UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF PENNSYLVANIA

SIERRA CLUB, Plaintiff, v. TALEN ENERGY CORPORATION and BRUNNER ISLAND LLC, Defendants.	CIVIL ACTION NO.:

COMPLAINT FOR INJUNCTIVE RELIEF AND FOR CIVIL PENALTIES

INTRODUCTION

1. This is an action for declaratory judgment and mandatory injunctive relief and for civil penalties against defendants Talen Energy Corp. and Brunner Island, LLC. Plaintiff alleges violations of the Federal Water Pollution Control Act, 33 U.S.C. § 1251 *et seq.* (hereinafter "the Clean Water Act" or the "CWA"), the Pennsylvania Clean Streams Law, 35 P.S. § 691.1 *et seq.*, and the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. § 6901 *et seq.*

2. As detailed below, Plaintiff alleges that Defendants discharged and continue to discharge industrial wastes, including arsenic, manganese, iron, and boron, into waters of the United States in persistent violation of the conditions and

limitations of a National Pollutant Discharge Elimination System ("NPDES") permit issued to Defendants by the Commonwealth of Pennsylvania pursuant to § 402 of the CWA (33 U.S.C. § 1342). Such discharges, exceeding the permitted limits, are also violations of § 301 of the CWA (33 U.S.C. § 1311).

3. As detailed below, Plaintiff alleges that Defendants discharged and continue to discharge industrial wastes without a permit into Waters of the Commonwealth, in violation the Clean Streams Law. 35 P.S. § 691.301.

4. As detailed below, Plaintiff alleges that Defendants contributed and continue to contribute to the handling, storage, treatment, and disposal of Coal Combustion Residuals ("CCR"), including fly ash, bottom ash, and flue gas desulfurization gypsum, which may present an imminent and substantial endangerment to health or the environment, in violation of RCRA, 42 U.S.C. § 6972(a)(1)(B), and the CCR Rule, 40 C.F.R. § 257.50 *et seq.*, promulgated pursuant to RCRA.

JURISDICTION AND VENUE

Claims arising under the Clean Water Act and Clean Streams Law

5. This Court has jurisdiction pursuant to 28 U.S.C. § 1331 (federal question jurisdiction), 33 U.S.C. § 1365 (the Clean Water Act's citizen suit provision), and 42 U.S.C. § 6972 (RCRA's citizen suit provision).

6. This Court has subject matter jurisdiction over plaintiff's claims under the Clean Streams Law pursuant to 28 U.S.C. § 1367(a) (supplemental jurisdiction) as those claims arise out of the same facts and circumstances as Plaintiff's claims under the Clean Water Act and form part of the same case and controversy.

7. By letter sent certified mail and postmarked February 14, 2018, Plaintiff gave notice of the CWA violations and its intent to file suit to Defendant, the United States Environmental Protection Agency ("EPA"), and the Pennsylvania Department of Environmental Protection ("DEP"), as required by 33 U.S.C. § 1365(b)(1)(a).

8. More than sixty days have passed since the notice was served and neither EPA nor DEP has commenced or has diligently prosecuted a civil or criminal action to require compliance. Moreover, neither EPA nor DEP commenced an administrative penalty action under Section 309(g) of the CWA, 33 U.S.C. § 1319(g), or comparable state law to redress the violations prior to the issuance of the February 14, 2018 notice letter. Venue in this District and at this Division is proper pursuant to 33 U.S.C. § 1365(c)(1) because the sources of the Clean Water Act and Clean Streams Law violations are located in York County, Pennsylvania.

Claim arising under the Resource Conservation and Recovery Act

9. Section 7002, 42 U.S.C. § 6972(a)(1), entitles citizens to bring suit under the Resource Conservation and Recovery Act (RCRA) for "any person . . . who has contributed or who is contributing to the past or present handling, storage, treatment,

transportation, or disposal of any solid or hazardous waste which may present an imminent and substantial endangerment to health or the environment." The RCRA citizen suit provision, *id.* § 6972(a)(1), empowers the Court to "restrain" any person referred to in paragraph (1)(b) and to order that person "to take such other action as may be necessary."

10. Plaintiff has provided Talen Energy and Brunner Island with notice of the endangerment alleged in this Complaint and of its intent to sue Talen Energy and Brunner Island, as required by 42 U.S.C. § 6972(b)(2)(A). A copy of this notice letter is attached as Exhibit A and was sent to Talen Energy and Brunner Island on February 14, 2018. Additionally, Plaintiff sent copies of the notice letter to the Administrator and the Regional Administrator of the EPA and to DEP.

11. More than ninety days have passed since the February 14, 2018 notice letter was served, and, based on information and belief, the violations outlined in the notice letter and alleged in this Complaint are continuing at this time and are likely to persist.

12. Neither EPA nor DEP has commenced or is diligently prosecuting a civil or criminal action, is engaging in a removal action, has incurred costs to initiate a Remedial Investigation and Feasibility Study, has obtained a court order or issued an administrative order for a removal action, or is proceeding with a remedial order or issued an administrative order for a removal action, or is proceeding with a remedial action to redress the asserted endangerment, as described in 42 U.S.C. § 6972(a).

13. The Brunner Island facility is located in this judicial district. Therefore, venue in this judicial district is appropriate pursuant to 42 U.S.C. § 6972(a).

PARTIES

14. Defendant Talen Energy Corporation is a corporation chartered in Delaware with its principal executive offices in Allentown, Pennsylvania.

15. Defendant Brunner Island, LLC is a subsidiary of Talen Energy Corporation with its principal executive offices in York Haven, Pennsylvania.

16. Defendants are persons within the meaning of § 502(5) of the Clean Water Act, 33 U.S.C. § 1362(5).

17. Talen Energy and Brunner Island, LLC own and operate Brunner Island, which is regulated pursuant to NPDES Permit No. PA0008281.

18. Plaintiff Sierra Club is the nation's oldest and largest grassroots nonprofit environmental organization, with over 32,000 members in Pennsylvania. Sierra Club's mission is to explore, enjoy, and protect the wild places of the Earth; to practice and promote the responsible use of the Earth's ecosystems and resources; to educate and enlist humanity in the protection and restoration of the quality of the natural and human environment; and to use all lawful means to carry out these objectives.

19. Individual members of Sierra Club live near, and recreate in and around, the Susquehanna River, including in the vicinity of Brunner Island. These individuals'

use and enjoyment of Susquehanna River is harmed by Defendants' unauthorized discharges of pollutants at Brunner Island and the resulting degradation of water quality in the River. Consequently, these members have stopped recreating in the River. Plaintiff's members also reasonably believe that Defendants' past and present handling, storage, treatment, transportation, and/or disposal of CCR at the Brunner Island site may endanger their health, the health of their families and communities, and their environment (including the fish, other aquatic life, and wildlife they observe, consume, or otherwise enjoy). These members have a strong, direct, and immediate interest in ensuring that the water quality and environmental health of the Susquehanna River support full use and appreciation of the River, and that their neighbors on the River are using this shared resource in a manner consistent with state and federal law.

20. The injuries suffered by the respective individual members of Sierra Club are traceable to Defendants' unauthorized discharges from Brunner Island, because the unauthorized discharges add pollution to Susquehanna River, contributing to the degradation of the River's water quality. Plaintiff's members' interests have already been adversely affected by unauthorized discharges from Brunner Island, and they will continue to be negatively impacted by such discharges.

21. Plaintiff's members' injuries are also traceable to contamination that is the result of handling, storage, treatment, transportation, and/or disposal of CCR waste at the Brunner Island site. CCR pollutants enter groundwater and surface water,

and their underlying sediments, from several sources at the Brunner Island site, including Defendants' coal ash basins, landfills, and other conveyances of CCR waste, and other facilities located at the site. CCR waste constituents in Susquehanna River and the sediments underlying those bodies of water are sources of ongoing exposure of pollutants to fish, other aquatic life, and wildlife, as well as to the Plaintiff's members who make use of those waters.

22. Plaintiff's requested declaratory and injunctive relief would mandate that Defendants' both cease unauthorized discharges of pollutants to comply with the CWA, and take all necessary steps to abate the imminent and substantial endangerment to human health and the environment. Plaintiff also seeks the imposition of civil penalties under the CWA to deter future violations. Plaintiff's requested relief will redress Plaintiff's members' injuries. These injuries will not be redressed except by an order from this Court requiring Defendants to take immediate and substantial action.

23. At all relevant times, Plaintiff was and is a "person" as the term is defined by the Clean Water Act, 33 U.S.C. § 1362(5), and by the Resource Conservation and Recovery Act, 42 U.S.C. § 6903(15).

STATUTORY AND REGULATORY FRAMEWORK

Claims Arising Under the Clean Water Act

24. Section 301(a) of the CWA, 33 U.S.C. § 1311(a), prohibits "the discharge of any pollutant by any person" into waters of the United States except in compliance with the terms of a permit, such as a NPDES permit issued by the EPA or an authorized state pursuant to Section 402 of the CWA, U.S.C. § 1342.

25. Section 502(14) of the CWA, 33 U.S.C. § 1362(14), 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, [or] container . . . from which pollutants are or may be discharged." (emphasis added).

26. Section 402(a) of the CWA, 33 U.S.C. § 1342(a), provides that the permit issuing authority may issue a NPDES Permit that authorizes the discharge of any pollutant directly into the waters of the United States, upon the condition that such discharge will meet all applicable requirements of the CWA.

27. The Administrator of EPA authorized DEP, pursuant to Section 402(a)(2) of the Act, 33 U.S.C. § 1342(a)(2), to issue NPDES permits in 1978. 43 Fed. Reg. 18017 (April 27, 1978).

28. Neither EPA nor DEP has commenced or is diligently prosecuting a civil or criminal action to redress the asserted violations as described in 33 U.S.C. § 1365(b)(1)(B).

Claims Arising Under the Clean Streams Law

29. Section 601(c) of the Clean Streams Law, 35 P.S. § 691.601(c), states that "any person having an interest which is or may be adversely affected may commence a civil action on his own behalf to compel compliance with this act or any rule, regulation, order or permit issued pursuant to this act against any other person alleged to be in violation of any provision of this act or any rule, regulation, order or permit issued pursuant to this act."

30. Section 301 of the Clean Streams Law, 35 P.S. § 691.301, states that "[n]o person or municipality shall place or permit to be placed, or discharged or permit to flow, or continue to discharge or permit to flow, into any of the waters of the Commonwealth any industrial wastes, except as hereinafter provided in this act."

31. Section 1 of the Clean Streams Law, 35 P.S. § 691.1, defines "Waters of the Commonwealth" as "any and all rivers, streams, creeks, rivulets, impoundments, ditches, water courses, storm sewers, lakes, dammed water, ponds, springs and all other bodies or channels of conveyance of surface and underground water, or parts thereof, whether natural or artificial, within or on the boundaries of this Commonwealth."

32. Section 307(a) of the Clean Streams Law, 35 P.S. § 691.307(a), further states that "[n]o person or municipality shall discharge or permit the discharge of industrial wastes in any manner, directly or indirectly, into any of the waters of the Commonwealth unless such discharge is authorized by the rules and regulations of the department or such person or municipality has first obtained a permit from the

department." Any such discharge "without a permit or contrary to the terms and conditions of a permit or contrary to the rules and regulations of the department is hereby declared to be a nuisance." 35 P.S. § 691.307(c).

33. Section 401 of the Clean Streams Law, 35 P.S. § 691.401, makes it "unlawful for any person or municipality to put or place into any of the waters of the Commonwealth, or allow or permit to be discharged from property owned or occupied by such person or municipality into any of the waters of the Commonwealth, any substance of any kind or character resulting in pollution." Any such discharge is "declared to be a nuisance." 35 P.S. § 691.401.

Claims Arising Under the Resource Conservation and Recovery Act

34. RCRA is the principal federal statute governing the handling, storage, treatment, transportation, and disposal of solid and hazardous waste. In enacting RCRA, Congress recognized that "disposal of solid waste and hazardous waste in or on the land without careful planning and management can present a danger to human health and the environment." 42 U.S.C. § 6901(b)(2).

35. RCRA defines "solid waste" to mean, inter alia, "any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material." *Id.* § 6903(27).

36. RCRA entitles citizens to bring suit against "any person . . . who has contributed or who is contributing to the past or present handling, storage, treatment,

transportation, or disposal of any solid or hazardous waste which may present an imminent and substantial endangerment to health or the environment." *Id.* § 6972(a)(1)(B).

37. The RCRA citizen suit provision for imminent and substantial endangerment, *id.* § 6972(a), empowers the Court to "restrain" any person referred to in paragraph (1)(B) and to order that person "to take such other action as may be necessary" to abate an imminent and substantial endangerment. The action "shall be brought" in the judicial district in which the alleged endangerment may occur. *Id.* Before commencing the action, the plaintiff must first give notice of its claims to the defendant and to federal and state government officials, and it may bring the action 90 days after notice is given. *Id.* § 6972(b)(2)(A).

FACTUAL BACKGROUND

38. Talen Energy has caused and continues to cause unauthorized, uncontrolled point source discharges to Waters of the United States and Waters of the Commonwealth at the Brunner Island Steam Electric Station ("Brunner Island" or "Plant"), allowing pollutants to flow unpermitted into the Susquehanna River and its tributaries. Toxic pollutants associated with coal ash waste and known to cause harm to human health and the environment are documented in groundwater and seeps at the Plant.

