



EARTHJUSTICE

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June 8, 2016

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Gina McCarthy
Administrator
U.S. Environmental Protection Agency
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Washington, DC 20460

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**Re: Petition for Rulemaking Under the Resource Conservation and Recovery Act,
42 U.S.C. § 6974(a)**

Dear Administrator McCarthy:

Pursuant to section 7004(a) of the Resource Conservation and Recovery Act (“RCRA”), 42 U.S.C. § 6974(a), the following Petitioners; Clean Water Action, Environmental Integrity Project, Natural Resources Defense Council, Public Justice, Sierra Club, Silent Disaster, Southern Alliance for Clean Energy, Southern Environmental Law Center and Waterkeeper Alliance, hereby petition the Administrator of the U.S. Environmental Protection Agency (“EPA”) to promulgate regulations governing the safe disposal of coal combustion residuals (“CCR” or coal ash) in municipal solid waste landfills. Specifically, petitioners request the establishment of minimum national criteria under 40 C.F.R. Part 258 to ensure that the disposal of coal ash in municipal solid waste landfills does not pose an unreasonable probability of adverse effects on human health and the environment. Section 7004(a) of RCRA allows any person to petition the Administrator of the EPA to promulgate an environmental regulation. 42 U.S.C. § 6974(a).

In the final coal ash rule published on April 17, 2015, the Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals From Electric Utilities; Final Rule (“CCR rule”), the EPA exempted municipal solid waste landfills from the new requirements pertaining to coal ash disposal. Consequently, when municipal solid waste landfills receive coal ash, the toxic waste generated by the nation’s coal-fired power plants, there are critical gaps in safeguards that may endanger public health and the environment.

In light of this exemption, Petitioners are requesting an amendment of the federal municipal solid waste landfill regulations, because public health and the environment are threatened by the absence of critical safeguards protecting air, groundwater and surface water

from coal ash contamination. Indeed, the lack of equivalent protections at household waste landfills threatens the health and environment of communities throughout the United States where these landfills are receiving coal ash.

The threat to communities near municipal solid waste landfills is growing because the CCR rule encourages the closure of coal ash surface impoundments (“ponds”) at power plant sites. Such closures have already resulted in a significant increase in the volume of coal ash being moved from on-site impoundments to off-site municipal solid waste landfills. There are plans in several states, including Virginia, Georgia, and South Carolina, to dispose of many millions of tons of coal ash in off-site landfills. It is likely that substantial volumes of coal ash will continue to be disposed of in household waste landfills in the near future as more coal ash ponds undergo closure.

According to Section 4004(a) of RCRA, EPA’s subtitle D criteria must be sufficient to prevent an unreasonable probability of adverse effects on human health and the environment. Petitioners request, therefore, that the EPA amend 40 C.F.R Part 258, as specified below, to close the gaps that threaten health and the environment when coal ash is disposed at municipal solid waste landfills. Specifically, petitioners request the Administrator amend the municipal solid waste landfill criteria to accomplish the following:

- (1) Incorporate the fugitive dust criteria of the CCR rule to minimize coal ash from becoming airborne at the facility;
- (2) Incorporate the liner design and leachate collection and removal system criteria of the CCR rule for new and expanded municipal solid waste landfills to prevent the leaching of coal ash contaminants into groundwater;
- (3) Incorporate the relevant groundwater monitoring and corrective action requirements of the CCR rule to ensure that releases of coal ash contaminants are promptly detected and remediated;
- (4) Require municipal solid waste landfills to evaluate coal ash for waste compatibility and placement by establishing a “CCR acceptance plan” maintained in the facility operating record that ensures the facility is aware of the physical and chemical characteristics of the coal ash and handles it with the additional precautions necessary to avoid dust, maintain structural integrity, and avoid compromising the gas and leachate collection systems of the landfill so that human health and the environment are protected;
- (5) Require public notifications to ensure impacted communities are able to access groundwater monitoring data, inspections, and other compliance documents;
- (6) Require weekly and annual inspections of municipal solid waste landfills receiving coal ash and require owners and operators to remedy all deficiencies found during landfill inspections;
- (7) Restrict the siting of new municipal solid waste landfills and lateral expansions to ensure the placement of coal ash above the uppermost aquifer; and
- (8) Incorporate environmental justice into permitting activities for municipal solid waste landfills that receive coal ash to the greatest extent practicable. This should include requiring permitting agencies: (1) to identify and address disproportionately high and adverse human health or environmental effects of coal ash disposal on minority populations and low-income populations; (2) to employ tools to avoid or reduce potential

environmental justice effects, including increasing public involvement; and (3) to consider cumulative impacts of waste disposal on already over-burdened communities.

