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May 21, 2010

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Via Certified Mail, Return Receipt Requested

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Via Certified Mail, Return Receipt Requested

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Via Certified Mail, Return Receipt Requested

RE: ***Notice of Violations and Notice of Intent to Sue RRI Energy, Inc., RRI Energy Mid-Atlantic Power Holdings, LLC, and Reliant Energy Seward, LLC for Violations of the Clean Water Act, the Clean Streams Law, and the Resource Conservation and Recovery Act at Seward Generating Station in New Florence, Pennsylvania***

Dear Sirs:

We are writing on behalf of PennEnvironment, Defenders of Wildlife, Citizens for Pennsylvania's Future ("PennFuture"), and the Sierra Club (collectively, the "Citizen Groups") to provide you with notice of their intent to file suit against RRI Energy, Inc., RRI Energy Mid-Atlantic Power Holdings, LLC, and Reliant Energy Seward, LLC (collectively, "RRI")¹ for

¹ Reliant Energy, Inc. formally changed its name to RRI Energy, Inc., effective May 2, 2009, and Reliant Energy Mid-Atlantic Power Holdings, LLC registered a name change to RRI Energy Mid-Atlantic Power Holdings, LLC, on May 4, 2009. See RRI Energy, Inc., Quarterly Report, Form 10-Q, at 4 (May 11, 2009) available at

significant and ongoing violations of the Clean Water Act, 33 U.S.C. § 1251 et seq., Pennsylvania's Clean Streams Law, as amended, 35 P. S. § 691.1 et seq., and the Resource Conservation and Recovery Act, 42 U.S.C. § 6901 et seq. ("RCRA"), at RRI's Seward Generating Station ("Seward"), located at 595 Plant Road, New Florence, Pennsylvania 15944.

RRI owns and operates the Seward Generating Station. The Seward plant is discharging heavy metals and other pollutants into the Conemaugh River at levels that exceed the limits of its National Pollutant Discharge Elimination System ("NPDES") permit, in violation of the Clean Water Act and Pennsylvania's Clean Streams Law. See 33 U.S.C. § 1311(a); 35 P.S. § 691.301; 25 Pa. Code § 92.3. In addition, the Seward plant's coal combustion waste ("CCW" or "coal ash") and coal refuse site (together, the "Disposal Site") is discharging leachate containing CCW and coal refuse pollutants directly, and into groundwater that flows directly, into the Conemaugh River without a permit, in violation of federal and state law. See *id.*² These leachate discharges of toxic and other harmful pollutants are also presenting an imminent and substantial endangerment to health or the environment, in violation of RCRA. 42 U.S.C. § 6972(a)(1)(B).

RRI's illegal discharges of pollutants into the Conemaugh River and failure to comply with the terms of its NPDES permit have injured, and will continue to injure, the health, environmental, aesthetic, and economic interests of the Citizen Groups and their members. These injuries are traceable to RRI's violations, and redressing the ongoing violations will redress the Citizen Groups' injuries.

Citizens are entitled to bring suit against "any person . . . alleged to be in violation" of an "effluent standard or limitation" established under the Clean Water Act, 33 U.S.C. § 1365(a)(1), and against "any person . . . who has contributed to 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). Citizen suits are similarly authorized by the Clean Streams Law. 35 P.S. § 691.601. Also, "any person" may also bring suit under RCRA "against any person . . . who has contributed or 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). Therefore, citizens may bring suit to enjoin illegal discharges of pollutants, compel compliance with the conditions of an NPDES permit, enjoin waste disposal activities that may present an imminent and substantial endangerment to health or the environment, impose civil penalties, recover attorneys fees and costs of litigation, and obtain other appropriate relief.

In accordance with Section 505(b)(1)(A) of the Clean Water Act, 33 U.S.C. § 1365(b)(1)(A), and Pennsylvania's Clean Streams Law, 35 P.S. § 691.601(e), this letter serves to notify you that the Citizen Groups intend to file suit in the applicable federal district court any

<http://www.sec.gov/Archives/edgar/data/1126294/000136231009007017/c84720e10vq.htm>, and PA Dep't of State, Corporation Bureau, *Certificate of Amendment of Registration-Foreign* (filed May 4, 2009).

² There are two old inactive ash disposal sites ("Old Ash Sites") near the Disposal Site at Seward. To the extent that leachate from either of these Old Ash Sites is contributing to the pollutants detected in groundwater and/or the Conemaugh River described herein, this Notice Letter covers all such discharges, which constitute violations of the Clean Water Act, Clean Streams Law, and RCRA as described in Sections III and IV, *infra*.

time beginning sixty (60) days after the postmarked date of this letter. In accordance with Section 7002(b)(2)(A) of RCRA, 42 U.S.C. § 6972(b)(2)(A), this letter serves to notify you that the Citizen Groups intend to file suit in the applicable federal district court any time beginning ninety (90) days after the postmarked date of this letter.