39. Talen Energy owns and operates Brunner Island, a 1,490-megawatt power plant in York County, Pennsylvania. The Plant sits on the west bank of the

Susquehanna River and abuts several of the river's tributaries, including Conewago Creek, Hartman Run, and Black Gut Creek.

40. Brunner Island's coal-burning operations generate over 671,000 tons of coal combustion residuals ("CCR") annually, including fly ash, bottom ash, and flue gas desulfurization gypsum. CCR generated at the Plant is disposed of in onsite basins and landfills, a system which today incorporates multiple closed coal ash basins, one active coal ash basin (Ash Basin 6), and one active coal ash landfill (Disposal Area 8) that was built on top of a former ash basin. Ash Basin 6, which covers approximately 70 acres and holds over 3.5 million tons of coal ash waste, is unlined and has no means of keeping CCR contaminants from leaching into the environment.

41. Upon information and belief, CCR in the Brunner Island coal ash waste units is leaching into groundwater beneath the Plant and into the surrounding environment. Contaminated groundwater also flows directly into surface waters via unpermitted, illegal flows through seeps. Groundwater contamination has been detected beneath Brunner Island in the water table aquifer as well as the underlying bedrock. Widespread occurrences of contaminants associated with CCR, such as arsenic, manganese, iron, and boron, have been documented in groundwater at the Plant and are discharging to surface waters

42. Connections between adjacent surface waters and groundwater underneath the Plant's coal ash waste units are demonstrated by hydrogeological features and principles and through documented seeps. The water table elevations

within and surrounding the coal ash waste units are higher than the base level elevations of the Susquehanna River and its nearby tributaries. Groundwater flows from areas of high head (recharge areas) to areas of lower head (discharge areas). Thus, groundwater flows away from high water table areas at Brunner Island—under the CCR waste units—and toward local surface water discharge areas.

43. Alluvium mapped beneath Brunner Island is consistent with fluvial channel deposits associated with the Susquehanna River and its tributaries. These unconsolidated sands and gravels associated with fluvial deposition have relatively high permeability and contiguously extend from beneath Brunner Island into the current channel of the Susquehanna River. Accordingly, there are direct hydraulic connections between the alluvial sediments beneath Brunner Island and nearby surface water bodies.

44. Assessments of seeps at the Plant confirm these connections between the shallow groundwater system and adjacent surface water bodies. Surface water has been impacted by discharge of contaminants from the groundwater system. Seeps have repeatedly been observed at Brunner Island's retired ash basins, as well as at active Ash Basin 6 and at Disposal Area 8, leaking into the Susquehanna River, Conewago Creek, Hartman Run, and Black Gut. This seepage results in the discharge of CCR contaminants (including arsenic, iron, boron, and aluminum).

45. Groundwater monitoring reports from Talen Energy demonstrate repeat and continuing impacts to groundwater quality at Brunner Island from CCR

contaminants. Exceedances of groundwater protection standards are ongoing, and trends for several pollutants have been increasing or variable in groundwater. In the first three quarters of 2016, at least 15 different parameters exceeded state and federal drinking water quality standards, including for arsenic, beryllium, cadmium, iron, manganese, molybdenum, and lead.

46. Disposal Area 8's exceedances caused a total of 31 violations of drinking water standards for pH, TDS, sulfate, aluminum, arsenic, beryllium, cadmium, iron, lithium, manganese, molybdenum, and nickel.

47. Unlined Ash Basin 6 has caused 19 exceedances of federal and Pennsylvania water quality standards, including pH, TDS, arsenic, iron, lithium, manganese, and molybdenum. These contaminant levels are far above documented background levels near the Plant.

48. As EPA describes, "current scientific literature indicates that steam electric power plant wastewater is *not* a benign waste."[1] EPA concluded that there is "substantial" evidence that CCR pollutants present a threat to human health.[2] Moreover, "[a]fter being released into the environment, pollutants can reside for a

[1] EPA, ENVIRONMENTAL ASSESSMENT FOR THE EFFLUENT LIMITATIONS GUIDELINES AND STANDARDS FOR THE STEAM ELECTRIC POWER GENERATING POINT SOURCE CATEGORY at 3-1 (Sept. 2015) (emphasis added), *available at* https://www.epa.gov/sites/production/files/2015-10/documents/steam-electric-envir_10-20-15.pdf [hereinafter "Environmental Assessment"].
[2] *Id.* at 1-1.

long time in the receiving waters, bioaccumulating and binding with the sediment."[3]

49. Because the groundwater beneath Brunner Island's waste facilities is contaminated and the groundwater discharges into local surface water bodies, discharges from the Plant are adding pollutants into the Susquehanna River and its local tributaries in an uncontrolled and illegal manner.

CLAIMS FOR RELIEF

Count 1: Violations of CWA

50. Plaintiff re-alleges and incorporates the allegations of all the preceding paragraphs of this Complaint, as well as all exhibits, as if fully set forth herein.

51. Susquehanna River is a navigable water as defined in the CWA, 33 U.S.C. § 1362(7).

52. Defendants are discharging and have discharged pollutants, as defined in the CWA, 33 U.S.C. § 1362(6), (12), from Brunner Island's CCR waste units to Susquehanna River. Upon information and belief, these discharges will continue after the date of the filing of this Complaint.

53. Discharges of pollutants from Brunner Island are not authorized by NPDES Permit No. PA0008281, and they are contrary to the limited authorization to discharge contained in that permit.

[3] *Id.* at 3-1.

54. Defendants have violated and are continuing to violate the CWA, 33 U.S.C. § 1311(a). Therefore, under the CWA citizen suit provision § 1365, a civil action may be maintained against Defendants.

55. By committing the acts and omissions alleged above, Defendants are subject to an assessment of civil penalties pursuant to 33 U.S.C. §§ 1319(d) & 1365 and 40 C.F.R. § 19.4.

56. In the letter postmarked February 14, 2018 and attached hereto as Exhibit A, Plaintiff sent Defendants notice of the violations alleged in this claim for relief as required by 33 U.S.C. § 1365(b)(1). The letter described the CWA violations alleged in this Complaint and Sierra Club's intent to sue Defendants, as required by 33 U.S.C. § 1365(b)(1)(A).

57. Unless Defendants desist in their violations of 33 U.S.C. § 1311(a), Plaintiff, its members and their communities will suffer irreparable harm.

58. Plaintiff has no adequate remedy at law, and therefore equitable relief is warranted.

Count 2: Violations of Clean Streams Law

59. Plaintiff re-alleges and incorporates the allegations of all the preceding paragraphs of this complaint, as well as all exhibits, as if fully set forth herein.

60. Susquehanna River is a water of the Commonwealth as defined in the Clean Streams Law, 35 P.S. § 691.1.

61. Defendants are discharging and have discharged industrial wastes, as defined in the Clean Streams Law, 35 P.S. § 691.1, from Brunner Island's CCR waste units to Susquehanna River. Upon information and belief, these discharges will continue after the date of the filing of this Complaint.

62. Discharges of pollutants from Brunner Island are not authorized by NPDES Permit No. PA0008281, and they are contrary to the limited authorization to discharge contained in that permit.

63. Defendants have violated and are continuing to violate the Clean Streams Law, 35 P.S. §§ 691.301, 691.307, and 691.401. Therefore, under the Clean Streams Law citizen suit provision 35 P.S. § 691.601(c), a civil action may be maintained against Defendants.

Count 3: RCRA Imminent and Substantial Endangerment

64. Plaintiff re-alleges and incorporates the allegations of all the preceding paragraphs of this complaint, as well as all exhibits, as if fully set forth herein.

65. CCR is solid waste under RCRA, 42 U.S.C. § 6903(27).

66. Defendants have contributed and are contributing to the handling, storage, treatment, transportation, or disposal of solid waste at the Brunner Island site that may present an imminent and substantial endangerment to human health and the environment. Upon information and belief, this endangerment will persist after the date of the filing of this Complaint. Therefore, under the RCRA citizen suit provision

for imminent and substantial endangerment, 42 U.S.C. § 6972(a)(1)(B), a civil action may be maintained against Defendants.

67. In the letter postmarked February 14, 2018 and attached hereto as Exhibit A, Plaintiff sent Defendants notice of the endangerment alleged in this claim for relief as required by 42 U.S.C. § 6972(b)(2)(A).

68. Unless Defendant eliminates this imminent and substantial endangerment to human health and the environment, Plaintiff, its members, and their communities will suffer irreparable harm.

69. Plaintiff has no adequate remedy at law, and therefore equitable relief is warranted.

PRAYER FOR RELIEF

Wherefore, plaintiff respectfully demands that this Court enter a judgment:

A. Declaring that Defendants' discharges of pollution into Susquehanna River from Brunner Island's CCR waste units are not authorized by NPDES permit PA0008281 and violate the CWA, 33 U.S.C. § 1311(a) and Clean Streams Law, 35 P.S. §§ 691.301, 691.307, and 691.401;

B. Ordering that Defendants take all actions necessary to comply with the CWA and Clean Streams Law, including ceasing all discharges that are not authorized by DEP NPDES permit;

C. Declaring that Defendants' past and present handling, storage, treatment, transportation, or disposal of CCR at the Brunner Island site may present an imminent and substantial endangerment to health or the environment in violation of RCRA, 42 U.S.C. § 6972(a)(1)(B);

D. Ordering that Defendants take all actions necessary to eliminate the endangerment to health and the environment in the vicinity of Brunner Island, including ordering that Defendants determine and implement the most expeditious, cost-effective, and environmentally sound means to eliminate ongoing migration of CCR pollutants into groundwater, surface water, and sediment; and to fully abate the endangerment associated with CCR pollutants that have already migrated into groundwater, surface water, and sediments near the site.

E. Assessing Defendants civil penalties under 33 U.S.C. §§ 1319(d) & 1365 and 40 C.F.R. § 19.4 not to exceed $37,500 per day for each violation of the CWA within the five-year statute of limitations period;

F. Awarding Plaintiff its litigation costs and reasonable attorney fees incurred in prosecuting this action, pursuant to 33 U.S.C. § 1365(d), 42 U.S.C. 6972(e), and 35 P.S. § 691.601(g); and,

G. Ordering such relief as the Court may deem just and proper.

Dated: May 17, 2018

Respectfully submitted,

/s/ Rose K. Monahan
ROSE K. MONAHAN, ESQ.

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SIERRA CLUB

Via Certified Mail - Return Receipt Requested

February 14, 2018

Mr. Ralph Alexander
President and Chief Executive Officer
Talen Energy Corporation
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Mr. Craig Shamory
Manager, Corporate Environmental Policy & Strategy
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Mr. Thomas Hickes
Plant Manager
Brunner Island Steam Electric Station
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RE: Notice of Intent to Sue for Violations of the Clean Water Act, Clean Streams Law, and the Resource Conservation and Recovery Act at Brunner Island Steam Electric Station in York County, Pennsylvania

Dear Sirs:

This letter is to notify Talen Energy, along with the United States Environmental Protection Agency ("EPA") and Pennsylvania Department of Environmental Protection ("DEP"), of the serious and ongoing violations of the Clean Water Act ("CWA"), Pennsylvania Clean Streams Law ("CSL"), and the Resource Conservation and Recovery Act ("RCRA") at the Brunner Island Steam Electric Station ("Brunner Island" or "the Plant"), owned and operated by Talen Energy ("Talen") in York County, Pennsylvania.

In accordance with Section 505 of the CWA, 33 U.S.C. § 1365, and 40 C.F.R. Part 135, and Section 601 of the CSL, 35 P.S. § 391.601, the Sierra Club hereby notifies you that Talen Energy ("Talen") has violated and continues to violate an "effluent standard or limitation" under Section 505(a)(1)(A) & (f) of the CWA, 33 U.S.C. § 1365(a)(1)(A) & (f), by discharging pollutants at Brunner Island without authorization in a National Pollutant Discharge Elimination System ("NPDES") permit and outside the limited authorization to discharge in Brunner Island's

EXHIBIT tabbies A

NPDES Permit No. PA0008281. Furthermore, Talen's uncontrolled, unpermitted discharges of industrial wastes to Waters of the Commonwealth are violating the CSL. If, within 60 days of the postmark of this letter, Talen does not bring these discharges into full compliance with the CWA, the Sierra Club intends to file a citizen suit in federal district court seeking civil penalties for your ongoing violations and an injunction compelling you to comply with the CWA and CSL and halt the spread of contamination into jurisdictional waters.

In accordance with Section 7002(a)(1)(A) of RCRA, 42 U.S.C. § 6972(a)(1)(A), Sierra Club hereby notifies Talen Energy of its intent to file suit for violations of RCRA and the Coal Combustion Residuals Rule ("CCR Rule"), 40 C.F.R. § 257.50 *et seq.*, adopted pursuant to RCRA. After the expiration of 60 days, as provided by 42 U.S.C. § 6972(b)(1), the Sierra Club plans to file suit in U.S. District Court against Talen to enforce the provisions of the CCR Rule and RCRA. Additionally, pursuant to Section 7002(a)(1)(B), 42 U.S.C. § 6972(a)(1)(B), the Sierra Club gives Talen Energy notice of its intent to sue for abatement of an imminent and substantial endangerment to health and the environment in connection with contamination caused by disposal of coal combustion residuals at Brunner Island. If Talen does not adequately abate the endangerment within the 90-day notice period stipulated by 42 U.S.C. § 6972(b)(2), Sierra Club intends to file a citizen suit seeking civil penalties for ongoing violations at Brunner Island and an injunction compelling compliance with RCRA and its regulations.