Petitioners request that EPA amend the criteria applicable to municipal solid waste landfills by publishing proposed criteria no later than six months from the receipt of this petition and finalizing amended criteria no later than one year from receipt.

We believe this petition has a reasonable basis. In EPA's 2015 rule governing the disposal of coal ash in surface impoundments and landfills, the EPA acknowledges the damage nationwide from the dumping of coal ash in the absence of minimum federal protective standards. The preamble to this rule, moreover, identifies numerous gaps in safeguards at the nation's household waste landfills, identical to many of those listed above, as well as the need to close these gaps to ensure nearby communities and their environment are protected.

This petition provides a concise statement of the facts, technical justification, and law that require the issuance of the petitioned rule. In accordance with section 7002(a), we look forward to EPA taking action in response to our petition within a reasonable time and publishing notice of that action in the Federal Register.

On behalf of all petitioners, thank you in advance for your consideration.

Sincerely,



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Enclosures

cc (w/ enclosures): Mathy Stanislaus, Assistant Administrator, Office of Land and Emergency Management, U.S. Environmental Protection Agency (USPS #7014 2870 0001 1161 7224)

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PETITION SEEKING AMENDMENT OF 40 C.F.R. PART 258 TO STRENGTHEN SAFEGUARDS FOR THE DISPOSAL OF COAL COMBUSTION RESIDUALS IN MUNICIPAL SOLID WASTE LANDFILLS

I. INTRODUCTION AND REQUESTED ACTION

Pursuant to provisions in the Resource Conservation and Recovery Act (“RCRA”), section 7004(a), petitioners request that the U.S. Environmental Protection Agency (“EPA”) promulgate a regulation as specified below to establish minimum national criteria for municipal solid waste (“MSW”) landfills that receive coal combustion residuals (“CCR”) to ensure the protection of human health and the environment. Specifically, petitioners request the establishment of criteria under 40 C.F.R. Part 258 to ensure that the disposal of CCR (or “coal ash”) in municipal solid waste landfills does not pose an unreasonable probability of adverse effects on human health and the environment under RCRA.

In its final coal ash rule published on April 17, 2015, Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals From Electric Utilities; Final Rule, 80 Fed. Reg. 21,302 (Apr. 17, 2015) (“CCR rule”), EPA exempted MSW landfills from the requirements of the coal ash disposal regulations. 40 C.F.R. § 257.50(i). Consequently, when coal ash is disposed of in a MSW landfill, the federal safeguards are less stringent than if the coal ash was disposed in a new or existing coal ash landfill or surface impoundment under the CCR rule.

Petitioners are requesting an amendment of the federal MSW landfill regulations because the health and environment of petitioners’ communities are threatened by the absence of critical safeguards protecting air, groundwater and surface water from coal ash contamination. Coal ash is the toxic remains of coal that is burned in power plants to generate electricity, and it contains heavy metals like arsenic, lead and mercury as well as other harmful toxins and carcinogens. To

many communities living in proximity to MSW landfills, it seems grossly inconsistent and unjust that coal ash is considered a hazardous substance under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. § 9601(14), but not under RCRA. *See Eagle-Pitcher Indus., Inc. v. EPA*, 759 F.2d 922 (D.C. Cir. 1985). At the very least, EPA should fill the gap in the MSW landfill criteria that creates an incentive for electric utilities to send coal ash to MSW landfills, which are unsuitable, unsafe and potentially inequitable dumping grounds for the toxic waste.

Indeed, the lack of equivalent protections at MSW landfills threatens the health and environment of communities throughout the United States where MSW landfills are receiving coal ash. Because of the absence of coal ash-specific safeguards in 40 C.F.R. Part 258, the current rule poses an unreasonable probability of adverse effects to health and the environment, and consequently the rule violates the protective standard of subtitle D of RCRA. 42 U.S.C. § 6944(a).