I. BACKGROUND

RRI's Seward Generating Station is a fossil-fuel burning power plant located in East Wheatfield Township, Indiana County, Pennsylvania. After operating for 82 years as a pulverized coal fired power plant, Seward was "repowered" to burn waste coal in 2004. RRI Energy Inc., *Generation Facilities: Seward Generating Station*, <http://www.rrienergy.com/our-company/operations/generation-facilities.asp#seward> (last visited May 19, 2010). The Seward facility's disposal and power generation activities have polluted and continue to pollute groundwater and the Conemaugh River with heavy metals and other dangerous pollutants in violation of the Clean Water Act, Pennsylvania's Clean Streams Law, and RCRA.

The Pennsylvania Department of Environmental Protection (PADEP) reissued National Pollutant Discharge Elimination System (NPDES) Permit Number PA0002054 to RRI³ on June 27, 2001, authorizing certain discharges from specific outfalls at Seward into the Conemaugh River. PADEP, *NPDES Permit No. PA0002054 for Seward Generating Station* (issued to Reliant Energy June 27, 2001) ("2001 NPDES Permit").⁴ Seward's 2001 NPDES Permit expired on June 27, 2006. RRI submitted a renewal application on December 16, 2005, and PADEP recommended issuance of a draft permit on May 8, 2007, yet the new permit has not issued. PADEP, Fact Sheet/Statement of Basis for Draft NPDES Permit No. PA0002054, to be issued to Reliant Energy LLC for Seward Generating Station, at 1 (May 8, 2007) ("2007 Draft Permit"). Consequently, the 2001 NPDES Permit (including amendments thereto) is still in effect. 25 Pa. Code § 92.9(b).

The Disposal Site is a large coal refuse pile that "lays[sic] along the Conemaugh River" and has been a persistent source of historic contamination of groundwater and surface water. Arthur W. Rose, Ph.D., P.G., Meiser & Earl, Inc., *Results of Monitoring Acid Groundwater in the Alluvial Aquifer Beneath the Former Seward Coal Refuse Site, Indiana Co., PA* (June 2005). Coal ash has been dumped onto with the refuse pile in an attempt to "beneficially reuse" the coal ash to remediate the acidic coal refuse pile, but "remediation" has failed. Despite the fact that "remediation" was completed in 2005, pollution continues to flow from the Disposal Site. *Id.*⁵

Seward's Outfall 012 is a seep that has been discharging from the closed ash pond area as well as the Disposal Site.⁶ The 2001 NPDES Permit authorizes discharges from Outfall 012, but

³ See note 1.

⁴ RRI also has two RCRA permits for the Seward facility, RCRA Permit No. PAD000780742 with Conditionally-Exempt Small Quantity Generator (CESQG) status and RCRA Permit No. PAD987366143 with Small Quantity Generator (SQG) status as a handler of RCRA wastes.

⁵ "Remediation" of the Disposal Site's coal refuse pile was completed as of 2005. Letter from Stephen B. Dixon, Principal, Waste Mgmt., RRI, to Kareen Milcic, PADEP, Refuse Site Remediation Quarterly Report, at 1 (Oct. 10, 2005) (stating "Remediation has been completed").

⁶ Outfall 012 has also been described as receiving wastes from "the closed ash pond area," and the Old Ash Sites.

imposes average monthly concentration and maximum daily concentration effluent limitations on iron, manganese, and aluminum, and limits pH to a range of 6.0 to 9.0. *Id.* at 2k. The facility's discharges from Outfall 012 have grossly exceeded permit limits for these pollutants every month for which there is public data available for the last five years.

Seward's Disposal Site (including all leaks and seeps other than Outfall 012) has also polluted and continues to pollute groundwater beneath the Disposal Site with leachate containing heavy metals and other common coal ash and coal refuse pollutants, and this contaminated water flows directly into the Conemaugh River, contributing to reduced water quality in the River.⁷

The 2001 NPDES Permit authorizes discharges from the Disposal Site only through Outfall 012. Any other pollutant discharges from this source are unpermitted discharges in violation of the Clean Water Act and the Clean Streams Law. 33 U.S.C. § 1311(a); 35 P.S. § 691.301; 25 Pa. Code § 92.3. Yet, over 5,000 times in the last five years, dissolved and total forms of at least 23 pollutants have been measured above background levels in groundwater immediately downgradient of the Disposal Site and/or in the Conemaugh River just downstream of where this groundwater discharges into the river. Each discharge of each pollutant from leaks and seeps in the Disposal Site other than through Outfall 012 is a violation of state and federal law.