I. BACKGROUND

Talen Energy has caused and continues to cause unauthorized, uncontrolled point source discharges to Waters of the United States and Waters of the Commonwealth at Brunner Island, allowing pollutants to flow unpermitted into the Susquehanna River and its tributaries. Toxic pollutants associated with coal ash waste and known to cause harm to human health and the environment are documented in groundwater and seeps at the Plant.

Talen Energy owns and operates Brunner Island, a 1,490-megawatt power plant in York County, Pennsylvania. The Plant sits on the west bank of the Susquehanna River and abuts several of the river's tributaries, including Conewago Creek, Hartman Run, and Black Gut Creek.

Brunner Island's coal-burning operations generate over 671,000 tons of coal combustion residuals ("CCR") annually, including fly ash, bottom ash, and flue gas desulfurization gypsum.[1] CCR generated at the Plant is disposed of in onsite basins and landfills, a system which today incorporates multiple closed coal ash basins, one active coal ash basin (Ash Basin 6), and one active coal ash landfill (Disposal Area 8) that was built on top of a former ash basin. Ash Basin 6, which covers approximately 70 acres and holds over 3.5 million tons of coal ash waste,[2] is unlined and has no means of keeping CCR contaminants from leaching into the environment.

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[1] In 2015, Brunner Island produced 389,600 tons of fly ash, 5,200 tons of bottom ash, and 277,000 tons of gypsum. U.S. Energy Information Administration Form 923, Schedule 8A (2015).

[2] HDR Engineering, 2015 ANNUAL U.S. EPA CCR SURFACE IMPOUNDMENT INITIAL ANNUAL INSPECTION REPORT FOR BRUNNER ISLAND ASH BASIN NO. 6 (Dec. 11, 2015), *available at* https://www.talenenergy.com/~/media/talen/files/ccr%20documents/bri/ash%20basin%206/20160118%20brunner%20ab6%202016%20usepa%20ccr%20report%20and%20appendices.pdf?la=en.

Upon information and belief, CCR in the Brunner Island coal ash waste units is leaching into groundwater beneath the Plant and into the surrounding environment. Contaminated groundwater also flows directly into surface waters via unpermitted, illegal flows through seeps. Groundwater contamination has been detected beneath Brunner Island in the water table aquifer as well as the underlying bedrock.[3] Widespread occurrences of contaminants associated with CCR, such as arsenic, manganese, iron, and boron, have been documented in groundwater at the Plant and are discharging to surface waters

Connections between adjacent surface waters and groundwater underneath the Plant's coal ash waste units are evidenced by hydrogeological features and principles and through documented seeps. The water table elevations within and surrounding the coal ash waste units are higher than the base level elevations of the Susquehanna River and its nearby tributaries.[4] Groundwater flows from areas of high head (recharge areas) to areas of lower head (discharge areas). Thus, groundwater flows away from high water table areas at Brunner Island—under the CCR waste units—and toward local surface water discharge areas. Most groundwater discharge to adjacent surface water bodies would be expected to occur through base flow discharge to the stream channels—that is, the discharge of groundwater directly to the stream channel below the water level in the stream—rather than through the small discharge quantities that can be observed at local seeps and springs.

Alluvium mapped beneath Brunner Island is consistent with fluvial channel deposits associated with the Susquehanna River and its tributaries. Unconsolidated sands and gravels associated with fluvial deposition would be expected to have relatively high permeability and would contiguously extend from beneath Brunner Island into the current channel of the Susquehanna River. Thus, evidence shows direct hydraulic connections between the alluvial sediments beneath Brunner Island and nearby surface water bodies.[5]

Assessments of seeps at the Plant confirm these connections between the shallow groundwater system and adjacent surface water bodies.[6] Surface water has been impacted by discharge of contaminants from the groundwater system, as is clearly documented by direct observation and monitoring of seeps for many years. Seeps have repeatedly been observed at Brunner Island's retired ash basins, as well as at active Ash Basin 6 and at Disposal Area 8, leaking into the Susquehanna River, Conewago Creek, Hartman Run, and Black Gut.[7] Seepage

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[3] James K. Holley, PRELIMINARY HYDROGEOLOGIC EVALUATION, BRUNNER ISLAND STEAM ELECTRIC STATION, YORK HAVEN, YORK COUNTY, PENNSYLVANIA (May 17, 2017) [hereinafter "Holley"].

[4] *Id.* at 17-18, App. III; AGES, Inc., WORK PLAN FOR HYDROLOGICAL AND WATER QUALITY INVESTIGATIONS TO DETERMINE THE SOURCE OF SEEPS TO HARTMAN RUN-BLACK GUT STREAM AREA AND FOR EXAMINING ARSENIC IN GROUNDWATER IN SHALLOW BEDROCK AT BRUNNER ISLAND STEAM ELECTRIC STATION (July 22, 2008).

[5] Holley at 13.

[6] *See id.* at 13, App. III.

[7] *See e.g.*, ISH, Inc., REPORT ON THE ASSESSMENT OF ARSENIC IN GROUNDWATER NEAR MONITORING WELLS MW8-5A/MW8-5B AT THE BRUNNER ISLAND STEAM STATION (Dec. 2006); Email from Sean Furjanic to Lee McDonnell regarding PPL Brunner Island Seeps (May 15, 2007); PPL Brunner Island,

areas are illustrative of areas where visible discharge of groundwater to the surface is occurring. Prior seep monitoring has confirmed the discharge of common CCR contaminants into local seeps (including arsenic, iron, boron, and aluminum)[8] and seep monitoring has been conducted at the facility for decades.

Groundwater monitoring reports from Talen Energy demonstrate repeat and continuing impacts to groundwater quality at Brunner Island from CCR contaminants. Exceedances of groundwater protection standards are ongoing, and trends for several pollutants have been increasing or variable in groundwater. In the first three quarters of 2016[9] alone, at least 15 different parameters exceeded state and federal drinking water quality standards, including for arsenic, beryllium, cadmium, iron, manganese, molybdenum, and lead.[10] Disposal Area 8 recorded the most exceedances—a total of 31 violations of drinking water standards for pH, TDS, sulfate, aluminum, arsenic, beryllium, cadmium, iron, lithium, manganese, molybdenum, and nickel.[11] Unlined Ash Basin 6 displayed 19 exceedances of federal and Pennsylvania water quality standards, including pH, TDS, arsenic, iron, lithium, manganese, and molybdenum. These contaminant levels are far above documented background levels near the Plant.[12] It is evident that elevated contaminant concentrations reported from monitoring wells at Brunner Island are related to releases of contaminants from activities at Brunner Island rather than attributable to off-site conditions or natural background concentrations in the groundwater system.[13]

As EPA describes, "current scientific literature indicates that steam electric power plant wastewater is *not* a benign waste."[14] EPA concluded that there is "substantial" evidence that CCR

LLC, "Water Quality Protection Report" (Dec. 2007); PPL Service Corporation, "PPL Brunner Island SES - Stormwater Evaluation Report," (July 27, 2007); AGES, Inc., WORK PLAN FOR HYDROLOGICAL AND WATER QUALITY INVESTIGATIONS TO DETERMINE THE SOURCE OF SEEPS TO HARTMAN RUN-BLACK GUT STREAM AREA AND FOR EXAMINING ARSENIC IN GROUNDWATER IN SHALLOW BEDROCK AT BRUNNER ISLAND STEAM ELECTRIC STATION (July 22, 2008); ISH, Inc., EVALUATION OF ARSENIC CONCENTRATIONS IN GROUNDWATER AT WELL MW7-5 NEAR RETIRED ASH BASIN 7 AFTER IMPLEMENTATION OF ABATEMENT MEASURES (Feb. 2010); DEP, "NPDES Compliance Inspection Report," (May 13, 2013); Email from Martin Mengel to Austin Pardoe regarding Groundwater Seepage—MW-4-9A Area of Basin 4S—Brunner Island (July 2, 2013); HDR Engineering, Inc., 2015 ANNUAL USEPA CCR SURFACE IMPOUNDMENT INITIAL ANNUAL INSPECTION REPORT FOR BRUNNER ISLAND ASH BASIN NO. 6 (Dec. 11, 2015); DEP, NPDES Permit Fact Sheet, Permit No. PA0008281 (Apr. 2017).

[8] Email from Sean Furjanic to Lee McDonnell regarding PPL Brunner Island Seeps (May 15, 2007); DEP, NPDES Permit Fact Sheet, Permit No. PA0008281 (Apr. 2017).

[9] Representing the most recent quarterly groundwater monitoring reports available from DEP.

[10] *See* Talen Energy, Brunner Island Quarterly Groundwater Reports –Quarters 1-3 2016; Holley, Tbl. 1; 40 C.F.R. §§ 141.62 and 141.66; 25 Pa. Code Chapter 250, App. A, Tbl. 2.

[11] *Id.*

[12] *See* Holley.

[13] Holley at 17.

[14] EPA, ENVIRONMENTAL ASSESSMENT FOR THE EFFLUENT LIMITATIONS GUIDELINES AND STANDARDS FOR THE STEAM ELECTRIC POWER GENERATING POINT SOURCE CATEGORY at 3-1 (Sept. 2015) (emphasis added), *available at* https://www.epa.gov/sites/production/files/2015-10/documents/steam-electric-envir_10-20-15.pdf [hereinafter "Environmental Assessment"].

pollutants present a threat to human health.[15] Moreover, "[a]fter being released into the environment, pollutants can reside for a long time in the receiving waters, bioaccumulating and binding with the sediment."[16] The impacts to human health and the environment from CCR pollutants at Brunner Island are described further below in Section III(B) of this letter.

Because the groundwater beneath Brunner Island's waste facilities is contaminated and the groundwater discharges into local surface water bodies, discharges from the Plant are adding pollutants into the Susquehanna River and its local tributaries in an uncontrolled and illegal manner.[17]

II. VIOLATIONS OF THE CLEAN WATER ACT AND THE CLEAN STREAMS LAW

Section 505 of the CWA authorizes any citizen to "commence a civil action on his own behalf against any person . . . who is alleged to be in violation of [] an effluent standard or limitation under this chapter[]." 33 U.S.C. § 1365(a). In Pennsylvania, the CWA is administered through the Clean Streams Law. Section 601(c) of the CSL authorizes "any person having an interest which is or may be adversely affected [to] commence a civil action on his own behalf to compel compliance with this act or any rule, regulation, order or permit issued pursuant to this act against . . . any other person alleged to be in violation of any provision of this act or any rule, regulation, order or permit issued pursuant to this act." 35 P.S. § 391.601(c).

A. Unpermitted Discharges of Polluted Wastewater from Coal Ash Waste Facilities at Brunner Island Violate the Clean Water Act and the Clean Streams Law.

"[T]he discharge of any pollutant by any person [is] unlawful" except as in compliance with the CWA. 33 U.S.C. § 1311(a). Brunner Island has a pollutant discharge permit—NPDES Permit No. PA0008281—which prescribes the exclusive, lawful limits for discharge of pollutants through specified points. However, upon information and belief, pollutants are discharging unpermitted from Brunner Island's coal ash waste units through hydrologically-connected groundwater to jurisdictional surface waters in violation of both the CWA and CSL.

Section 301(a) of the CWA, 33 U.S.C. § 1311(a), prohibits the discharge of pollutants from a point source to Waters of the United States, except in compliance with a NPDES permit. 33 U.S.C. § 1311(a); *see also* 40 C.F.R. § 122.41. 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, [or] container . . . from which pollutants are or may be discharged." 33 U.S.C. § 1362(14) (emphasis added). A discharge of pollutants from a point source into Waters of the United States without a permit is a violation of the CWA. 33 U.S.C. § 1311(a). Likewise, Section 301 of the CSL prohibits the discharge of industrial wastes into Waters of the Commonwealth, unless such discharge is in compliance with both the terms and conditions of a permit issued by the Commonwealth and with the rules, regulations, and orders of the Commonwealth. 35 P.S. § 691.301.

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[15] *Id.* at 1-1.

[16] *Id.* at 3-1.

[17] Holley at 19.

Talen Energy causes and continues to cause harmful pollution to flow out of Brunner Island's CCR waste units and into the Susquehanna River through groundwater discharges and seeps. These discharges are from points other than those authorized in the Plant's NPDES permit and thus have violated, and continue to violate, the CWA and CSL.

Direct hydraulic connections between adjacent surface waters and groundwater underneath Brunner Island's coal ash waste units are demonstrated by hydrogeological features at the site and through observation of seeps and discharges. Contaminated groundwater beneath the Plant is discharging dangerous pollutants to the Susquehanna River and its tributaries in an uncontrolled and unpermitted manner. Leaks or "seeps" form point source discharges to surface waters from groundwater at Brunner Island, conveying pollutants from the Plant's coal ash waste units. The majority of groundwater discharge is evidently unseen and occurs through base flow discharge to the stream channels.