The threat to communities near MSW landfills is growing because the CCR rule encourages the closure of coal ash surface impoundments and provides incentives for early closure of inactive coal ash impoundments. *See, e.g.*, 40 C.F.R. § 257.100. This has already resulted in a significant increase in the volume of coal ash being moved from impoundments to landfills. Recent plans and proposals indicate that a substantial volume of coal ash will be disposed in off-site MSW landfills. There are plans in several states, including but not limited to Virginia,¹ Georgia², and South Carolina³ to dispose of many millions of tons of coal ash in off-

¹ In 2009, the Virginia Department of Environmental Quality amended the permit for the Maplewood Recycling and Waste Disposal Facility, a MSW landfill in Amelia County, Virginia to permit the construction of a monofill area for coal ash and flue gas desulfurization sludge. *See* Exhibit 1, Permit No. 540, Amendment No. 14. It is estimated that about 1.5 million tons of coal ash sludge from Duke Energy's Dan River Station in Eden, North Carolina will be transported to the landfill. Starting in January 2016, 180 rail cars per week of coal ash arrived at the landfill. *See Rail cars laden with coal ash rolling into Amelia landfill*, The Richmond Times-Dispatch, Jan. 28, 2016, available at http://www.richmond.com/news/virginia/ap/article_07dd2182-2b76-5e4a-bbad-c9788c337e9a.html.

site landfills. It is likely that substantial volumes of coal ash will continue to be disposed of in MSW landfills in the near future as active and inactive coal ash impoundments undergo closure.

Disposal of coal ash in a MSW landfill has already caused great harm to an adjacent community because of the lack of federal safeguards. *See, e.g.*, Exhibit 2, An Evaluation of Particulate Matter, Hydrogen Sulfide, and Non-Methane Organic Compounds from the Arrowhead Landfill (2012). In the absence of federal safeguards, residents near MSW landfills receiving coal ash will continue to be threatened by coal ash.

EPA recognizes the critical gap in protections at MSW landfills. In the preamble to its final CCR rule, EPA specifically, and strongly, recommended numerous ways that individual states should implement their municipal solid waste programs to make the MSW landfill standards more protective in the event coal ash is disposed in these landfills. States, however, are granting permit modifications to MSW landfills to accept large volumes of coal ash, but they are not requiring the safeguards mandated by the CCR rule. By letter dated April 30, 2015, the Georgia Environmental Protection Division (EPD) approved the disposal of coal ash at the R & B Landfill, a municipal solid waste landfill in Banks County, Georgia without all the public health safeguards required at coal ash landfills. *See* Exhibit 3. Coal ash began arriving at the landfill on May 21, 2015 from a Duke Energy facility in North Carolina, and the landfill is expected to receive about 1.4 million tons of coal ash by truck over a two-year period.⁴ In addition, a proposed 249.8-acre rail yard near the Broadhurst Landfill in Wayne County, Georgia

² Banks County, R&B Landfill, Permit number 006-009D (MSWL). *See* Exhibit 3.

³ In Pickens County, South Carolina, an out-of-state solid waste landfill owner MRR Pickens LLC proposed in 2015 to haul thousands of tons of coal ash to a new construction and demolition debris landfill that lacked adequate safeguards. . Sammy Fretwell, *Out-of-state coal ash dumping a concern in South Carolina*, The State (Columbia, South Carolina), Feb. 13, 2016, available at <http://www.thestate.com/news/local/article60285531.html>.

⁴ *See* Paul Rea, *Banks County Inherits North Carolina's Coal Ash*, Now Habersham, May 24, 2015, available at <http://www.nowhabersham.com/banks-county-inherits-north-carolinas-coal-ash/>.

is expected to bring a significantly increased volume of coal ash to the Republic Services' Broadhurst Environmental Landfill, whose permit also does not contain the full suite of protections. *See* Exhibit 4, Individual Permit Application, SAS-2006-01206, Dec. 2015. The owner estimates the rail yard could receive "100-plus rail cars" of solid waste per day, including up to 10,000 tons of coal ash *daily*. *See* Exhibit 5, Special Report: Coal Ash Controversy at Broadhurst Landfill, The Press Sentinel, Mar. 12, 2016, http://uberassets.solesolution.com/sites/2899/assets/AEEV_3_12_16_C_Coal_Ash_Section.pdf.