The 2001 NPDES Permit also prohibits "any discharge that contains any pollutant that may cause or contribute to an impact on aquatic life or pose a substantial hazard to human health or the environment due to its quantity or concentration." *Id.* at 14e, Part C, § 12.C. Yet, in at least 14 of the 17 quarters with available downstream surface water data from 2005 through 2010, there has been at least one exceedance of Pennsylvania's Water Quality Criteria for Fish and Aquatic Life involving pollutants discharged from the Disposal Site. There were at least 26 exceedances of Pennsylvania's criteria for aluminum, nickel, and zinc, including an aluminum reading of 5,300 ug/L (exceeding the Criteria Maximum Concentration of 750 ug/L) and a nickel reading of 30 ug/L (exceeding the Criteria Continuous Concentration of 4.05 ug/L).⁸ These exceedances violate the requirements in the 2001 NPDES Permit and also present an imminent and substantial endangerment to human health or the environment in violation of RCRA.

RRI had entered into a Consent Order and Agreement with PADEP in 2000 that required RRI to remediate the coal refuse site by 2004. Consent Order and Agreement between PADEP and Reliant Energy Mid-Atlantic Holdings, LLC 3, 4, 5 (entered into Sept. 1, 2000) ("2000 COA"). RRI and PADEP agreed the site was contaminating groundwater, contaminating the Conemaugh River, and also causing the violations of the effluent limitations at Outfall 012. *Id.* The 2000 COA required RRI to implement a long-term groundwater monitoring plan created in 1999, and to monitor and report concentrations of at least 27 enumerated pollutants every three months. *Id.* at 8–9. Although "site remediation" is complete according to the terms of the 2000 COA, pollutants continue to flow from the site and into the Conemaugh River.

⁷ One or both of the two Old Ash Sites near the Disposal Site may be contributing to these contaminated discharges. One of the Old Ash Sites (Number 1) was required to be remediated in 2001 after evidence of pollution was discovered.

⁸ "mg/L" means "milligrams per liter"; "ug/L" means "micrograms per liter."

Also, in response to the 2004 repowering of the facility to burn waste coal, Outfall 023 was added in 2003 to permit discharges of cooling tower blowdown water into the Conemaugh River. *Amendment No. 2 to NPDES Permit PA0002054 for Seward Generating Station*, at 2 (issued to Reliant Energy Nov. 3, 2003) (“NPDES Permit Amendment 2”). Temperature requirements were added to the permit expressly “to demonstrate that the new thermal discharge of cooling tower blowdown (Outfall 023) and that the operation of the new repowered Seward Generating Station *do not adversely impact the indigenous aquatic biological community of the Conemaugh River.*” *Id.* at 14f (emphasis added). The permit required the placement of a continuous temperature monitoring device in the Conemaugh River, called “logger A.” *Id.* at 14g. The permit requires that Outfall 023’s discharges measured at logger A do not result in a temperature change of 2°F or greater per hour more than 10 times per year.⁹

PADEP classifies the Conemaugh River as a warm water fishery and has placed the river on the Commonwealth’s list of “impaired” water bodies due to pervasive contamination from metals (specifically aluminum, iron, and manganese), pH, turbidity, and total suspended solids. 2007 Draft Permit; U.S. EPA, Listed Water Information for the Conemaugh River (2004) *available at* http://oaspub.epa.gov/tmdl/enviro.control?p_list_id=PA18D43832_990102-0840-TVP&p_cycle=2004; U.S. EPA, Acid Mine Drainage TMDLs for the Kiskiminetas-Conemaugh River Watershed, Pennsylvania: Established by the Environmental Protection Agency, (Jan. 2010), *available at* http://www.epa.gov/reg3wapd/tmdl/pa_tmdl/Kiskiminetas/KiskiReport.pdf.

II. 2001 NPDES PERMIT VIOLATIONS (OUTFALLS 012 AND 023)

RRI is violating the Clean Water Act and Clean Streams Law at its Seward Generating Station by failing to comply with the terms and conditions of its NPDES permit, No. PA0002054. Specifically, RRI is discharging:

- 1) iron, aluminum, and manganese from Outfall 012 at levels that exceed daily maximum and average monthly effluent limitations in its NPDES permit, and pH from Outfall 012 at levels that exceed minimum limits in its NPDES permit; and
- 2) heat from Outfall 023 at levels that exceed hourly temperature limitations in its NPDES permit.

The Clean Water Act and Clean Streams Law prohibit the discharge of a pollutant by any person into the waters of the United States unless such discharge is authorized by and in compliance with a permit. *See, e.g.*, 33 U.S.C. § 1311(a); 35 P.S. § 691.301; 25 Pa. Code § 92.3. The Commonwealth of Pennsylvania received approval from EPA to implement the Clean Water Act’s NPDES program on June 30, 1978. *See* 67 Fed. Reg. 55,841-01, 55,842. The Commonwealth issues permits, including the 2001 NPDES Permit, pursuant to this authority under the Clean Water Act and the Clean Streams Law. *See, e.g.*, 25 Pa. Code § 963.1 (defining a Part I Permit as an NPDES permit “issued by the Department under section 5 of The Clean

⁹ *Id.* The permit states that RRI “shall ensure that the cooling tower blowdown discharge does not result in a 2°F temperature change per hour at the location of logger A. Recognizing some influence of natural conditions on river temperature changes, the cooling tower blowdown discharge may not result in more than 10 exceedances per year of a 2°F temperature change per hour in the Conemaugh River.”

