. Dominion built the piles and ponds to concentrate coal ash, and its constituent pollutants, in one location. That one location channels and conveys arsenic directly into the groundwater and thence into the surface waters. Essentially, they are discrete mechanisms that convey pollutants from the old power plant to the river.¹³ A recent decision by a court in the Fourth Circuit supports this conclusion. In *Yadkin Riverkeeper, Inc. v. Duke Energy Carolinas, LLC*, 141 F.Supp.3d 428 (M.D. N.C. 2015), the Court held that a coal ash dump constituted a point source regulated by the CWA.

In *Sierra Club v. Abston Construction Co., Inc.*, the Fifth Circuit focused on human action, and whether that action had the effect of channeling and collecting water. 620 F.2d at 45. Although *Abston* involved overflow from a sediment basin, the court found a point source because human action had the effect of channeling or changing the path of the water. *Id.* at 47 (“Surface runoff from rainfall, when collected or channeled by coal miners in connection with mining activities, constitutes point source pollution.”). Similarly, here the human action of Dominion channels the flow of pollutants.

In this case, contaminated water containing arsenic runs into the groundwater under the CEC site from the Coal Ash Piles. Dominion created those piles specifically for coal ash, and they channel the pollutants away from the old power plant and directly into the groundwater. Indeed, the piles also have the effect of changing the original flow path of any precipitation, because the 3 million tons of coal ash has changed the geography of the peninsula, thereby channeling the flow of contaminated water. Consequently, the Court finds that each of the Coal Ash Piles constitutes a point source because they are discrete conveyances of pollutants discharged into surface waters.

Since Dominion has no discharge permit for these conveyances of pollutants, it has violated the CWA.

*764 B. VPDES Permit Violations

Counts II and III of the complaint allege violations of the specific terms of Dominion's VPDES permits. These permits allow Dominion to discharge outflow from various sites at the Coal Ash Piles. Apparently the

discharges go from pipes directly into the bodies of water surrounding the CEC.

[12] The claims in Counts II and III arise from the plaintiff's interpretation of state law, and the applicability of state law to the VPDES permits. The VPDES permits allow certain discharges to "state waters." Under Virginia law, the term "state waters" includes groundwater. If the permits govern discharges to groundwater, Dominion has violated them, because they do not authorize discharges to groundwater.

[13] [14] The DEQ, however, believes that the VPDES permits do not apply to groundwater, and therefore has found no violations of the permits. In this instance, the Court defers to the DEQ's determination that the VPDES permits do not regulate pollutants seeping into the groundwater at the CEC site. Federal courts should give state agency decisions at least some deference where a state agency is interpreting regulations under "the authority of a federally created program." *Ritter v. Cecil Cty. Office of Hous. & Cmty. Dev.*, 33 F.3d 323, 327–28 (4th Cir. 1994). In this case, the Court defers to the DEQ's decision finding Dominion in compliance with its permit.¹⁴ The DEQ conducts reviews of Dominion's permits and each time determines whether Dominion has violated any conditions of its permit. The DEQ has never found Dominion in violation of either of its permits. Consequently, the Court accords the DEQ deference and finds that Dominion is not liable on Counts II or III.

III. CIVIL PENALTIES

[15] [16] The Court has discretion whether to impose civil penalties in a citizen suit under the CWA. See *Gwaltney of Smithfield v. Chesapeake Bay Found.*, 484 U.S. 49, 52–53 n.1, 108 S.Ct. 376, 98 L.Ed.2d 306 (1987). Civil penalties are not appropriate here.

As noted above, the DEQ has regulatory authority over the administration of the CWA in Virginia. The record here demonstrates that Dominion has cooperated with the DEQ every step of the way in operating the CEC. It has provided the DEQ with an enormous amount of information, including the information that the Sierra Club uses in this case as its exclusive factual evidence of what has occurred at the CEC. Dominion has secured the precise permits the DEQ has required it to obtain. As

the Court observed at trial, Dominion has been a good corporate citizen, not a chronic violator of water laws at the CEC.