Furthermore, according to Section 4004(a) of RCRA, EPA's subtitle D regulations must be sufficient to prevent an unreasonable probability of adverse effects on human health and the environment. 42 U.S.C. § 6944(a). Petitioners request, therefore, that EPA amend 40 C.F.R. Part 258, as specified below, to close the gaps that threaten health and the environment when coal ash is disposed at MSW landfills.

Specifically, petitioners request the Administrator amend the municipal solid waste landfill criteria to accomplish the following:

- (1) Incorporate the fugitive dust criteria of the CCR rule at 40 C.F.R. § 257.80 to effectively minimize coal ash from becoming airborne at the facility, including coal ash fugitive dust originating from the landfill as well as roads and other ash management and material handling activities.
- (2) Incorporate the liner design and leachate collection and removal system criteria of the CCR rule at 40 C.F.R. § 257.70 for new and expanded MSW landfills to prevent the leaching of coal ash contaminants into groundwater.

- (3) Incorporate the relevant groundwater monitoring and corrective action requirements of the CCR rule at 40 C.F.R. §§ 257.90-98 to ensure that releases of coal ash contaminants are promptly detected and remediated.
- (4) Require MSW landfills to evaluate coal ash for waste compatibility and placement by establishing a “CCR acceptance plan” maintained in the facility operating record that ensures the facility is aware of the physical and chemical characteristics of the coal ash and handles it with the additional precautions necessary to avoid dust, maintain structural integrity, and avoid compromising the gas and leachate collection systems of the landfill so that human health and the environment are protected.
- (5) Require weekly and annual inspections of MSW landfills receiving coal ash that are equivalent to 40 C.F.R. § 257.84 and require owners and operators to remedy all deficiencies found at landfill inspections.
- (6) Restrict the siting of new MSW landfills and lateral expansions of MSW landfills to ensure the placement of coal ash above the uppermost aquifer as required by 40 C.F.R. § 257.60.
- (7) Require public notifications equivalent to 40 C.F.R. § 257.107 to ensure impacted communities are able to access groundwater monitoring data, inspections, and other documents demonstrating compliance.
- (8) Incorporate environmental justice into permitting activities for municipal solid waste landfills that receive coal ash. This should include requiring permitting agencies: (1) to identify and address disproportionately high and adverse human health or environmental effects of coal ash disposal on minority populations and low-income populations; (2) to employ tools to avoid or reduce potential environmental justice effects, including

increasing public involvement; and (3) to consider cumulative impacts of waste disposal on already over-burdened communities.

Petitioners request that EPA amend the criteria applicable to municipal solid waste landfills according to the following schedule:

- (1) Publish proposed criteria no later than six months from the receipt of this petition; and
- (2) Finalize amended criteria no later than one year from the receipt of this petition.

II. PETITIONERS

Petitioner *Clean Water Action* is a national citizens' organization, founded in 1972, of over 1 million members and is active in over a dozen states. Clean Water Action works for strong public health and environmental protections with an emphasis on those that impact water resources. Its activities include policy research and advocacy, public education and grassroots mobilization.

Petitioner *Natural Resources Defense Council* ("NRDC") is a nonprofit advocacy organization whose purpose is to safeguard the Earth: its people, its plants and animals, and the natural systems on which all life depends. NRDC uses law, science, and the support of more than two million members and online activists to protect public health and the environment and to solve the most pressing environmental issues we face today. NRDC has worked for many years to protect safe drinking water and clean water more generally, and to ensure that safe and sufficient water sources are available to meet the needs of communities and ecosystems, now and in the future.

Petitioner *Public Justice* is an advocacy organization that pursues high impact lawsuits to combat social and economic injustice, protect the Earth's sustainability, and challenge predatory corporate conduct and government abuses.

Petitioner *Southern Alliance for Clean Energy* ("SACE") has been a leading voice for energy policy to protect the quality of life and treasured places in the Southeast, since 1985. SACE works to minimize the impact of the energy sector on the Southeast's communities, natural resources, and economies. SACE also works to support clean energy, air, water, and safe communities.

Petitioner *Southern Environmental Law Center* ("SELCC") is a regional nonprofit using the power of the law to protect the health and environment of the Southeast (Virginia, Tennessee, North and South Carolina, Georgia, and Alabama). Founded in 1986, SELCC's team of more than 60 legal and policy experts represent more than 100 partner groups on issues of climate change and energy, air and water quality, forests, the coast and wetlands, transportation, and land use.