Streams Law (35 P. S. § 691.5) and section 402 of the Clean Water Act (33 U.S.C.A. § 1342)"); 33 U.S.C. § 1342(i). Citizens may file suit to enforce the terms and conditions of the 2001 NPDES Permit. 33 U.S.C. § 1365(f); 35 P.S. § 691.601(c).

A. Outfall 012 Violations

Every month during the last five years for which data is publicly available, RRI has discharged and continues to discharge iron, aluminum, manganese, and pH from Outfall 012 of the Seward Generating Station at concentrations or levels that violate the daily maximum, monthly average, and/or minimum (for pH) limits in the 2001 NPDES Permit. *See* Table 1, below *and* Attachment A: Outfall 012 Violations.¹⁰ Part A1 of the 2001 NPDES Permit establishes effluent limits from permitted Outfall 012, expressed as “maximum daily” and “average monthly” pollutant concentrations. 2001 NPDES Permit, at 2k & NPDES Permit Amendment 1, at 2j. These limits are as follows:

- Iron (average monthly): 3.5 mg/L
- Iron (maximum daily): 7.0 mg/L
- Manganese (average monthly): 2.0 mg/L
- Manganese (maximum daily): 4.0 mg/L
- Aluminum (average monthly): 5.0 mg/L
- Aluminum (maximum daily): 10.0 mg/L
- pH: “not less than 6.0 nor greater than 9.0 standard units.”

Id. The facility is required to collect grab samples and monitor iron, manganese, and aluminum at the discharge two times per month and pH one time per week. *Id.* All monitoring results are then required to be reported on a monthly Discharge Monitoring Report (“DMR”) and submitted to the PADEP in Pittsburgh and in Ebensburg and to EPA Region III by the 28th day of every month. 2001 NPDES Permit, at 5, 6, & 14a.

Exceedances of effluent limitations contained in an NPDES permit violate the Clean Water Act and the Clean Streams Law. RRI’s discharge monitoring reports from Seward’s Outfall 012 reveal *at least* 385 violations of permit limits between May 2005 and December 2009. Because many of these violations involve monthly limits, for which a monthly exceedance counts as 28, 30, or 31 days of violation (one for each day of the month), RRI is responsible for *at least 5,425 days* of violation. RRI has been violating its permit limits for the four pollutants *every month* for which data is available for the past five years. Concentrations of iron, aluminum, and manganese are consistently being discharged at five, ten, or even twenty times the permit limits. *See* Attachment A (showing, *e.g.*, daily maximum iron values of 71.9 and 73.6 mg/L in April and March of 2008, respectively, which are over twenty times higher than the limit of 3.5 mg/L).

¹⁰ Table 1 and Attachment A may not reflect all violations that occurred in this time frame. For example, RRI’s DMRs list only the single highest daily maximum reading per month for each pollutant, although two to four grab samples are required each month for each pollutant. RRI possesses the underlying data that shows whether additional samples each month also exceeded daily maximum limitations. Any such violations are incorporated by reference in this Notice Letter.

Table 1. Number of Effluent Violations (in Days) from Outfall 012 in Last Five Years*

Pollutant	Permit Limit	Number of Violations by Year					
		2005 (May-Dec.)	2006	2007	2008	2009	2010 (Jan.)
Aluminum	Daily Maximum	8	12	12	11	12	N/A
	Monthly Average	306	365	365	334	365	N/A
Iron	Daily Maximum	8	12	12	11	12	N/A
	Monthly Average	306	365	365	334	365	N/A
Manganese	Daily Maximum	8	12	12	11	12	N/A
	Monthly Average	306	365	365	334	365	N/A
pH	Minimum	8	12	12	11	12	N/A
Total by Row		950	1,143	1,143	1,046	1,143	N/A
TOTAL EXCEEDANCES		5,425					

Source: Discharge Monitoring Reports, May 2005–Dec. 2009.

*No data was available for January 2008 or for 2010.

High levels of aluminum, iron, and manganese, and low pH can, separately and in conjunction with each other, have severe adverse effects on fish, benthic organisms, and other aquatic life, including direct toxicity, egg smothering, and decreased oxygen availability. *See, e.g., Jane Earle & Thomas Callaghan, PADEP, Chapter 4: Impacts of Mine Drainage on Aquatic Life, Water Uses, and Man-Made Structures, in Coal Mine Drainage and Pollution Prevention in Pennsylvania* (1998), <http://www.dep.state.pa.us/dep/deputate/minres/districts/cmdp/chap04.html> (further stating that a pH of less than 5.5 combined with a dissolved aluminum concentration greater than 0.5 mg/L “will generally eliminate all fish and many macroinvertebrates”).