Because there is a direct hydrologic connection between the Plant's coal ash waste units and the Susquehanna River and its tributaries, Talen's ongoing, polluting discharges of contaminants via groundwater are point source discharges that violate the CWA and CSL. The groundwater beneath Brunner Island's coal ash waste units is hydrologically-connected to Waters of the United States—that is, the Susquehanna River and its tributaries. By discharging pollutants to groundwater at the site, Brunner Island is discharging to Waters of the United States via the groundwater, a conduit to Waters of the United States. Discharges from Brunner Island's CCR waste units are subject to the CWA, which prohibits the discharge of pollutants from a point source to Waters of the United States, except as in compliance with a NPDES permit. 33 U.S.C. §§ 1311(a), 1362(4).

When groundwater is a conduit for pollutants, CWA liability attaches to discharges of that groundwater. "[I]t 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." *N. Cal. Riverwatch v. Mercer Fraser Co.*, No. C-04-4620 SC, 2005 U.S. Dist. LEXIS 42997, *7-*8 (N.D. Cal. Sep. 1, 2005).

EPA has repeatedly affirmed that the CWA applies to such hydrologically-connected groundwater discharges. *See, e.g.*, 66 Fed. Reg. 2,960, 3,015 (Jan. 12, 2001) ("EPA is restating that the Agency interprets the Clean Water Act to apply to discharges of pollutants from a point source via ground water that has a direct hydrologic connection to surface water."); 73 Fed. Reg. 70,418, 70,420 (Nov. 20, 2008) (the CWA has jurisdiction over discharges to surface water via groundwater that has a direct hydrologic connection to surface water); 55 Fed. Reg. 47,990, 47,997 (Nov. 16, 1990) (discharges to groundwater are covered where there is a "hydrological connection between the groundwater and a nearby surface water body"); Brief for the United States as Amici Curiae Supporting Plaintiffs-Appellees, *Hawai'i Wildlife Fund v. Cty. of Maui*, No. CIV. 12-00198 SOM, 2015 WL 1608 (D. Haw. Apr. 9, 2015) ("EPA's longstanding position is that a discharge from a point source to jurisdictional surface waters that moves through groundwater with a direct hydrological connection comes under the purview of the CWA's permitting requirements")

The courts agree and have held, definitively, that the CWA covers groundwater that is hydrologically-connected to Waters of the United States. *See, e.g., Dague v. City of Burlington*, 935 F.2d 1343, 1347 & 1355 (2d Cir. 1991) (discharge of pollution into groundwater is subject to regulation under the CWA if the groundwater is "directly hydrologically connected" to waters of the United States), *rev'd in part on other grounds*, 505 U.S. 557 (1992); *Quivira Mining Co. v. U.S. EPA*, 765 F.2d 126, 130 (10th Cir. 1985) (finding CWA coverage where discharges ultimately affected navigable-in-fact streams via underground flows); *Friends of Santa Fe County v. LAC Minerals, Inc.*, 892 F. Supp. 1333, 1358 (D.N.M. 1995) ("[t]he majority of courts have held that groundwaters that are hydrologically connected to surface waters are regulated waters of the United States, and that unpermitted discharges into such groundwaters are prohibited under section 1311"); *Wash. Wilderness Coal. v. Hecla Mining Co.*, 870 F. Supp. 983, 990 (E.D. Wash. 1994) ("since the goal of the CWA is to protect the quality of surface waters, any pollutant which enters such waters, whether directly or through groundwater, is subject to regulation" under the CWA). This includes the U.S. District Court for the Middle District of Pennsylvania, which has noted that groundwater comes within the scope of the CWA if there is a direct hydrological connection to surface waters. *Sun Pipe Line Co. v. Conewago Contractors, Inc.*, 1994 WL 539326, *13 (M.D. Pa. Aug. 22, 1994) (citing *McClellan Ecological Seepage Situation (MESS) v. Weinberger*, 707 F. Supp. 1182, 1196 (E.D. Cal. 1988) (groundwater that is "naturally connected to surface waters that constitute 'navigable waters' under the Act" is covered by the CWA), *vacated on other grounds*, 47 F.3d 325 (9th Cir. 1995)).

A "point source need not be the original source of the pollutant; it need only convey the pollutant to 'navigable waters.'" *S. Fla. Water Mgmt. Dist. v. Miccosukee Tribe of Indians*, 541 U.S. 95, 105 (2004). This includes the unintentional conveyance of pollutants, for example, through overflows, natural-formed ditches, gullies, or fissures in berms. *See Sierra Club v. Abston Constr. Co.*, 620 F.2d 41, 45 (5th Cir. 1980); *Fishel v. Westinghouse Elec. Corp.*, 640 F. Supp. 442, 446-47 (M.D. Pa. 1986).

The CSL, like the CWA, prohibits discharges from a point source into Waters of the Commonwealth if not authorized by a permit. 35 P.S. § 691.301. Pennsylvania defines "Waters of the Commonwealth" as "any and all rivers, streams, creeks, rivulets, impoundments, ditches, water courses, storm sewers, lakes, dammed water, ponds, springs and all other bodies or channels of conveyance of surface and underground water, or parts thereof, whether natural or artificial, within or on the boundaries of this Commonwealth." 35 P.S. § 691.1. Therefore, the Susquehanna River and its tributaries are Waters of the Commonwealth, in addition to being Waters of the United States. Moreover, the groundwater beneath and around Brunner Island itself is Water of the Commonwealth.

Additionally, the CSL prohibits the discharge of substances that cause pollution to surface water or groundwater and declares pollution of groundwater or surface water to be a statutory nuisance. *See* 35 P.S. §§ 691.1, 691.401, 691.601. It is "unlawful for any person or municipality to put or place into any of the waters of the Commonwealth, or allow or permit to be discharged from property owned or occupied by such person or municipality into any of the waters of the Commonwealth, any substance of any kind or character resulting in pollution" and "[a]ny such discharge is [] declared to be a nuisance." 35 P.S. § 691.401.

III. VIOLATIONS OF THE RESOURCE CONSERVATION AND RECOVERY ACT

Citizens are entitled to bring suit under RCRA Section 7002 for violation of "any permit, standard, regulation, condition, requirement, or order [] effective pursuant to [RCRA]." 42 U.S.C. § 6972(a)(1). Citizens may also commence a civil action against "any person . . . who has contributed or who is contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste which may present an imminent and substantial endangerment to health or the environment." 42 U.S.C. § 6972(a)(1)(B).

A. Talen Energy is Open Dumping at Brunner Island in Violation the Requirements of RCRA and the CCR Rule.

Talen Energy is violating the requirements of RCRA and the CCR Rule by failing to address exceedances of federal groundwater protection standards at Ash Basin 6 and Disposal Area 8, active CCR facilities subject to the Rule's requirements.

Under RCRA, any violation of the requirements of the Rule constitutes illegal, open dumping: "Practices failing to satisfy *any of the criteria* in . . . §§ 257.50 through 257.107 constitute open dumping, which is prohibited under section 4005 of the Act." 40 C.F.R. §§ 257.1(a)(2) (emphasis added), 257.2 ("Open dump means a facility for the disposal of solid waste which does not comply with this part.").

EPA's CCR Rule, effective October 19, 2015, establishes a comprehensive set of requirements for CCR disposal under RCRA Subtitle D. Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals From Electric Utilities, 80 Fed. Reg. 21,302 (Apr.17, 2015), *as amended by* Technical Amendments to the Hazardous and Solid Waste Management System, Disposal of Coal Combustion Residuals from Electric Utilities-Correction of the Effective Date, 80 Fed. Reg. 37,988 (July 2, 2015); 40 C.F.R. § 257.50 *et seq.*

Disposal Area 8 is a "CCR landfill" and Ash Basin 6 is a "CCR surface impoundment," both "CCR units" under the CCR Rule.[18] Upon discovering a release from a CCR unit or if levels of contaminants exceeding U.S. EPA Safe Drinking Water Act ("SDWA") maximum contaminant limits ("MCLs")[19] or background levels where there is no MCL, are detected at an

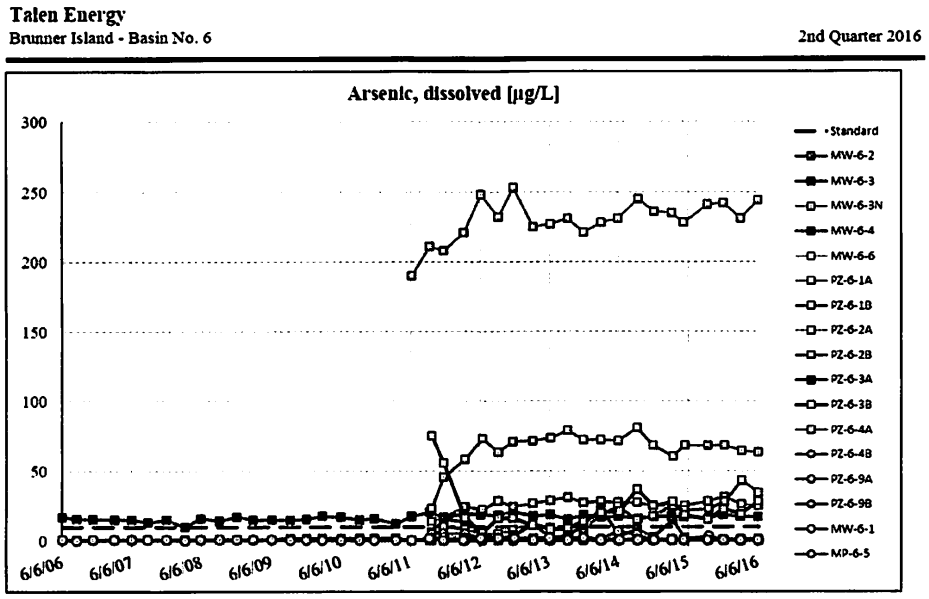
[18] *CCR unit* means any CCR landfill, CCR surface impoundment, or lateral expansion of a CCR unit, or a combination of more than one of these units, based on the context of the paragraph(s) in which it is used. This term includes both new and existing units, unless otherwise specified; *CCR landfill* means an area of land or an excavation that receives CCR and which is not a surface impoundment, an underground injection well, a salt dome formation, a salt bed formation, an underground or surface mine, or a cave. For purposes of this subpart, a CCR landfill also includes sand and gravel pits and quarries that receive CCR, CCR piles, and any practice that does not meet the definition of a beneficial use of CCR; and *CCR surface impoundment* means a natural topographic depression, man-made excavation, or diked area, which is designed to hold an accumulation of CCR and liquids, and the unit treats, stores, or disposes of CCR. 40 C.F.R. § 257.53.

[19] RCRA groundwater contamination from solid waste facilities is generally defined by a set of MCLs found at 40 CFR 257 Appendix I. These MCLs are in some cases different from SDWA MCLs and state groundwater standards. In the CCR Rule, EPA chose to apply the SDWA MCLs, rather than Appendix I MCLs, under §§141.62 and 141.66 for coal ash disposal facilities.

active coal ash waste unit, the owner or operator of a CCR unit must take "immediate" action to remedy the contamination. 40 C.F.R §§ 257.90(d); 257.96(a); App. I to Part 257. Owners or operators must initiate an assessment of corrective measures to prevent further releases, remediate existing releases, and to restore the affected area to original conditions. 40 C.F.R. § 257.96(a). Remedies must be certified by a qualified engineer and be consistent with the standards set out in the rule. 40 C.F.R. § 257.97. An unlined surface impoundment, such as Ash Basin 6, that requires assessment of corrective measures must undergo retrofits or closure. 40 C.F.R. § 257.95(g)(5).

As described above, there are serious, ongoing exceedances of groundwater protection standards at both Ash Basin 6 and Disposal Area 8. Talen's own groundwater monitoring reports acknowledge these exceedances at wells outside of the waste disposal units and exhibit trends of increasing contaminants. Arsenic and cadmium, key coal ash constituents, have been measured at increasing levels above SDWA MCLs and Pennsylvania Statewide Health Standards, at both Ash Basin 6 and Disposal Area 8 for arsenic and at Disposal Area 8 for cadmium.

Figure 1. Arsenic at Ash Basin 6 above 10 μg/L (SDWA MCL & Pa. Statewide Health Standard).[20]



[20] Talen Energy, Brunner Island—Basin No. 6, Trend Plots, 2nd Quarter 2016; *see also* C.F.R. §§ 141.62 and 141.66; 25 Pa. Code Chapter 250, App. A, Tbl. 2.