Petitioner *Sierra Club* is the nation's largest and most influential grassroots environmental organization with more than two million members and supporters across the country. Founded in 1892, the 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 to protect and restore the quality of the natural and human environment; and to use all lawful means to carry out these objectives. To this end, the Sierra Club is engaged in a nationwide campaign to reduce dependence on coal-fired power and to move our economy to a clean energy future.

Petitioner *Silent Disaster* is a community organization located in Waycross, Ware County, Georgia. The community group represents over 3,300 members concerned with the

lingering toxic chemicals from known contaminated sites. Included among these sites are smaller municipal landfills, Broadhurst Landfill, and local water treatment systems that have received coal ash. Silent Disaster is determined to pursue the restoration of its county and the surrounding counties to good health by increasing awareness and preventing further toxic injustice.

III. STATEMENT OF GROUNDS AND ARGUMENT

A. Background

After decades of inaction by EPA to address the threats posed by coal ash, EPA issued its final rule governing the disposal of coal ash from electric utilities on April 17, 2015. 80 Fed. Reg. 21,302 (Apr. 17, 2015). The final rule regulates the disposal of coal ash as solid waste under subtitle D of RCRA and establishes national minimum criteria for existing and new coal ash landfills and surface impoundments. While the rule addresses some threats posed by coal ash, it fails in many important ways to protect health and the environment, including by exempting municipal solid waste landfills from the rule's requirements.

Coal-fired power plants in the United States burn more than 800 million tons of coal every year, producing more than 110 million tons of solid waste in the form of fly ash, bottom ash, scrubber sludge, and boiler slag. 80 Fed. Reg. at 21,303. Coal naturally contains trace amounts of many toxic chemicals, and these chemicals are concentrated in the solid waste when the coal is burned. 75 Fed. Reg. 35,128, 35,138 (June 21, 2010). In addition, Clean Air Act regulations have required coal plants to capture increasing amounts of toxic emissions at the smokestack, like mercury and other heavy metals, and these pollutants, particulates, and sludge end up in the solid waste. *Id.* at 35,139. Consequently, coal ash is a toxic brew of carcinogens, neurotoxins, and poisons—including arsenic, boron, cadmium, hexavalent chromium, lead,

lithium, mercury, molybdenum, selenium, and thallium. *See id.* at 35,139, 35,153, 35,168.

When this dangerous waste is not disposed of properly, the toxic chemicals are re-released to air, groundwater, surface water, and soil.

Most coal ash is currently disposed in dedicated landfills and surface impoundments located at or close to the power plants, which are owned and operated by the electric utility that generated the waste. 80 Fed. Reg. at 21,341. However, there have been notable exceptions. Following the catastrophic release of more than 1 billion gallons of coal ash sludge from the coal ash impoundment at the Tennessee Valley Authority (TVA) Kingston Fossil Plant, more than 4 million tons of the spilled coal ash was removed from the rivers, bays, and riverfront properties and transported to a municipal solid waste landfill in Alabama, about 300 miles from the site of the disaster. Furthermore, EPA's new CCR rule provides strong incentives for closure of coal ash surface impoundments, which is increasing the demand for off-site landfill space for tens of millions of tons of coal ash.

B. Federal Criteria For The Operation Of Municipal Solid Waste Landfills

In 1991, EPA promulgated criteria for the operation of municipal solid waste landfills under the authority of sections 1008, 2002, 4004 and 4010 of subtitle D of RCRA. 42 U.S.C. §§ 6907, 6912, 6944, 6949a. Section 1008 directs EPA to publish guidelines for solid waste management, including criteria that define solid waste management practices that constitute open dumping and are prohibited under subtitle D of RCRA. Section 4004 further requires EPA to promulgate regulations containing criteria for determining which facilities are open dumps. Section 4010, added by the Hazardous and Solid Waste Amendments of 1984, directs EPA to revise the criteria promulgated under 1008 and 4004 for facilities that may receive hazardous household waste or small quantity generator hazardous waste.