B. Outfall 023 Violations

RRI’s Seward plant has violated its permit limits for discharges of heat from Outfall 023 into the Conemaugh River at least 633 times in the last five years. NPDES Permit Amendment 2 requires that “[t]he permittee shall ensure that the cooling tower blowdown discharge does not result in a 2°F temperature change per hour at the location of logger A,” and specifically prohibits blowdown discharge from resulting in “more than 10 exceedances per year of a 2°F temperature change per hour in the Conemaugh River.” NPDES Permit Amendment 2, at 14g, Part C, “Other Requirements.” The permit requires that the permittee “shall maintain upstream continuous temperature monitoring devices,” and “shall report” to PADEP, within 30 days of the end of each quarter, the number of exceedances per quarter and the cause of the exceedances if it

can be determined. *Id.* The plant's cooling tower blowdown discharges have caused temperature fluctuations in the Conemaugh River of more than 2°F per hour, which violates the restriction in RRI's permit.

After subtracting the first 10 hourly fluctuations each year (as directed by the permit), temperatures fluctuated more than 2°F per hour on 506 occasions in 2007, on 74 occasions in 2008, and on 53 occasions in the first six months of 2009. *See* Table 2, *infra*; Attachment B: RRI, Two Degree Temperature Change Data on the Conemaugh River (2005–2009). RRI frequently caused temperature readings to fluctuate as many as 9, 11, or 14 degrees per hour, even reaching a 20 degree change in one hour.

Table 2. Number of Temperature Violations from Outfall 023 in Last Five Years*

MONTH	2007	2008	2009
January	0	0	0
February	0	0	0
March	0	16	22
April	0	4	0
May	25	0	7
June	0	4	34
July	0	1	N/A
August	1	6	N/A
September	224	53	N/A
October	218	N/A	N/A
November	48	N/A	N/A
December	0	N/A	N/A
Yearly Total	516	84	63
TOTAL VIOLATIONS (after subtracting 10 violations per year)	633		

Source: "NPDES Permit PA0002054, Seward Generating Station, Two Degree Temperature Change Data of the Conemaugh River," submitted by RRI to PADEP (May 2005–Present).

*At the time this letter was written, no data was available for months listed as "N/A" or for 2010.

These temperature restrictions were placed in the Seward plant's NPDES permit specifically "[i]n order to demonstrate that the new thermal discharge of cooling tower blowdown (Outfall 023) and that the new repowered Seward Generating Station do not adversely impact the indigenous aquatic biological community of the Conemaugh River." Because the temperature limit was imposed for the express purpose of preventing adverse impacts to aquatic life, RRI's discharges of heat in violation of NPDES permit limits threaten the viability of the aquatic ecosystem in the Conemaugh River.

III. DISCHARGES OF POLLUTANTS DIRECTLY, AND INTO GROUNDWATER THAT FLOWS DIRECTLY, INTO THE CONEMAUGH RIVER, IN VIOLATION OF THE CLEAN WATER ACT, THE CLEAN STREAMS LAW

The groundwater below the Disposal Site is contaminated far above background levels by dissolved and/or total forms of at least 23 pollutants, and the contamination is clearly linked to leaks and seeps from the Disposal Site (other than Outfall 012). This contaminated groundwater flows directly into the Conemaugh River, and contributes to water pollution and violations of water quality criteria in the river.

RRI and its hired hydrogeologists have admitted, numerous times, that pollutants from the Disposal Site discharge into groundwater that flows directly into the River and have degraded water quality in the River. RRI has stated plainly that the Disposal Site is the cause of the contamination of the underlying groundwater aquifer, including stating that “Groundwater. . . in the area of the coal refuse disposal area [is] contaminated,” “[RRI] intends to remediate the coal refuse disposal area . . . to ameliorate groundwater contamination at the Site,” and “[t]he coal refuse pile at the Site constitutes pollution and a danger of pollution to Commonwealth waters.” See 2000 COA, at 3, 4, 5.

Furthermore, hydrogeology reports prepared for RRI in 1999, 2001, and 2005 all confirm that leachate from the Disposal Site discharges into, and has polluted, the Conemaugh River. The reports state that these pollutants are directly polluting the Conemaugh River, as “[g]roundwater from this aquifer discharges into the Conemaugh River and is responsible for reduced water quality in the river.”¹¹

Groundwater monitoring data submitted quarterly by RRI to PADEP clearly show that the Disposal Site’s discharges of pollutants in leachate have polluted and are polluting groundwater. Monitoring below and around the Disposal Site has revealed *at least* 5,827 instances in which concentrations of pollutants in groundwater immediately downgradient of the Disposal Site were higher than concentrations of the same pollutants measured in the same monitoring event immediately upgradient. See Attachment C: Evidence of Pollutants in Downgradient Groundwater. Most of these same pollutants have already contaminated surface waters. Surface water monitoring data show at least 292 instances in which levels of pollutants in the Conemaugh River immediately downstream of the Disposal Site were higher than levels immediately upstream, and at least 26 instances in which these concentrations have exceeded Pennsylvania’s Water Quality Criteria. See Attachment D: Pollutants in Conemaugh River in Higher Levels Downstream of Disposal Site, *and* Table 3.