Figure 2. Arsenic at Disposal Area 8 above 10 µg/L (SDWA MCL & Pa. Statewide Health Standard).[21]

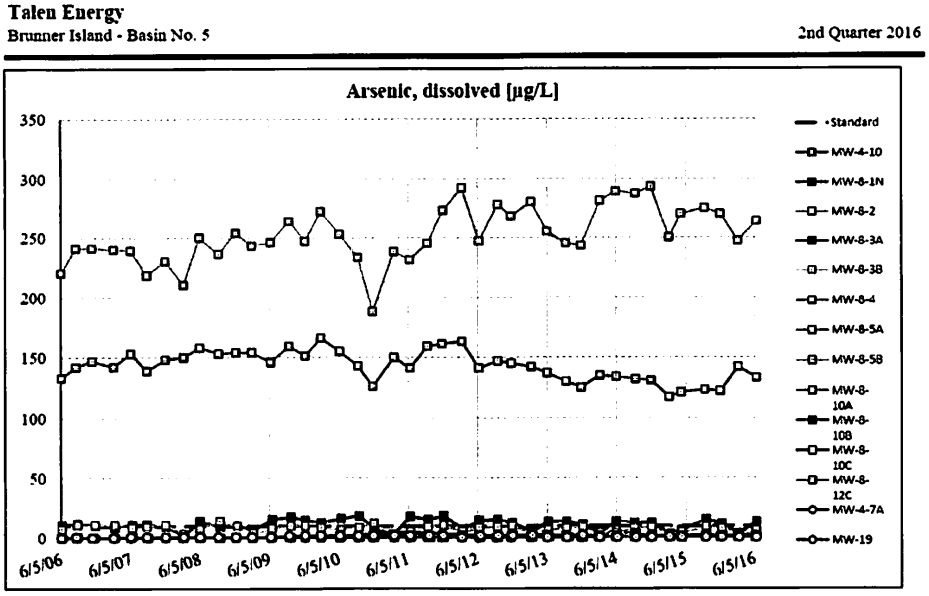
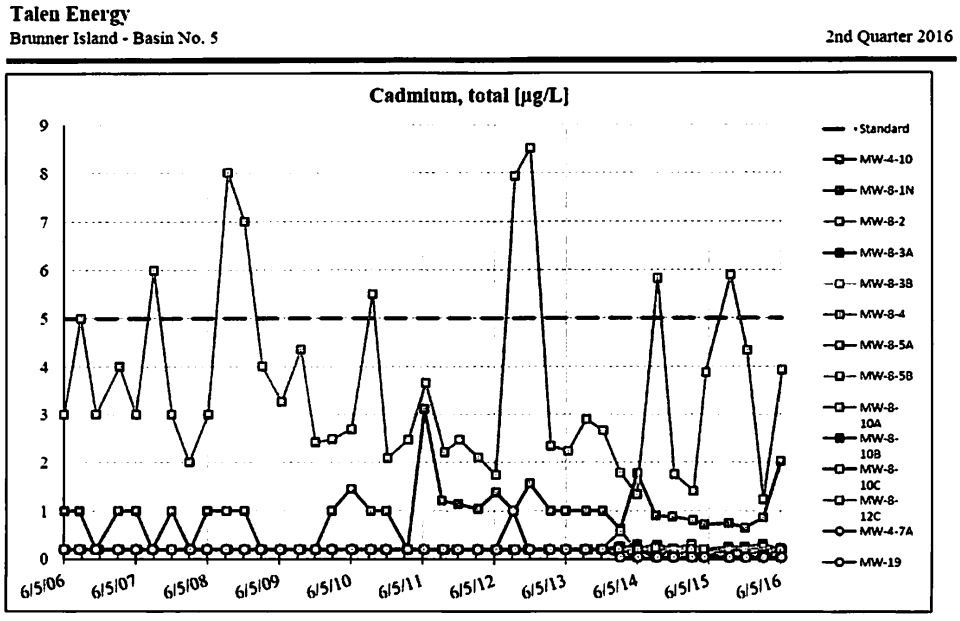


Figure 3. Cadmium at Disposal Area 8 above 5 µg/L (SDWA MCL & Pa. Statewide Health Standard).[22]



[21] Talen Energy, Brunner Island—Basin No. 5, Trend Plots, 2nd Quarter 2016; *see also* C.F.R. §§ 141.62 and 141.66; 25 Pa. Code Chapter 250, App. A, Tbl. 2.

[22] *Id.*

Pennsylvania law also requires Talen Energy to address Brunner Island's groundwater contamination. Specifically, state regulations require that Talen (or its predecessor), as the owner of a residual waste disposal impoundment, prepare and submit a groundwater assessment plan within 60 days of data indicating groundwater degradation at any monitoring point. 25 Pa. Code § 289.266(a). "Groundwater degradation" is defined as "[a] measurable increase in the concentration of one or more contaminants in groundwater above background concentrations for those contaminants," 25 Pa. Code § 287.1. Talen is required to undertake abatement when monitoring shows the presence of a statewide health standard at distances defined in the regulations. 25 Pa. Code § 289.267. According to publicly available files, DEP has no record of recent assessments or abatement plans submitted in the last five years by Talen or its predecessors-in-interest. *See also* 25 Pa. Code § 289.251(b) ("A residual waste disposal impoundment shall be operated to prevent and control water pollution. An operator shall operate and maintain necessary water treatment facilities until water pollution from the facility has been permanently abated").

B. Ongoing Pollution from Brunner Island's Coal Waste Facilities Presents an Imminent and Substantial Endangerment to the Environment and Human Health.

Contamination in groundwater and surface waters and their underlying sediments from Talen's handling, storage, treatment, and disposal of CCR wastes poses an imminent and substantial endangerment to the environment and public health. 42 U.S.C. § 6972 (a)(1)(B). CCR waste constituents in the Susquehanna River, nearby streams, and the sediments of those bodies of water are sources of ongoing exposure to fish, other aquatic life, and wildlife, as well as to the people who use those waters. Exposure may occur through physical contact with contaminated waters or sediments, or when CCR constituents enter the food chain.

Citizens are entitled to bring suit under Section 7002(a)(1)(B) of RCRA against "any person . . . who has contributed or who is contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste which may present an imminent and substantial endangerment to health or the environment." 42 U.S.C. § 6972(a)(1)(B). Thus, where an entity "may" present an "imminent and substantial endangerment" to "health or the environment" as a result of the disposal of any "solid or hazardous waste," such a claim is permitted.

Toxic CCR pollutants have been documented in seeps and groundwater at the Plant for years. Talen's own groundwater monitoring data show significant spreading of pollutants associated with CCR waste in the vicinity of Brunner Island. The contamination documented at Brunner Island is the result of the handling, storage, treatment, and disposal of CCR originating at Plant. This contamination may present an imminent and substantial endangerment to health and the environment for which Talen is liable under this provision.

As described above, CCR pollutants found at elevated levels at Brunner Island include arsenic, cadmium, aluminum, boron, iron, lead, and nickel, all of which threaten human and environmental health:

- ***Arsenic*** causes cancer, including lung cancer, skin tumors, and internal organ tumors,

and is connected to heart problems, nervous system disorders, and stomach pain.[23] EPA estimates that nearly 140,000 people each year experience increased cancer risk due to arsenic in fish from coal-fired power plants.[24] Arsenic contamination causes liver poisoning, developmental abnormalities, behavioral impairments, metabolic failure, reduced growth, and appetite loss in fish and is a potent endocrine disruptor at low, environmentally relevant levels.[25]

- ***Cadmium*** is bio-accumulating and can cause kidney damage, fragile bones, vomiting and diarrhea, death, and likely cancer. Fish exposed to excess cadmium become deformed.[26]

- ***Aluminum*** contamination can lead to the inability of fish to maintain fluid balance and is associated with damage to amphibian eggs and larvae. Human exposure to high concentrations has been linked to Alzheimer's disease.[27]

- ***Boron*** is rare in unpolluted water and can be toxic to wildlife in even small concentrations.[28] For people, ingestion of large amounts of boron can result in damage to the stomach, intestines, liver, kidney, and the brain.[29] Some studies suggest that boron exposure in humans can cause nausea, vomiting, and diarrhea.[30]

- ***Iron*** contamination can reduce growth, increase susceptibility to injury and disease, and harm eggs in fish. Human exposure to high concentrations of iron can cause metabolic changes and damage to the pancreas, liver, spleen, and heart.[31]

- ***Lead*** is a highly toxic poison that can cause serious damage to the brain, kidneys, nervous system, and red blood cells, particularly in children.[32] Once lead enters the river ecosystem, it can enter the food chain and bio-accumulate, leading to serious harm to wildlife and placing children in harm's way.[33]

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[23] *See* EPA, STEAM ELECTRIC POWER GENERATING POINT SOURCE CATEGORY: FINAL DETAILED STUDY REPORT at 6-5, 20-22 (2009), *available at* http://water.epa.gov/scitech/wastetech/guide/steam-electric/upload/Steam-Electric_Detailed-Study-Report_2009.pdf [hereinafter "Detailed Study Report"].

[24] EPA, BENEFIT AND COST ANALYSIS FOR THE PROPOSED EFFLUENT LIMITATIONS GUIDELINES AND STANDARDS FOR THE STEAM ELECTRIC POWER GENERATING POINT SOURCE CATEGORY at 3-6 (Apr. 2013), Docket No. EPA-HQ-OW-2009-0819-2238.

[25] Environmental Assessment at 3-3.

[26] *Id.* at 3-7; Agency for Toxic Substances and Disease Registry, Public Health Statement for Cadmium 5 (2012).

[27] Environmental Assessment at 3-3.

[28] *Id.* at 3-8, 3-9.

[29] Agency for Toxic Substances and Disease Registry, ToxFAQs for Boron (2010), *available at* http://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=452&tid=80.

[30] *Id.*

[31] Environmental Assessment at 3-4.

[32] *Id.* at 3-8

[33] *Id.*

- *Nickel* can inhibit the growth of microorganisms and algae at low levels and can damage the lungs, immune system, liver, and kidneys of fish and aquatic invertebrates. Human exposure to high concentrations of nickel can cause gastrointestinal and kidney damage.[34]

Because contamination at Brunner Island exceeds groundwater protection standards and levels at which scientific studies show pollutants will cause harm to organisms, it may present an imminent and substantial endangerment to human health and the environment in violation of RCRA.

IV. PERSONS RESPONSIBLE FOR VIOLATIONS

Brunner Island is owned and operated by Talen Energy, a corporation with its headquarters in Allentown, Pennsylvania. Talen Energy is responsible for all violations at Brunner Island described herein.

V. PERSONS GIVING NOTICE

Sierra Club, founded in 1892, is the nation's oldest and largest grassroots nonprofit environmental organization, with over 32,000 members in Pennsylvania. Sierra Club's purposes are to explore, enjoy, and protect the wild places of the Earth; to practice and promote the responsible use of the Earth's ecosystems and resources; to educate and enlist humanity in the protection and restoration of the quality of the natural and human environment; and to use all lawful means to carry out these objectives.

The name, address, and telephone number of the person giving notice pursuant to this notice letter are as follows:

Zachary M. Fabish
Senior Attorney
The Sierra Club
50 F Street, NW - 8th Floor
Washington, DC 20001
(202) 675-7917

VI. CONCLUSION

The Sierra Club believes that a negotiated settlement of these violations, codified through a court-approved consent decree, would be preferable to protracted litigation. We would be happy to meet with Talen Energy or its representatives to attempt to resolve these issues within the 60- and 90-day notice periods. However, if unable to reach an enforceable settlement agreement, Sierra Club is prepared to file suit in the U.S. District Court for the Middle District of Pennsylvania pursuant to Section 505(a) of the CWA, 33 U.S.C. § 1365(a)(1), Section 601 of the CSL, 35 P.S. § 391.601, and Section 7002(a)(1)(A) of RCRA, 42 U.S.C. §

[34] Environmental Assessment at 3-4.

6972(a)(1)(A), after 60 days from the date of this letter. Sierra Club is prepared to file suit in federal court pursuant to Section 7002(a)(1)(B) of RCRA, 42 U.S.C. § 6972(a)(1)(B), after 90 days from the date of this letter.

If Talen Energy has taken steps to abate the underlying cause of the violations described above, or if Talen believes that anything in this letter is inaccurate, please let us know. If Talen does not advise us of any remedial steps or inaccuracies during the notice period, Sierra Club will assume that no such steps have been taken, that the information in this letter is accurate, and that the violations will continue.

Thank you for your prompt attention to this manner.

Sincerely,

Zachary M. Fabish
Senior Attorney
The Sierra Club
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Washington, DC 20001
(202) 675-7917
zachary.fabish@sierraclub.org

Cc:

Scott Pruitt, Administrator
U.S. Environmental Protection Agency
Mail Code 1101A
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SIERRA CLUB

Via Certified Mail - Return Receipt Requested

February 14, 2018

Mr. Ralph Alexander
President and Chief Executive Officer
Talen Energy Corporation
835 Hamilton Street, Suite 150
Allentown, PA 18101

Mr. Craig Shamory
Manager, Corporate Environmental Policy & Strategy
Brunner Island LLC
835 Hamilton Street, Suite 150
Allentown, PA 18101

Mr. Thomas Hickes
Plant Manager
Brunner Island Steam Electric Station
1400 Wago Road –Brunner Island
York Haven, PA 17370-00221

RE: Notice of Intent to Sue for Violations of the Clean Water Act, Clean Streams Law, and the Resource Conservation and Recovery Act at Brunner Island Steam Electric Station in York County, Pennsylvania

Dear Sirs:

This letter is to notify Talen Energy, along with the United States Environmental Protection Agency ("EPA") and Pennsylvania Department of Environmental Protection ("DEP"), of the serious and ongoing violations of the Clean Water Act ("CWA"), Pennsylvania Clean Streams Law ("CSL"), and the Resource Conservation and Recovery Act ("RCRA") at the Brunner Island Steam Electric Station ("Brunner Island" or "the Plant"), owned and operated by Talen Energy ("Talen") in York County, Pennsylvania.