EPA's subtitle D criteria for municipal solid waste landfills, set forth in 40 C.F.R. Part 258, established minimum national performance standards necessary to ensure that "no reasonable probability of adverse effects on health or the environment" will result from solid waste disposal facilities or practices pursuant to section 4004(a) of RCRA. *Id.* § 6944(a). A facility or practice that meets the criteria is classified as a "sanitary landfill." A facility failing to satisfy any of the criteria is considered an "open dump" for purposes of State solid waste management planning. Practices not complying with the criteria also constitute "open dumping" for purposes of the federal prohibition on open dumping in section 4005(a). *Id.* § 6945(a). EPA's 1991 criteria for municipal solid waste landfills have undergone few significant amendments since their promulgation, save the addition of financial assurance requirements in 1996 and 1998. 61 Fed. Reg. 60,328 (Nov. 27, 1996); 63 Fed. Reg. 17,706 (Apr. 10, 1998). Certainly EPA did not anticipate, nor does the criteria provide for, the disposal of high volumes of industrial waste in the form of coal ash in municipal solid waste landfills.

The nation's more than 1,900 municipal solid waste landfills largely receive household waste.⁵ Total municipal solid waste generation amounted to 254 million tons in 2013 and was comprised largely of organic materials.⁶ Municipal solid waste landfills can also receive non-hazardous sludge, industrial solid waste, and construction and demolition debris. All municipal solid waste landfills must comply with the federal regulations in 40 C.F.R. Part 258 or equivalent state regulations. Federal municipal solid waste landfill standards include:

⁵ EPA, *Municipal Solid Waste in the United States, 2009*, available at <http://www3.epa.gov/epawaste/nonhaz/municipal/pubs/msw2009rpt.pdf> at 15.

⁶ "Paper and paperboard account for 27 percent and yard trimmings and food account for another 28 percent. Plastics comprise about 13 percent; metals make up 9 percent; and rubber, leather, and textiles account for 9 percent. Wood follows at around 6 percent and glass at 5 percent. Other miscellaneous wastes make up approximately 3 percent of the MSW generated in 2013." EPA, MSW, <https://www3.epa.gov/epawaste/nonhaz/municipal/>.

- Location restrictions. Criteria ensure that landfills are built in suitable geological areas away from faults, wetlands, flood plains, unstable areas and other restricted areas.
- Operating practices. Criteria include compacting and covering waste frequently with several inches of soil to help reduce odor; control litter, insects, and rodents; and protect public health.
- Groundwater monitoring requirements. Criteria require testing groundwater wells to determine whether waste materials have escaped from the MSW placed in the landfill.
- Closure and post-closure care requirements. Criteria include covering landfills and providing long-term care of closed landfills.
- Corrective action provisions. Criteria include the control and clean up of landfill releases to achieve groundwater protection standards.
- Financial assurance. Criteria require funding for environmental protection during and after landfill closure (i.e., closure and post-closure care).

C. Promulgation Of Criteria For Disposal Of Coal Combustion Residuals

On April 17, 2015, EPA published a final rule to regulate the disposal of coal combustion residuals under subtitle D of RCRA. 80 Fed. Reg. 21,302. The CCR rule establishes national minimum criteria for existing and new CCR landfills and existing and new CCR surface impoundments and all lateral expansions, consisting of location restrictions, design and operating criteria, groundwater monitoring and corrective action, closure requirements and post closure care, and recordkeeping, notification, and internet posting requirements. EPA defined CCR as the solid waste generated from the combustion of coal for the purpose of generating steam to produce electricity by electric utilities and independent power producers. CCR includes fly ash, bottom ash, boiler slag, and flue gas desulfurization materials.

EPA drew heavily on the existing criteria applicable to MSW landfills in 40 C.F.R. Part 258 for many of the requirements applicable to CCR landfills. 80 Fed. Reg. at 21,330. Despite the similarities of the two regulatory schemes, however, the CCR rule differs in important

respects. EPA tailored the coal ash disposal standards to address the specific risks of harm to health and the environment from coal ash, taking into account the volume, behavior and composition of the toxic waste. EPA applied these coal ash-specific standards to the disposal of ash in a variety of disposal scenarios, including wet impoundments, dry landfills, waste piles, gravel quarries, and sand and gravel pits. EPA did not, however, apply the coal ash-specific disposal safeguards to MSW landfills that receive coal ash. EPA exempted MSW landfills that receive coal ash from the requirements of the CCR rule. 40 C.F.R. § 257.50(i).