¹¹ Arthur W. Rose, Ph.D., P.G., *Geochemistry of Alluvial Aquifer Beneath Coal Refuse Piles, GPU Seward Station, Indiana Co., PA* (July 1999) (emphasis added) (also stating that “This is about as bad as acid mine drainage gets” and that groundwater “in the aquifer beneath the ash pile show[s] very high acidities and dissolved solids”); see also Arthur W. Rose, Ph.D., P.G., Meiser & Earl, Inc., *Demonstration Plan: Modeling and Monitoring Acid Drainage from the Seward Coal Refuse Site, East Wheatfield Twp., Indiana Co., PA* (Dec. 2001) (“Piles of coal refuse from former coal mining at the Seward site have generated large amounts of acid that has percolated into the underlying alluvial sediments and is flowing as groundwater into the Conemaugh River”).

The Seward Disposal Site, and leaks and seeps from the Site, are point sources as defined by the Clean Water Act. 33 U.S.C. § 1362(14); 40 C.F.R. § 122.2.¹² These point sources are discharging leachate containing toxic heavy metals and other pollutants through leaks and seeps (other than Outfall 012) without a permit into groundwater and into the Conemaugh River, in violation of the Clean Water Act and the Clean Streams Law. *See* 33 U.S.C. § 1311(a) *and* 35 P.S. § 691.301 (prohibiting any discharges into waters of the United States or the Commonwealth of Pennsylvania without a permit authorized by the Clean Water Act or Clean Streams Law, respectively). Unpermitted discharges to “underground water” are expressly forbidden by the Clean Streams Law. 35 P.S. § 691.1.

RRI’s own quarterly groundwater monitoring data of the Disposal Site for the last five years, conducted pursuant to the terms of the 2000 COA, reveal pervasive contamination of groundwater underneath the Disposal Site. The data show that pollutant levels downgradient of the Disposal Site exceed background (upgradient) levels of the same pollutants. *See* Attachment C: Evidence of Pollutants in Downgradient Groundwater. Levels of at least the following pollutants in groundwater immediately downgradient of the Disposal Site have exceeded measured background levels immediately upgradient of the Disposal Site more than 5,000 times in the last five years: aluminum (total and dissolved); antimony (total and dissolved); arsenic (total and dissolved); boron (total and dissolved); cadmium (total and dissolved); calcium (total and dissolved); chloride; chromium (total and dissolved); copper (total and dissolved); iron (total, dissolved, and ferrous); lead (total and dissolved); magnesium (total and dissolved); manganese (total and dissolved); mercury (total); nickel (total and dissolved); pH (field and laboratory); selenium (total and dissolved); specific conductance (field and laboratory); sodium (total and dissolved); sulfate; total dissolved solids; turbidity; and zinc (total and dissolved).

RRI’s monitoring data show that most of these same pollutants have already been measured in the Conemaugh River at higher levels immediately downstream of the Disposal Site than levels measured just upstream of the Disposal Site. *See* Attachment D: Pollutants in Conemaugh River in Higher Concentrations Downstream of Disposal Site.

Each such discharge into groundwater and each such discharge into the Conemaugh River constitutes a separate violation of the Clean Water Act and the Clean Streams Law.

¹² The Old Ash Sites are also point sources.

IV. VIOLATIONS OF 2001 NPDES PERMIT (PART C, SECTION 12.C) AND RCRA

A. Violations of 2001 NPDES Permit Part C, Section 12.C

The 2001 NPDES Permit prohibits “any discharge that contains any pollutant that may cause or contribute to an impact on aquatic life or pose a substantial hazard to human health or the environment due to its quantity or concentration,” *id.* at 14e, Part C, § 12.C. Yet, as explained in Section III, *supra*, the Seward plant’s Disposal Site and leaks and seeps from the Disposal Site are point sources that are discharging leachate with toxic pollutants into underground water that flows directly into the Conemaugh River. Some of those pollutants have been measured downstream at concentrations above those recognized by EPA and PADEP to threaten the viability of aquatic life. In fourteen of the seventeen quarters for which the Citizen Groups have downstream surface water data in the Conemaugh River from 2005 to 2009, there was at least one exceedance of Pennsylvania’s Water Quality Criteria for Fish and Aquatic Life for one or more of the pollutants found in the Seward plant’s Disposal Site leachate (described in Section III, *supra*). During that time there were 26 separate exceedances involving aluminum, nickel, or zinc, including an aluminum exceedance of 5,300 ug/L (compared to a Criteria Maximum Concentration of 750 ug/L) and a nickel concentration of 30 ug/L (compared to a Criteria Continuous Concentration of 4.05 ug/L). *See* Table 3, *infra*. EPA’s water quality criteria for toxic pollutants (adopted and supplemented by PADEP) define “Criteria Maximum Concentration (CMC)” and “Criteria Continuous Concentration (CCC)” as follows:

- CMC is “the highest concentration of a pollutant to which aquatic life can be exposed for a short period of time (1-hour average) without deleterious effects”; and
- CCC is “the highest concentration of a pollutant to which aquatic life can be exposed for an extended period of time (4 days) without deleterious effects.”