The Sierra Club has offered in this case a novel interpretation of the law, which, as to Count I, the Court has adopted. Dominion should not suffer penalties for doing things that it, and the Commonwealth, thought complied with state and federal law.

The Court, therefore, will not order any civil penalties in this case.

IV. INJUNCTION

The Sierra Club demands draconian injunctive relief. It wants the Court to order Dominion to move over three million tons *765 of coal ash to a landfill that may not even be willing to accept it.

[17] [18] Injunctive relief—especially mandatory injunctive relief—is a "drastic and extraordinary" remedy, available only in unusual situations. *Monsanto Co. v. Geertson Seed Farms*, 561 U.S. 139, 165, 130 S.Ct. 2743, 177 L.Ed.2d 461 (2010); *Vollette v. Watson*, 978 F.Supp.2d 572, 583 (E.D. Va. 2013). To secure a permanent injunction, a plaintiff must demonstrate "(1) that it has suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction." *Legend Night Club v. Miller*, 637 F.3d 291, 297 (4th Cir. 2011). Factor two—available remedies at law—does not apply here.

[19] The other factors weigh against the drastic injunctive relief sought by the plaintiff. As discussed above, no evidence shows that any injury, much less an irreparable one, has occurred to health or the environment. In contrast, the hardships of the proposed injunction on Dominion are enormous, given the absence of any evidence of the amount of arsenic going into the water. The proposed injunction will entail years of effort costing hundreds of millions of dollars, for very little return. The public interest will not be served. Dominion receives income through rates charged to its customers; those rates

would likely rise to pay for the Sierra Club's proposal. Moreover, the Sierra Club has not even attempted to itemize the collateral environmental effects of moving this much coal ash.

The Sierra Club's evidence in support of its proposed remedy is remarkable only for what it does not show. The plaintiff has offered no credible evidence of the cost of this removal. It has offered no credible evidence of how long it would take to move the ash. It has offered no credible evidence of how the ash will safely travel across Tidewater Virginia.

The plaintiff's damage experts have not considered the simple fact known by everyone who has ever dug a hole and moved dirt around in his or her yard. When one digs a hole, some of the dirt slops over and does not go where it is supposed to wind up. How much spillage will occur when someone moves three million tons of ash? How many truck wrecks will occur with resulting coal ash dropped on the roads, and perhaps on the motorists?¹⁵ The Sierra Club does not consider, much less address, these questions.

The Sierra Club's desperation to provide some evidence to support its requested relief causes it to speculate. It says that Dominion might be able to cart the coal ash around Virginia on train cars. But again, this speculation leads to nothing but unanswered questions. How many train cars would it take? Do tracks still run where the ash needs to go? Where are the loading and unloading facilities? Will the ash blow out of the cars as the big train keeps on rolling?

The Court will not require Dominion to move the coal ash away from CEC.

But denying the relief request by the Sierra Club does not answer the question of how to address the ongoing pollution. While it is true that Dominion's arsenic does not poison the surrounding waters, that fact simply reflects that the waters *766 are enormous, and the amount of pollutant is comparatively small. The dilution of pollution does not render it acceptable.

Dominion's solution—Monitored Natural Attenuation—does not adequately address the discharge of arsenic. Like the Sierra Club's proposal, MNA leaves a host of questions unanswered: Does it really work? How long

will it take? What happens if a hurricane comes through Tidewater before MNA has worked its magic?

The parties have left the Court with virtually no valid suggestions to address the issue of arsenic in the waters surrounding CEC. The Court has considered asking the parties to provide more evidence on the issue of remedy, but this approach ignores two problems. First, it ignores the fact that the parties have consistently adopted an all or nothing approach: all (the Sierra Club's scheme of moving the ash), or nothing (Dominion's MNA plan). Second, it ignores the reality of litigation that the plaintiff has the burden of proving entitlement to its proposed remedy—a burden the Sierra Club has not carried.