In accordance with Section 505 of the CWA, 33 U.S.C. § 1365, and 40 C.F.R. Part 135, and Section 601 of the CSL, 35 P.S. § 391.601, the Sierra Club hereby notifies you that Talen Energy ("Talen") has violated and continues to violate an "effluent standard or limitation" under Section 505(a)(1)(A) & (f) of the CWA, 33 U.S.C. § 1365(a)(1)(A) & (f), by discharging pollutants at Brunner Island without authorization in a National Pollutant Discharge Elimination System ("NPDES") permit and outside the limited authorization to discharge in Brunner Island's

EXHIBIT tabbies A

NPDES Permit No. PA0008281. Furthermore, Talen's uncontrolled, unpermitted discharges of industrial wastes to Waters of the Commonwealth are violating the CSL. If, within 60 days of the postmark of this letter, Talen does not bring these discharges into full compliance with the CWA, the Sierra Club intends to file a citizen suit in federal district court seeking civil penalties for your ongoing violations and an injunction compelling you to comply with the CWA and CSL and halt the spread of contamination into jurisdictional waters.

In accordance with Section 7002(a)(1)(A) of RCRA, 42 U.S.C. § 6972(a)(1)(A), Sierra Club hereby notifies Talen Energy of its intent to file suit for violations of RCRA and the Coal Combustion Residuals Rule ("CCR Rule"), 40 C.F.R. § 257.50 *et seq.*, adopted pursuant to RCRA. After the expiration of 60 days, as provided by 42 U.S.C. § 6972(b)(1), the Sierra Club plans to file suit in U.S. District Court against Talen to enforce the provisions of the CCR Rule and RCRA. Additionally, pursuant to Section 7002(a)(1)(B), 42 U.S.C. § 6972(a)(1)(B), the Sierra Club gives Talen Energy notice of its intent to sue for abatement of an imminent and substantial endangerment to health and the environment in connection with contamination caused by disposal of coal combustion residuals at Brunner Island. If Talen does not adequately abate the endangerment within the 90-day notice period stipulated by 42 U.S.C. § 6972(b)(2), Sierra Club intends to file a citizen suit seeking civil penalties for ongoing violations at Brunner Island and an injunction compelling compliance with RCRA and its regulations.

I. BACKGROUND

Talen Energy has caused and continues to cause unauthorized, uncontrolled point source discharges to Waters of the United States and Waters of the Commonwealth at Brunner Island, allowing pollutants to flow unpermitted into the Susquehanna River and its tributaries. Toxic pollutants associated with coal ash waste and known to cause harm to human health and the environment are documented in groundwater and seeps at the Plant.

Talen Energy owns and operates Brunner Island, a 1,490-megawatt power plant in York County, Pennsylvania. The Plant sits on the west bank of the Susquehanna River and abuts several of the river's tributaries, including Conewago Creek, Hartman Run, and Black Gut Creek.

Brunner Island's coal-burning operations generate over 671,000 tons of coal combustion residuals ("CCR") annually, including fly ash, bottom ash, and flue gas desulfurization gypsum.[1] CCR generated at the Plant is disposed of in onsite basins and landfills, a system which today incorporates multiple closed coal ash basins, one active coal ash basin (Ash Basin 6), and one active coal ash landfill (Disposal Area 8) that was built on top of a former ash basin. Ash Basin 6, which covers approximately 70 acres and holds over 3.5 million tons of coal ash waste,[2] is unlined and has no means of keeping CCR contaminants from leaching into the environment.

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[1] In 2015, Brunner Island produced 389,600 tons of fly ash, 5,200 tons of bottom ash, and 277,000 tons of gypsum. U.S. Energy Information Administration Form 923, Schedule 8A (2015).

[2] HDR Engineering, 2015 ANNUAL U.S. EPA CCR SURFACE IMPOUNDMENT INITIAL ANNUAL INSPECTION REPORT FOR BRUNNER ISLAND ASH BASIN NO. 6 (Dec. 11, 2015), *available at* https://www.talenenergy.com/~/media/talen/files/ccr%20documents/bri/ash%20basin%206/20160118%20brunner%20ab6%202016%20usepa%20ccr%20report%20and%20appendices.pdf?la=en.

Upon information and belief, CCR in the Brunner Island coal ash waste units is leaching into groundwater beneath the Plant and into the surrounding environment. Contaminated groundwater also flows directly into surface waters via unpermitted, illegal flows through seeps. Groundwater contamination has been detected beneath Brunner Island in the water table aquifer as well as the underlying bedrock.[3] Widespread occurrences of contaminants associated with CCR, such as arsenic, manganese, iron, and boron, have been documented in groundwater at the Plant and are discharging to surface waters

Connections between adjacent surface waters and groundwater underneath the Plant's coal ash waste units are evidenced by hydrogeological features and principles and through documented seeps. The water table elevations within and surrounding the coal ash waste units are higher than the base level elevations of the Susquehanna River and its nearby tributaries.[4] Groundwater flows from areas of high head (recharge areas) to areas of lower head (discharge areas). Thus, groundwater flows away from high water table areas at Brunner Island—under the CCR waste units—and toward local surface water discharge areas. Most groundwater discharge to adjacent surface water bodies would be expected to occur through base flow discharge to the stream channels—that is, the discharge of groundwater directly to the stream channel below the water level in the stream—rather than through the small discharge quantities that can be observed at local seeps and springs.

Alluvium mapped beneath Brunner Island is consistent with fluvial channel deposits associated with the Susquehanna River and its tributaries. Unconsolidated sands and gravels associated with fluvial deposition would be expected to have relatively high permeability and would contiguously extend from beneath Brunner Island into the current channel of the Susquehanna River. Thus, evidence shows direct hydraulic connections between the alluvial sediments beneath Brunner Island and nearby surface water bodies.[5]

Assessments of seeps at the Plant confirm these connections between the shallow groundwater system and adjacent surface water bodies.[6] Surface water has been impacted by discharge of contaminants from the groundwater system, as is clearly documented by direct observation and monitoring of seeps for many years. Seeps have repeatedly been observed at Brunner Island's retired ash basins, as well as at active Ash Basin 6 and at Disposal Area 8, leaking into the Susquehanna River, Conewago Creek, Hartman Run, and Black Gut.[7] Seepage

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[3] James K. Holley, PRELIMINARY HYDROGEOLOGIC EVALUATION, BRUNNER ISLAND STEAM ELECTRIC STATION, YORK HAVEN, YORK COUNTY, PENNSYLVANIA (May 17, 2017) [hereinafter "Holley"].

[4] *Id.* at 17-18, App. III; AGES, Inc., WORK PLAN FOR HYDROLOGICAL AND WATER QUALITY INVESTIGATIONS TO DETERMINE THE SOURCE OF SEEPS TO HARTMAN RUN-BLACK GUT STREAM AREA AND FOR EXAMINING ARSENIC IN GROUNDWATER IN SHALLOW BEDROCK AT BRUNNER ISLAND STEAM ELECTRIC STATION (July 22, 2008).

[5] Holley at 13.

[6] *See id.* at 13, App. III.

[7] *See e.g.*, ISH, Inc., REPORT ON THE ASSESSMENT OF ARSENIC IN GROUNDWATER NEAR MONITORING WELLS MW8-5A/MW8-5B AT THE BRUNNER ISLAND STEAM STATION (Dec. 2006); Email from Sean Furjanic to Lee McDonnell regarding PPL Brunner Island Seeps (May 15, 2007); PPL Brunner Island,

areas are illustrative of areas where visible discharge of groundwater to the surface is occurring. Prior seep monitoring has confirmed the discharge of common CCR contaminants into local seeps (including arsenic, iron, boron, and aluminum)[8] and seep monitoring has been conducted at the facility for decades.

Groundwater monitoring reports from Talen Energy demonstrate repeat and continuing impacts to groundwater quality at Brunner Island from CCR contaminants. Exceedances of groundwater protection standards are ongoing, and trends for several pollutants have been increasing or variable in groundwater. In the first three quarters of 2016[9] alone, at least 15 different parameters exceeded state and federal drinking water quality standards, including for arsenic, beryllium, cadmium, iron, manganese, molybdenum, and lead.[10] Disposal Area 8 recorded the most exceedances—a total of 31 violations of drinking water standards for pH, TDS, sulfate, aluminum, arsenic, beryllium, cadmium, iron, lithium, manganese, molybdenum, and nickel.[11] Unlined Ash Basin 6 displayed 19 exceedances of federal and Pennsylvania water quality standards, including pH, TDS, arsenic, iron, lithium, manganese, and molybdenum. These contaminant levels are far above documented background levels near the Plant.[12] It is evident that elevated contaminant concentrations reported from monitoring wells at Brunner Island are related to releases of contaminants from activities at Brunner Island rather than attributable to off-site conditions or natural background concentrations in the groundwater system.[13]

As EPA describes, "current scientific literature indicates that steam electric power plant wastewater is *not* a benign waste."[14] EPA concluded that there is "substantial" evidence that CCR

LLC, "Water Quality Protection Report" (Dec. 2007); PPL Service Corporation, "PPL Brunner Island SES - Stormwater Evaluation Report," (July 27, 2007); AGES, Inc., WORK PLAN FOR HYDROLOGICAL AND WATER QUALITY INVESTIGATIONS TO DETERMINE THE SOURCE OF SEEPS TO HARTMAN RUN-BLACK GUT STREAM AREA AND FOR EXAMINING ARSENIC IN GROUNDWATER IN SHALLOW BEDROCK AT BRUNNER ISLAND STEAM ELECTRIC STATION (July 22, 2008); ISH, Inc., EVALUATION OF ARSENIC CONCENTRATIONS IN GROUNDWATER AT WELL MW7-5 NEAR RETIRED ASH BASIN 7 AFTER IMPLEMENTATION OF ABATEMENT MEASURES (Feb. 2010); DEP, "NPDES Compliance Inspection Report," (May 13, 2013); Email from Martin Mengel to Austin Pardoe regarding Groundwater Seepage—MW-4-9A Area of Basin 4S—Brunner Island (July 2, 2013); HDR Engineering, Inc., 2015 ANNUAL USEPA CCR SURFACE IMPOUNDMENT INITIAL ANNUAL INSPECTION REPORT FOR BRUNNER ISLAND ASH BASIN NO. 6 (Dec. 11, 2015); DEP, NPDES Permit Fact Sheet, Permit No. PA0008281 (Apr. 2017).

[8] Email from Sean Furjanic to Lee McDonnell regarding PPL Brunner Island Seeps (May 15, 2007); DEP, NPDES Permit Fact Sheet, Permit No. PA0008281 (Apr. 2017).

[9] Representing the most recent quarterly groundwater monitoring reports available from DEP.

[10] *See* Talen Energy, Brunner Island Quarterly Groundwater Reports –Quarters 1-3 2016; Holley, Tbl. 1; 40 C.F.R. §§ 141.62 and 141.66; 25 Pa. Code Chapter 250, App. A, Tbl. 2.

[11] *Id.*

[12] *See* Holley.

[13] Holley at 17.

[14] EPA, ENVIRONMENTAL ASSESSMENT FOR THE EFFLUENT LIMITATIONS GUIDELINES AND STANDARDS FOR THE STEAM ELECTRIC POWER GENERATING POINT SOURCE CATEGORY at 3-1 (Sept. 2015) (emphasis added), *available at* https://www.epa.gov/sites/production/files/2015-10/documents/steam-electric-envir_10-20-15.pdf [hereinafter "Environmental Assessment"].

pollutants present a threat to human health.[15] Moreover, "[a]fter being released into the environment, pollutants can reside for a long time in the receiving waters, bioaccumulating and binding with the sediment."[16] The impacts to human health and the environment from CCR pollutants at Brunner Island are described further below in Section III(B) of this letter.

Because the groundwater beneath Brunner Island's waste facilities is contaminated and the groundwater discharges into local surface water bodies, discharges from the Plant are adding pollutants into the Susquehanna River and its local tributaries in an uncontrolled and illegal manner.[17]

II. VIOLATIONS OF THE CLEAN WATER ACT AND THE CLEAN STREAMS LAW

Section 505 of the CWA authorizes any citizen to "commence a civil action on his own behalf against any person . . . who is alleged to be in violation of [] an effluent standard or limitation under this chapter[]." 33 U.S.C. § 1365(a). In Pennsylvania, the CWA is administered through the Clean Streams Law. Section 601(c) of the CSL authorizes "any person having an interest which is or may be adversely affected [to] commence a civil action on his own behalf to compel compliance with this act or any rule, regulation, order or permit issued pursuant to this act against . . . any other person alleged to be in violation of any provision of this act or any rule, regulation, order or permit issued pursuant to this act." 35 P.S. § 391.601(c).

A. Unpermitted Discharges of Polluted Wastewater from Coal Ash Waste Facilities at Brunner Island Violate the Clean Water Act and the Clean Streams Law.

"[T]he discharge of any pollutant by any person [is] unlawful" except as in compliance with the CWA. 33 U.S.C. § 1311(a). Brunner Island has a pollutant discharge permit—NPDES Permit No. PA0008281—which prescribes the exclusive, lawful limits for discharge of pollutants through specified points. However, upon information and belief, pollutants are discharging unpermitted from Brunner Island's coal ash waste units through hydrologically-connected groundwater to jurisdictional surface waters in violation of both the CWA and CSL.