40 C.F.R. § 131.36(b)(1), at n.(d); 25 Pa. Code §§ 16.21, 16.22, 93.8c.

Table 3. Exceedances of PA Water Quality Criteria Downstream of Disposal Site*

POLLUTANT	YEAR	QUARTER	HARDNESS (CaCO ₃)	PA WQC (ug/L)	READING (ug/L)
Nickel (dissolved)	2009	4	35	CCC = 21.40	30
Aluminum (total)	2009	1	N/A	CMC = 750	1,400
Nickel (dissolved)	2008	3	34	CCC = 20.88	50
Zinc (dissolved)	2008	3	34	CCC = 47.36, CMC = 46.98	57
Aluminum (total)	2008	2	N/A	CMC = 750	1,900
Aluminum (total)	2008	1	N/A	CMC = 750	1,100
Nickel (dissolved)	2008	1	4.9	CCC = 4.05	30
Zinc (dissolved)	2008	1	4.9	CCC = 9.17	51
Aluminum (total)	2007	4	N/A	CMC = 750	1,400
Aluminum (total)	2007	3	N/A	CMC = 750	900
Nickel (dissolved)	2007	3	44	CCC = 25.97	30
Aluminum (total)	2006	4	N/A	CMC = 750	1,400
Nickel (dissolved)	2006	4	35	CCC = 21.40	50
Zinc (dissolved)	2006	4	35	CCC = 48.54	93
Aluminum (total)	2006	3	N/A	CMC = 750	1,200
Nickel (dissolved)	2006	3	22	CCC = 14.45	20
Nickel (dissolved)	2006	2	22	CCC = 14.45	20
Aluminum (total)	2006	1	N/A	CMC = 750	1,600
Nickel (dissolved)	2006	1	24	CCC = 15.55	50
Zinc (dissolved)	2006	1	24	CCC = 35.26	81
Nickel (dissolved)	2005	4	26	CCC = 16.64	30
Zinc (dissolved)	2005	4	26	CCC = 37.73	59
Nickel (dissolved)	2005	3	34	CCC = 20.88	30
Aluminum (total)	2005	2	N/A	CMC = 750	5,300
Nickel (dissolved)	2005	2	14	CCC = 9.86	40
Zinc (dissolved)	2005	2	14	CCC = 22.33	39
Source: Form 14R Residual Waste Landfills and Disposal Impoundments Quarterly and Annual Water Quality Analyses (submitted by RRI Energy to PADEP, 2005 to 2009). (CR-1 is the monitoring point upstream of the Disposal Site, and CR-2 is the point downstream.)					
Note: Data was missing quarters 1 and 2 of 2007. Of 17 quarters with available data, 14 had at least one exceedance.					
* Water quality criteria for nickel and zinc are hardness-dependent, and were calculated according to EPA and PADEP's required hardness calculations. 40 C.F.R. § 131.36(b)(1), at n.(e); 25 Pa. Code § 93.8c.					

All three of these pollutants – aluminum (total), nickel (dissolved), and zinc (dissolved) – were present both in groundwater downgradient of, and in surface water downstream of, the Disposal Site in excess of upgradient and upstream levels, respectively. As stated in Section III, *supra*, reports prepared by RRI’s hydrogeologist confirm that the groundwater below Seward’s Disposal Site is contaminated by toxic pollutants and is discharging into the Conemaugh River. *See, e.g.,* Rose, *Geochemistry of Alluvial Aquifer* (July 1999) (stating that “[g]roundwater from this aquifer discharges into the Conemaugh River and is responsible for reduced water quality in the river”). RRI has admitted that this groundwater contamination is attributable to the coal refuse and coal ash disposal site. *See, e.g.,* 2000 COA, at 3, 4, 5 (stating “Groundwater and storm water runoff in the area of the coal refuse disposal area are contaminated,” “Reliant intends to remediate the coal refuse disposal area . . . to ameliorate groundwater contamination at the Site,” and “[t]he coal refuse pile at the Site constitutes pollution and a danger of pollution to Commonwealth waters”). Each discharge that causes or contributes to an exceedance of a water quality criterion in the Conemaugh River immediately downstream of the coal refuse and coal ash pile constitutes a violation of Part C, Section 12.C, of the 2001 NPDES Permit.