The Court, therefore, will grant an injunction adopting a middle course. First, Dominion will conduct more extensive monitoring of the CEC site, including sampling of the contents of sediments both on the site and at distances in ten yard increments from the shore of the waters around the CEC. The sediment monitoring will extend up to 100 yards into the surrounding waters, if the river and streams are wide enough to allow such monitoring. Dominion will conduct a series of tests of the sediments one foot and three feet below the bottom of the water. In addition, Dominion will monitor the water column at depths of six inches above the bottom of the water, three feet above the bottom, and six feet above the bottom, if the waters are deep enough to allow such monitoring. Dominion will also periodically monitor fish and crabs in the area for arsenic. Dominion will report the results of its tests to the DEQ and the Sierra Club's counsel. In the event of a significant change in the amount of arsenic in the water or sediments, either party may move the Court for further relief.

In addition, Dominion will reopen its solid waste permit application.

Within thirty days, the parties will submit to the Court an agreed detailed remedial plan specifying the locations and schedule of monitoring. The plan will also state the timing of Dominion's application for a revised solid waste permit. If the parties cannot agree on a remedial plan, they may submit dueling proposals to the Court.

V. CONCLUSION

For the reasons stated in this Opinion, the Court finds that Dominion violated the CWA and finds it liable under Count I. The Court, however, finds that Dominion did not violate the express terms of the VPDES permits, so it finds Dominion not liable under Counts II and III. The Court imposes no penalties. The parties will suggest a remedial plan consistent with the Court's Opinion.

The Court will enter an appropriate Order.

Let the Clerk send a copy of this Opinion to all counsel of record.

All Citations

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Footnotes

- 1 Dominion withdrew its application after the trial of this case. The letter withdrawing the application is available on the DEQ's website, and the Court takes judicial notice that Dominion withdrew the application. Letter from Cathy C. Taylor to James Golden, October 25, 2016. www.deq.virginia-gov/Portals/O/DEQ/Land/Chesapeake/10-25Letter.pdf?ver=2016-10-31-144953-630.
- 2 Dominion has also built a series of berms and dikes, partially made of coal ash, throughout the facility.
- 3 Permits issued by the Virginia Department of Environmental Quality are called Virginia Pollutant Discharge Elimination System ("VPDES") permits.
- 4 This regulatory standard applies unless the site receives a variance from the DEQ. The DEQ has not given Dominion a variance.
- 5 The subsurface of Virginia's coastal plain largely contains unconsolidated sediments. Small quantities of clay exist, but most of the materials in the subsurface for the first seventy or eighty feet have moderate to high conductivity so groundwater moves freely throughout the sediment.
- 6 Dominion also argues that the methodology used to extract the water from the sediment biased the arsenic data high. The Court does not find this evidence persuasive, especially since Dominion has been relying on this data for years in its assessment of the situation at the CEC. (See Pl. Ex. 168–B, DOM00000903.)
- 7 The groundwater is above the surface water standard, but once it gets into the surrounding waters the volume of the polluted groundwater is comparatively negligible. This is due, most likely, to its dilution in the much larger body of water. But this dilution does not make the discharge legal.
- 8 The CWA authorizes citizen suits for any violations of an effluent standard or limitation or "against any NPDES permit holder who has allegedly violated its permit. A successful suit may result in the award of injunctive relief and the imposition of civil penalties payable to the United States Treasury." *Friends of the Earth, Inc. v. Gaston Copper Recycling Corp.*, 204 F.3d 149, 152 (4th Cir. 2000); see 33 U.S.C. § 1365(a). The Court finds that the Sierra Club has standing to pursue this matter. Section 1365 sets forth the statutory standing requirement for the citizen suit provision of the CWA. 33 U.S.C. § 1365(g). Specifically, it defines "citizen" as "a person or persons having an interest which is or may be adversely affected." *Id.* Congress has indicated that this section provides standing to enforce the Clean Water Act to the full extent allowed by the Constitution. *Friends of the Earth, Inc.*, 204 F.3d at 152. To have constitutional standing a plaintiff must show that it has (1) suffered an injury in fact, (2) that is fairly traceable to the challenged conduct of the defendant, and (3) is likely to be redressed by a favorable judicial decision. *Spokeo, Inc. v. Robins*, — U.S. —, 136 S.Ct. 1540, 1547, 194 L.Ed.2d 635 (2016). An association has standing to sue on behalf of its members when (1) its members would otherwise have standing to sue in their own right, (2) the interests at stake are germane to the organization's purpose, and (3) neither the claim asserted nor the relief requested requires the participation of individual members in the lawsuit. *Friends of the Earth, Inc. v. Laidlaw Envtl. Servs. (TOC), Inc.*, 528 U.S. 167, 181, 120 S.Ct. 693, 145 L.Ed.2d 610 (2000). The evidence at trial clearly demonstrated that members of the Sierra Club have met all three requirements under the standing analysis because of their interest and use of the surface waters surrounding the CEC and their fear of the effects of the contamination of that water. The Court, therefore, finds that they have standing to sue in their own right. Further, the Court took judicial notice of the Sierra Club's relevant organizational purpose. Finally, nothing in this suit requires the participation of individual members. Consequently, the Sierra Club has standing for a citizen suit under the CWA.
- 9 As stated above, Dominion has two VPDES permits for the CEC site.
- 10 The parties agree that the surface waters at issue here, SBER, Deep Creek, and CWDC, are navigable waters under the CWA.