Section 301(a) of the CWA, 33 U.S.C. § 1311(a), prohibits the discharge of pollutants from a point source to Waters of the United States, except in compliance with a NPDES permit. 33 U.S.C. § 1311(a); *see also* 40 C.F.R. § 122.41. 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, [or] container . . . from which pollutants are or may be discharged." 33 U.S.C. § 1362(14) (emphasis added). A discharge of pollutants from a point source into Waters of the United States without a permit is a violation of the CWA. 33 U.S.C. § 1311(a). Likewise, Section 301 of the CSL prohibits the discharge of industrial wastes into Waters of the Commonwealth, unless such discharge is in compliance with both the terms and conditions of a permit issued by the Commonwealth and with the rules, regulations, and orders of the Commonwealth. 35 P.S. § 691.301.

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[15] *Id.* at 1-1.

[16] *Id.* at 3-1.

[17] Holley at 19.

Talen Energy causes and continues to cause harmful pollution to flow out of Brunner Island's CCR waste units and into the Susquehanna River through groundwater discharges and seeps. These discharges are from points other than those authorized in the Plant's NPDES permit and thus have violated, and continue to violate, the CWA and CSL.

Direct hydraulic connections between adjacent surface waters and groundwater underneath Brunner Island's coal ash waste units are demonstrated by hydrogeological features at the site and through observation of seeps and discharges. Contaminated groundwater beneath the Plant is discharging dangerous pollutants to the Susquehanna River and its tributaries in an uncontrolled and unpermitted manner. Leaks or "seeps" form point source discharges to surface waters from groundwater at Brunner Island, conveying pollutants from the Plant's coal ash waste units. The majority of groundwater discharge is evidently unseen and occurs through base flow discharge to the stream channels.

Because there is a direct hydrologic connection between the Plant's coal ash waste units and the Susquehanna River and its tributaries, Talen's ongoing, polluting discharges of contaminants via groundwater are point source discharges that violate the CWA and CSL. The groundwater beneath Brunner Island's coal ash waste units is hydrologically-connected to Waters of the United States—that is, the Susquehanna River and its tributaries. By discharging pollutants to groundwater at the site, Brunner Island is discharging to Waters of the United States via the groundwater, a conduit to Waters of the United States. Discharges from Brunner Island's CCR waste units are subject to the CWA, which prohibits the discharge of pollutants from a point source to Waters of the United States, except as in compliance with a NPDES permit. 33 U.S.C. §§ 1311(a), 1362(4).

When groundwater is a conduit for pollutants, CWA liability attaches to discharges of that groundwater. "[I]t 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." *N. Cal. Riverwatch v. Mercer Fraser Co.*, No. C-04-4620 SC, 2005 U.S. Dist. LEXIS 42997, *7-*8 (N.D. Cal. Sep. 1, 2005).

EPA has repeatedly affirmed that the CWA applies to such hydrologically-connected groundwater discharges. *See, e.g.*, 66 Fed. Reg. 2,960, 3,015 (Jan. 12, 2001) ("EPA is restating that the Agency interprets the Clean Water Act to apply to discharges of pollutants from a point source via ground water that has a direct hydrologic connection to surface water."); 73 Fed. Reg. 70,418, 70,420 (Nov. 20, 2008) (the CWA has jurisdiction over discharges to surface water via groundwater that has a direct hydrologic connection to surface water); 55 Fed. Reg. 47,990, 47,997 (Nov. 16, 1990) (discharges to groundwater are covered where there is a "hydrological connection between the groundwater and a nearby surface water body"); Brief for the United States as Amici Curiae Supporting Plaintiffs-Appellees, *Hawai'i Wildlife Fund v. Cty. of Maui*, No. CIV. 12-00198 SOM, 2015 WL 1608 (D. Haw. Apr. 9, 2015) ("EPA's longstanding position is that a discharge from a point source to jurisdictional surface waters that moves through groundwater with a direct hydrological connection comes under the purview of the CWA's permitting requirements")

The courts agree and have held, definitively, that the CWA covers groundwater that is hydrologically-connected to Waters of the United States. *See, e.g., Dague v. City of Burlington*, 935 F.2d 1343, 1347 & 1355 (2d Cir. 1991) (discharge of pollution into groundwater is subject to regulation under the CWA if the groundwater is "directly hydrologically connected" to waters of the United States), *rev'd in part on other grounds*, 505 U.S. 557 (1992); *Quivira Mining Co. v. U.S. EPA*, 765 F.2d 126, 130 (10th Cir. 1985) (finding CWA coverage where discharges ultimately affected navigable-in-fact streams via underground flows); *Friends of Santa Fe County v. LAC Minerals, Inc.*, 892 F. Supp. 1333, 1358 (D.N.M. 1995) ("[t]he majority of courts have held that groundwaters that are hydrologically connected to surface waters are regulated waters of the United States, and that unpermitted discharges into such groundwaters are prohibited under section 1311"); *Wash. Wilderness Coal. v. Hecla Mining Co.*, 870 F. Supp. 983, 990 (E.D. Wash. 1994) ("since the goal of the CWA is to protect the quality of surface waters, any pollutant which enters such waters, whether directly or through groundwater, is subject to regulation" under the CWA). This includes the U.S. District Court for the Middle District of Pennsylvania, which has noted that groundwater comes within the scope of the CWA if there is a direct hydrological connection to surface waters. *Sun Pipe Line Co. v. Conewago Contractors, Inc.*, 1994 WL 539326, *13 (M.D. Pa. Aug. 22, 1994) (citing *McClellan Ecological Seepage Situation (MESS) v. Weinberger*, 707 F. Supp. 1182, 1196 (E.D. Cal. 1988) (groundwater that is "naturally connected to surface waters that constitute 'navigable waters' under the Act" is covered by the CWA), *vacated on other grounds*, 47 F.3d 325 (9th Cir. 1995)).

A "point source need not be the original source of the pollutant; it need only convey the pollutant to 'navigable waters.'" *S. Fla. Water Mgmt. Dist. v. Miccosukee Tribe of Indians*, 541 U.S. 95, 105 (2004). This includes the unintentional conveyance of pollutants, for example, through overflows, natural-formed ditches, gullies, or fissures in berms. *See Sierra Club v. Abston Constr. Co.*, 620 F.2d 41, 45 (5th Cir. 1980); *Fishel v. Westinghouse Elec. Corp.*, 640 F. Supp. 442, 446-47 (M.D. Pa. 1986).

The CSL, like the CWA, prohibits discharges from a point source into Waters of the Commonwealth if not authorized by a permit. 35 P.S. § 691.301. Pennsylvania defines "Waters of the Commonwealth" as "any and all rivers, streams, creeks, rivulets, impoundments, ditches, water courses, storm sewers, lakes, dammed water, ponds, springs and all other bodies or channels of conveyance of surface and underground water, or parts thereof, whether natural or artificial, within or on the boundaries of this Commonwealth." 35 P.S. § 691.1. Therefore, the Susquehanna River and its tributaries are Waters of the Commonwealth, in addition to being Waters of the United States. Moreover, the groundwater beneath and around Brunner Island itself is Water of the Commonwealth.

Additionally, the CSL prohibits the discharge of substances that cause pollution to surface water or groundwater and declares pollution of groundwater or surface water to be a statutory nuisance. *See* 35 P.S. §§ 691.1, 691.401, 691.601. It is "unlawful for any person or municipality to put or place into any of the waters of the Commonwealth, or allow or permit to be discharged from property owned or occupied by such person or municipality into any of the waters of the Commonwealth, any substance of any kind or character resulting in pollution" and "[a]ny such discharge is [] declared to be a nuisance." 35 P.S. § 691.401.

III. VIOLATIONS OF THE RESOURCE CONSERVATION AND RECOVERY ACT

Citizens are entitled to bring suit under RCRA Section 7002 for violation of "any permit, standard, regulation, condition, requirement, or order [] effective pursuant to [RCRA]." 42 U.S.C. § 6972(a)(1). Citizens may also commence a civil action against "any person . . . who has contributed or who is contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste which may present an imminent and substantial endangerment to health or the environment." 42 U.S.C. § 6972(a)(1)(B).

A. Talen Energy is Open Dumping at Brunner Island in Violation the Requirements of RCRA and the CCR Rule.

Talen Energy is violating the requirements of RCRA and the CCR Rule by failing to address exceedances of federal groundwater protection standards at Ash Basin 6 and Disposal Area 8, active CCR facilities subject to the Rule's requirements.

Under RCRA, any violation of the requirements of the Rule constitutes illegal, open dumping: "Practices failing to satisfy *any of the criteria* in . . . §§ 257.50 through 257.107 constitute open dumping, which is prohibited under section 4005 of the Act." 40 C.F.R. §§ 257.1(a)(2) (emphasis added), 257.2 ("Open dump means a facility for the disposal of solid waste which does not comply with this part.").

EPA's CCR Rule, effective October 19, 2015, establishes a comprehensive set of requirements for CCR disposal under RCRA Subtitle D. Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals From Electric Utilities, 80 Fed. Reg. 21,302 (Apr.17, 2015), *as amended by* Technical Amendments to the Hazardous and Solid Waste Management System, Disposal of Coal Combustion Residuals from Electric Utilities-Correction of the Effective Date, 80 Fed. Reg. 37,988 (July 2, 2015); 40 C.F.R. § 257.50 *et seq.*

Disposal Area 8 is a "CCR landfill" and Ash Basin 6 is a "CCR surface impoundment," both "CCR units" under the CCR Rule.[18] Upon discovering a release from a CCR unit or if levels of contaminants exceeding U.S. EPA Safe Drinking Water Act ("SDWA") maximum contaminant limits ("MCLs")[19] or background levels where there is no MCL, are detected at an

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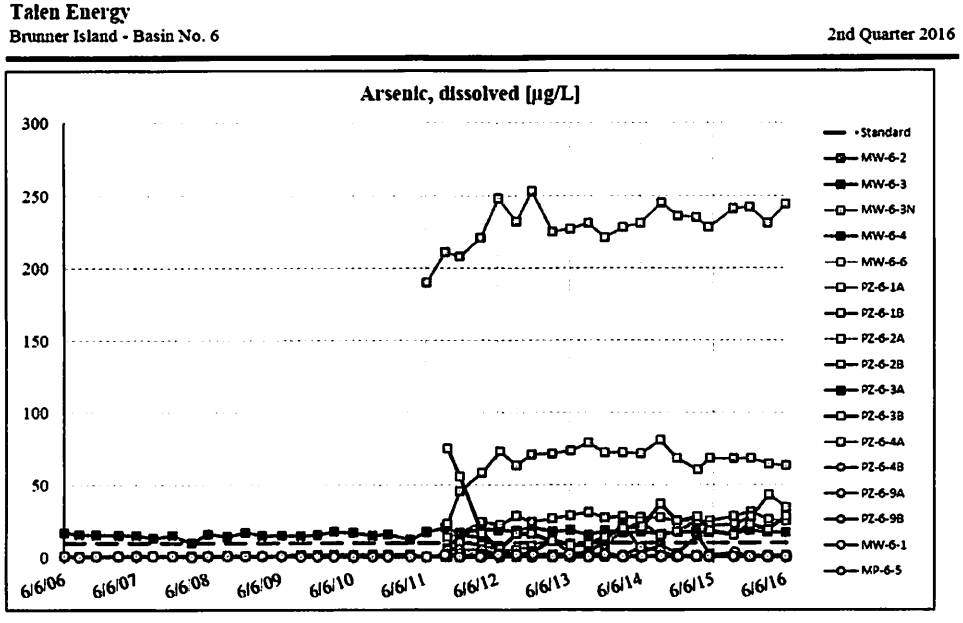
[18] *CCR unit* means any CCR landfill, CCR surface impoundment, or lateral expansion of a CCR unit, or a combination of more than one of these units, based on the context of the paragraph(s) in which it is used. This term includes both new and existing units, unless otherwise specified; *CCR landfill* means an area of land or an excavation that receives CCR and which is not a surface impoundment, an underground injection well, a salt dome formation, a salt bed formation, an underground or surface mine, or a cave. For purposes of this subpart, a CCR landfill also includes sand and gravel pits and quarries that receive CCR, CCR piles, and any practice that does not meet the definition of a beneficial use of CCR; and *CCR surface impoundment* means a natural topographic depression, man-made excavation, or diked area, which is designed to hold an accumulation of CCR and liquids, and the unit treats, stores, or disposes of CCR. 40 C.F.R. § 257.53.

[19] RCRA groundwater contamination from solid waste facilities is generally defined by a set of MCLs found at 40 CFR 257 Appendix I. These MCLs are in some cases different from SDWA MCLs and state groundwater standards. In the CCR Rule, EPA chose to apply the SDWA MCLs, rather than Appendix I MCLs, under §§141.62 and 141.66 for coal ash disposal facilities.

active coal ash waste unit, the owner or operator of a CCR unit must take "immediate" action to remedy the contamination. 40 C.F.R §§ 257.90(d); 257.96(a); App. I to Part 257. Owners or operators must initiate an assessment of corrective measures to prevent further releases, remediate existing releases, and to restore the affected area to original conditions. 40 C.F.R. § 257.96(a). Remedies must be certified by a qualified engineer and be consistent with the standards set out in the rule. 40 C.F.R. § 257.97. An unlined surface impoundment, such as Ash Basin 6, that requires assessment of corrective measures must undergo retrofits or closure. 40 C.F.R. § 257.95(g)(5).

As described above, there are serious, ongoing exceedances of groundwater protection standards at both Ash Basin 6 and Disposal Area 8. Talen's own groundwater monitoring reports acknowledge these exceedances at wells outside of the waste disposal units and exhibit trends of increasing contaminants. Arsenic and cadmium, key coal ash constituents, have been measured at increasing levels above SDWA MCLs and Pennsylvania Statewide Health Standards, at both Ash Basin 6 and Disposal Area 8 for arsenic and at Disposal Area 8 for cadmium.