B. Creation of an Imminent and Substantial Endangerment Under RCRA

In the alternative, the higher downgradient and downstream pollutant concentrations and exceedances of Pennsylvania’s Water Quality Criteria for Fish and Aquatic Life described in Sections III and IV.A and listed in Table 3, *supra*, are evidence that the ongoing discharge of leachate from the leaks and seeps from the Disposal Site through groundwater and into the Conemaugh River presents an imminent and substantial endangerment to health or the environment. RCRA authorizes citizens to commence a civil action against any person whose “handling, storage, treatment, transportation, or disposal of any solid or hazardous waste . . . may present an imminent and substantial endangerment to health or the environment.” 42 U.S.C. § 6972(a)(1)(B). RRI Energy, Inc., RRI Energy Mid-Atlantic Power Holdings, LLC, and Reliant Energy Seward, LLC are the owners and/or operators of the Seward facility, and thus have been responsible for the handling, storage, treatment, transportation, and/or disposal of coal refuse and coal ash at Seward. The coal refuse pile at the Disposal Site, as well as coal ash onsite, constitute “solid waste.” *See* 42 U.S.C. § 6903(27); 40 C.F.R. § 261.4(b)(4).¹³

As described in Sections III and IV.A, *supra*, RRI’s own monitoring well samples taken in the last five years reveal at least 5,827 instances in which levels of harmful pollutants from the Seward Disposal Site were discharged into groundwater, at least 292 instances in which quarterly levels of these pollutants in the Conemaugh were higher immediately downstream of the pile compared to immediately upstream, and at least 26 instances in which pollutants from the Disposal Site caused or contributed to exceedances of Pennsylvania’s Water Quality Criteria for Fish and Aquatic Life in the Conemaugh River. *See* Table 3. RRI’s hired hydrogeologist admitted that groundwater “in the aquifer beneath the Diposal Site show[s] very high acidities

¹³ One of EPA’s two recent proposals for regulation of coal ash may reclassify coal ash as “special waste,” to be regulated under RCRA’s hazardous waste provisions. Such a reclassification of coal ash as hazardous waste would not affect Citizen Groups’ ability to sue for contamination from the Disposal Site under RCRA’s imminent and substantial endangerment provision, as that provision expressly incorporates all wastes regulated under RCRA.

and dissolved solids” and “discharges into the Conemaugh River and is responsible for reduced water quality in the river.” Rose, *Geochemistry of Alluvial Aquifer* (July 1999).

In addition to diminishing the quality of the water itself, water contaminated with the toxic heavy metals and other coal refuse and coal ash pollutants being released at the Disposal Site pose a variety of serious threats to the environment, especially to aquatic life. The devastating impacts of coal ash pollutants on aquatic life and wildlife are well documented. Vertebrates exposed to the trace metals in coal combustion waste have suffered respiratory, metabolic, hormonal, physiological, and other impairments, including death.¹⁴

The impacts of exposure to heavy metals and other pollutants commonly found in coal refuse and coal ash leachate on aquatic life and wildlife are exacerbated by the tendency of toxic metals to bioaccumulate in animal tissues up the food chain, creating serious adverse impacts observable for decades. The high levels of toxic metals and other pollutants discharged into the Conemaugh River by leachate from disposal of coal refuse and coal ash at the Seward power plant pose an imminent and substantial threat to the environment, in violation of RCRA.

V. CONCLUSION

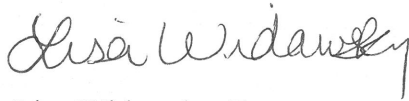
RRI has violated and will continue to violate the federal Clean Water Act, Pennsylvania’s Clean Streams Law, and the federal Resource Conservation and Recovery Act at the Seward Generating Station. Accordingly, the Citizen Groups intend to file suit to enjoin the violations described above, ensure sustained compliance with federal and state law, obtain civil penalties, recover attorneys fees and costs of litigation, and obtain other appropriate relief.

If you have any questions regarding the allegations in this notice, believe any of the foregoing information to be in error, or would otherwise like to discuss a resolution of this matter

¹⁴ See, e.g., A. L. Bryan et al., Maternal Transfer of Contaminants to Eggs in Common Grackles (*Quiscalus quiscula*) Nesting on Coal Fly Ash Basins, 45 Archives of Env’tl. Toxicology 273 (2003); William Alexander Hopkins et al., Reproduction, Embryonic Development, and Maternal Transfer of Contaminants in the Amphibian *Gastrophryne carolinensis*, 114 Env’tl. Health Perspectives 661 (May 2006); A. Dennis Lemly, Symptoms & Implications of Selenium Toxicity in Fish: The Belews Lake Case Example, 57 Aquatic Toxicology 39 (2002); Christopher L. Rowe, Elevated Standard Metabolic Rate in a Freshwater Shrimp (*Palaemonetes paludosus*) Exposed to Trace Element-Rich Coal Combustion Waste, 121 Comparative Biochemistry & Physiology 299 (1998); Christopher L. Rowe, Growth Responses of an Estuarine Fish Exposed to Mixed Trace Elements in Sediments Over a Full Life Cycle, 54 Ecotoxicology & Env’tl. Safety 229 (2003).

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