- 11 Compare *N. Ca. River Watch v. Mercer Eraser Co.*, No. C-04-4620 SC, 2005 WL 2122052, at *2 (N.D. Cal. Sept. 1, 2005) (“The Court finds that the regulations of the CWA do encompass the discharge of pollutants from wastewater basins to navigable waters via connecting groundwaters It would hardly make sense for the CWA to encompass a polluter who discharges pollutants via a pipe running from the factory directly to the riverbank, but not a polluter who dumps the same pollutants into a man-made settling basin some distance short of the river and then allows the pollutants to seep into the river via the groundwater.”); and *Williams Pipe Line Co. v. Bayer Corp.*, 964 F.Supp. 1300, 1319 (S.D. Iowa 1997) (“The majority of courts have held that groundwater that is hydrologically connected to surface waters are regulated waters of the United States, and that unpermitted discharges into such groundwaters are prohibited.”); with *Cape Fear River Watch, Inc. v. Duke Energy Progress, Inc.*, 25 F.Supp.3d 798, 810 (E.D.N.C. 2014), amended, No. 7:13-CV-200-FL, 2014 WL 10991530 (E.D.N.C. Aug. 1, 2014) (“Congress did not intend for the CWA to extend federal regulatory authority over groundwater, regardless of whether that groundwater is eventually or somehow hydrologically connected to navigable surface waters.”).
- 12 See *Chevron, U.S.A., Inc. v. Nat. Res. Def. Council, Inc.*, 467 U.S. 837, 843, 104 S.Ct. 2778, 81 L.Ed.2d 694 (1984) (holding that courts should give deference to agency decisions that have the force of law where congress has not directly spoken to the issue and where the agency's decision is based on a permissible construction of the statute). Cf. *Auer v. Robbins*, 519 U.S. 452, 461, 117 S.Ct. 905, 137 L.Ed.2d 79 (1997) (holding that an agency's interpretation of its own regulations is controlling unless it is plainly incorrect or inconsistent with the regulation); *Skidmore v. Swift & Co.*, 323 U.S. 134, 140, 65 S.Ct. 161, 89 L.Ed. 124 (1944) (holding that informal agency determinations can still be persuasive authority for courts).
- 13 Dominion relies on *Consolidation Coal Co. v. Costle*, 604 F.2d 239, 249 (4th Cir. 1979), and *Appalachian Power Co. v. Train*, 545 F.2d 1351, 1373 (4th Cir. 1976) (“Broad though this definition may be, we are of [the] opinion that it does not include unchanneled and uncollected surface waters.”) The Fourth Circuit does not give much more guidance on the qualities that define channeled and collected in this context.
- 14 The defendant also argues that Burford abstention dictates that the Court should abstain jurisdiction of this case. This Court already expressly denied the defendant's Burford abstention argument at the motion to dismiss phase and finds no reason to change that ruling now. (See Mem. Opinion & Order, Dk. No. 21, 11–12.)
- 15 The Sierra Club also pretty much ignores the fact that Dominion does not even own the entire CEC site now, and may not have legal authority to move the coal ash from the part it does not own.