Figure 1. Arsenic at Ash Basin 6 above 10 µg/L (SDWA MCL & Pa. Statewide Health Standard).[20]



[20] Talen Energy, Brunner Island—Basin No. 6, Trend Plots, 2nd Quarter 2016; *see also* C.F.R. §§ 141.62 and 141.66; 25 Pa. Code Chapter 250, App. A, Tbl. 2.

Figure 2. Arsenic at Disposal Area 8 above 10 μg/L (SDWA MCL & Pa. Statewide Health Standard).[21]

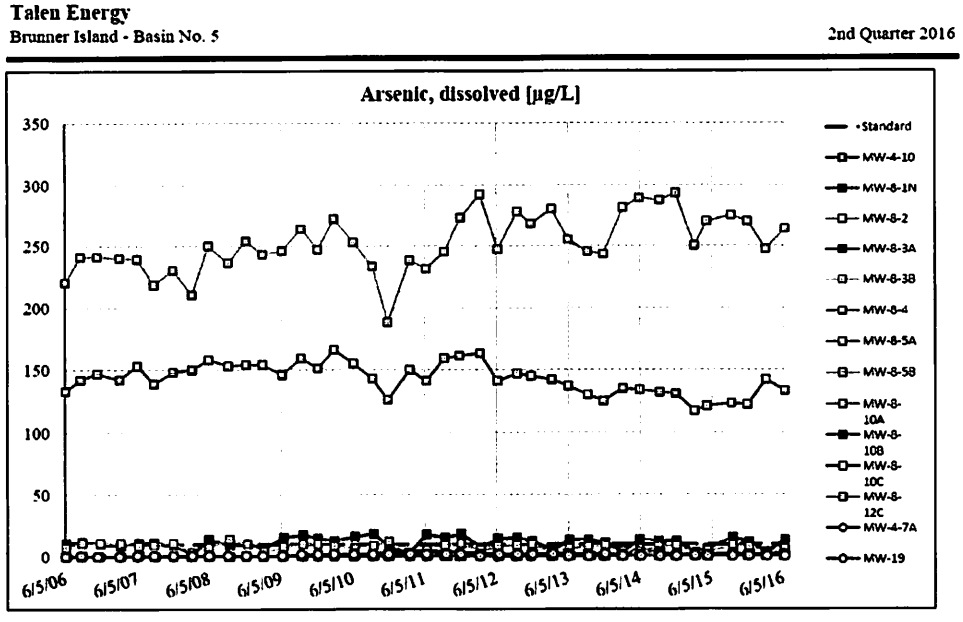
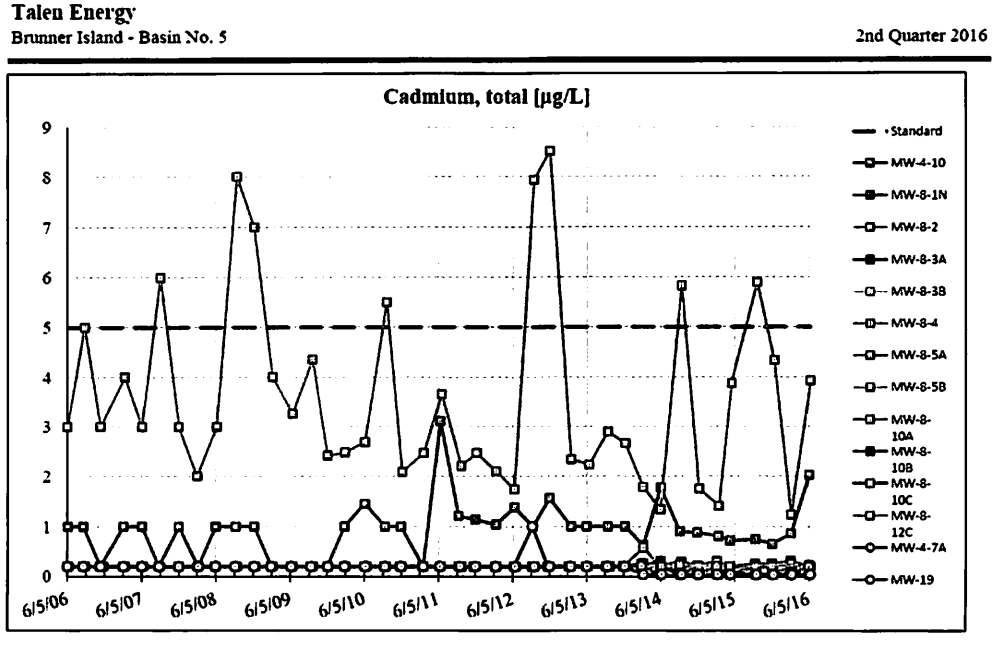


Figure 3. Cadmium at Disposal Area 8 above 5 μg/L (SDWA MCL & Pa. Statewide Health Standard).[22]



[21] Talen Energy, Brunner Island—Basin No. 5, Trend Plots, 2nd Quarter 2016; *see also* C.F.R. §§ 141.62 and 141.66; 25 Pa. Code Chapter 250, App. A, Tbl. 2.

[22] *Id.*

Pennsylvania law also requires Talen Energy to address Brunner Island's groundwater contamination. Specifically, state regulations require that Talen (or its predecessor), as the owner of a residual waste disposal impoundment, prepare and submit a groundwater assessment plan within 60 days of data indicating groundwater degradation at any monitoring point. 25 Pa. Code § 289.266(a). "Groundwater degradation" is defined as "[a] measurable increase in the concentration of one or more contaminants in groundwater above background concentrations for those contaminants," 25 Pa. Code § 287.1. Talen is required to undertake abatement when monitoring shows the presence of a statewide health standard at distances defined in the regulations. 25 Pa. Code § 289.267. According to publicly available files, DEP has no record of recent assessments or abatement plans submitted in the last five years by Talen or its predecessors-in-interest. *See also* 25 Pa. Code § 289.251(b) ("A residual waste disposal impoundment shall be operated to prevent and control water pollution. An operator shall operate and maintain necessary water treatment facilities until water pollution from the facility has been permanently abated").

B. Ongoing Pollution from Brunner Island's Coal Waste Facilities Presents an Imminent and Substantial Endangerment to the Environment and Human Health.

Contamination in groundwater and surface waters and their underlying sediments from Talen's handling, storage, treatment, and disposal of CCR wastes poses an imminent and substantial endangerment to the environment and public health. 42 U.S.C. § 6972 (a)(1)(B). CCR waste constituents in the Susquehanna River, nearby streams, and the sediments of those bodies of water are sources of ongoing exposure to fish, other aquatic life, and wildlife, as well as to the people who use those waters. Exposure may occur through physical contact with contaminated waters or sediments, or when CCR constituents enter the food chain.

Citizens are entitled to bring suit under Section 7002(a)(1)(B) of RCRA against "any person . . . who has contributed or who is contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste which may present an imminent and substantial endangerment to health or the environment." 42 U.S.C. § 6972(a)(1)(B). Thus, where an entity "may" present an "imminent and substantial endangerment" to "health or the environment" as a result of the disposal of any "solid or hazardous waste," such a claim is permitted.

Toxic CCR pollutants have been documented in seeps and groundwater at the Plant for years. Talen's own groundwater monitoring data show significant spreading of pollutants associated with CCR waste in the vicinity of Brunner Island. The contamination documented at Brunner Island is the result of the handling, storage, treatment, and disposal of CCR originating at Plant. This contamination may present an imminent and substantial endangerment to health and the environment for which Talen is liable under this provision.

As described above, CCR pollutants found at elevated levels at Brunner Island include arsenic, cadmium, aluminum, boron, iron, lead, and nickel, all of which threaten human and environmental health:

- *Arsenic* causes cancer, including lung cancer, skin tumors, and internal organ tumors,

and is connected to heart problems, nervous system disorders, and stomach pain.[23] EPA estimates that nearly 140,000 people each year experience increased cancer risk due to arsenic in fish from coal-fired power plants.[24] Arsenic contamination causes liver poisoning, developmental abnormalities, behavioral impairments, metabolic failure, reduced growth, and appetite loss in fish and is a potent endocrine disruptor at low, environmentally relevant levels.[25]

- ***Cadmium*** is bio-accumulating and can cause kidney damage, fragile bones, vomiting and diarrhea, death, and likely cancer. Fish exposed to excess cadmium become deformed.[26]

- ***Aluminum*** contamination can lead to the inability of fish to maintain fluid balance and is associated with damage to amphibian eggs and larvae. Human exposure to high concentrations has been linked to Alzheimer's disease.[27]

- ***Boron*** is rare in unpolluted water and can be toxic to wildlife in even small concentrations.[28] For people, ingestion of large amounts of boron can result in damage to the stomach, intestines, liver, kidney, and the brain.[29] Some studies suggest that boron exposure in humans can cause nausea, vomiting, and diarrhea.[30]

- ***Iron*** contamination can reduce growth, increase susceptibility to injury and disease, and harm eggs in fish. Human exposure to high concentrations of iron can cause metabolic changes and damage to the pancreas, liver, spleen, and heart.[31]

- ***Lead*** is a highly toxic poison that can cause serious damage to the brain, kidneys, nervous system, and red blood cells, particularly in children.[32] Once lead enters the river ecosystem, it can enter the food chain and bio-accumulate, leading to serious harm to wildlife and placing children in harm's way.[33]

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[23] *See* EPA, STEAM ELECTRIC POWER GENERATING POINT SOURCE CATEGORY: FINAL DETAILED STUDY REPORT at 6-5, 20-22 (2009), *available at* http://water.epa.gov/scitech/wastetech/guide/steam-electric/upload/Steam-Electric_Detailed-Study-Report_2009.pdf [hereinafter "Detailed Study Report"].

[24] EPA, BENEFIT AND COST ANALYSIS FOR THE PROPOSED EFFLUENT LIMITATIONS GUIDELINES AND STANDARDS FOR THE STEAM ELECTRIC POWER GENERATING POINT SOURCE CATEGORY at 3-6 (Apr. 2013), Docket No. EPA-HQ-OW-2009-0819-2238.

[25] Environmental Assessment at 3-3.

[26] *Id.* at 3-7; Agency for Toxic Substances and Disease Registry, Public Health Statement for Cadmium 5 (2012).

[27] Environmental Assessment at 3-3.

[28] *Id.* at 3-8, 3-9.

[29] Agency for Toxic Substances and Disease Registry, ToxFAQs for Boron (2010), *available at* http://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=452&tid=80.

[30] *Id.*

[31] Environmental Assessment at 3-4.

[32] *Id.* at 3-8

[33] *Id.*

- *Nickel* can inhibit the growth of microorganisms and algae at low levels and can damage the lungs, immune system, liver, and kidneys of fish and aquatic invertebrates. Human exposure to high concentrations of nickel can cause gastrointestinal and kidney damage.[34]

Because contamination at Brunner Island exceeds groundwater protection standards and levels at which scientific studies show pollutants will cause harm to organisms, it may present an imminent and substantial endangerment to human health and the environment in violation of RCRA.

IV. PERSONS RESPONSIBLE FOR VIOLATIONS

Brunner Island is owned and operated by Talen Energy, a corporation with its headquarters in Allentown, Pennsylvania. Talen Energy is responsible for all violations at Brunner Island described herein.

V. PERSONS GIVING NOTICE

Sierra Club, founded in 1892, is the nation's oldest and largest grassroots nonprofit environmental organization, with over 32,000 members in Pennsylvania. Sierra Club's purposes are to explore, enjoy, and protect the wild places of the Earth; to practice and promote the responsible use of the Earth's ecosystems and resources; to educate and enlist humanity in the protection and restoration of the quality of the natural and human environment; and to use all lawful means to carry out these objectives.

The name, address, and telephone number of the person giving notice pursuant to this notice letter are as follows:

Zachary M. Fabish
Senior Attorney
The Sierra Club
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VI. CONCLUSION

The Sierra Club believes that a negotiated settlement of these violations, codified through a court-approved consent decree, would be preferable to protracted litigation. We would be happy to meet with Talen Energy or its representatives to attempt to resolve these issues within the 60- and 90-day notice periods. However, if unable to reach an enforceable settlement agreement, Sierra Club is prepared to file suit in the U.S. District Court for the Middle District of Pennsylvania pursuant to Section 505(a) of the CWA, 33 U.S.C. § 1365(a)(1), Section 601 of the CSL, 35 P.S. § 391.601, and Section 7002(a)(1)(A) of RCRA, 42 U.S.C. §

[34] Environmental Assessment at 3-4.

6972(a)(1)(A), after 60 days from the date of this letter. Sierra Club is prepared to file suit in federal court pursuant to Section 7002(a)(1)(B) of RCRA, 42 U.S.C. § 6972(a)(1)(B), after 90 days from the date of this letter.

If Talen Energy has taken steps to abate the underlying cause of the violations described above, or if Talen believes that anything in this letter is inaccurate, please let us know. If Talen does not advise us of any remedial steps or inaccuracies during the notice period, Sierra Club will assume that no such steps have been taken, that the information in this letter is accurate, and that the violations will continue.

Thank you for your prompt attention to this manner.

Sincerely,

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