Nevertheless, EPA stated explicitly in the preamble to the CCR rule that it expected State Directors to require MSW landfills to modify their permits to address several important program requirements that are absent in part 258 for MSW landfills that receive coal ash. 80 Fed. Reg. at 21,341-42. As described below, these requirements specifically address protection of air and water from coal ash pollutants and address issues of waste management, structural stability and waste compatibility that arise from the disposal of coal ash at MSW landfills. EPA concluded that coal ash can be handled safely in permitted MSW landfills, but only if State Directors revise permits accordingly. *Id.*

EPA's enumeration of the changes that must be made to existing MSW landfill permits when the landfill receives coal ash is tantamount to an admission that the current program requirements are unable to achieve the subtitle D statutory obligation of "no reasonable probability of adverse effects on health or the environment." 42 U.S.C. § 6944(a). Consequently, in order to meet the statutory requirements of subtitle D of RCRA, EPA must amend the municipal solid waste landfill criteria to incorporate the critical safeguards that are missing from the MSW landfill criteria.

D. Deficiencies In The Municipal Solid Waste Landfill Criteria For Landfills That Receive Coal Ash

1. Air Criteria Must Protect Human Health from Coal Ash Fugitive Dust.

EPA recognized that fugitive dust from coal ash disposal at both landfills and surface impoundments creates an unreasonable probability of adverse effects on health and the environment if not properly controlled. 80 Fed. Reg. at 21,386-88. EPA noted that its screening level analysis of the risks posed by fugitive dust from coal ash landfills indicated that, absent controls, dust levels at nearby locations could exceed the 24-hour PM 2.5 National Ambient Air Quality Standard for fine particulates. *Id.* at 21,386; *see also* Exhibit 6, EPA, Draft, Inhalation of Fugitive Dust, A Screening Assessment of the Risks Posed by Coal Combustion Waste Landfills, Sept. 2009. EPA also found that excessive cancer risks are associated with the inhalation of hexavalent chromium in coal ash fugitive dust. 80 Fed. Reg. at 21,386.

In support of the enhanced requirements pertaining to the control of fugitive dust in the CCR rule, EPA collected evidence of fugitive dust exposure at eight public hearings on the proposed CCR rule conducted by the agency in 2010. At these hearings, stakeholders provided extensive information about fugitive dust impacts associated with coal ash disposal adjacent to their residences, including documented reports on fugitive dust provided by citizen groups. *Id.* In addition, EPA compiled records of more than 20 documented fugitive dust cases indicating that dust problems arise in all phases of the coal ash life cycle—from “conveyor belt transfer at the coal-fired power plant, through stockpiling and transport . . . to final landfill disposition.” *Id.* EPA’s findings are contained in a technical support document to the CCR rule titled “Damage Cases: Fugitive Dust Impact,” attached as Exhibit 7. Lastly EPA also documented that state regulators did not always respond in an effective or timely manner to assist communities suffering from exposure to coal ash fugitive dust. *Id.*

Consequently, the CCR rule contains air criteria that require owners and operators of coal ash disposal units to “adopt measures that will effectively minimize CCR from becoming airborne at the facility, including CCR fugitive dust originating from CCR units, roads, and other CCR management and material handling activities.” 40 C.F.R. § 257.80. The rule’s mandatory measures include development of a site-specific CCR fugitive dust control plan, conditioning of CCR placed in landfills (treating CCR with water or dust suppression agents to prevent wind dispersal), establishing procedures to log citizen complaints, and annual reports documenting compliance. *Id.*

In contrast, the type of waste normally disposed in MSW landfills is usually very different in composition from coal ash and not normally susceptible to fine particulate airborne dispersion. Therefore the conditioning of waste with water or dust suppressants is not something that is routinely conducted or required at MSW landfills. In fact the disposal of most liquids in MSW landfills is strictly prohibited, and the intentional addition of liquids to municipal solid waste is avoided because of the creation of potentially hazardous leachate and run-off. *Id.* § 258.28.

Thus municipal solid waste criteria do not contain requirements analogous to the specific air criteria of the CCR rule. 80 Fed. Reg. at 21,341. Section 258.24 of part 258 states only that owners or operators of MSW landfills must ensure that the units do not violate any applicable requirements developed under a State Implementation Plan (“SIP”) approved or promulgated by the Administrator pursuant to section 110 of the Clean Air Act, as amended. 40 C.F.R. § 258.24. This is the exact requirement found at section 257.3-7 that EPA found wholly insufficient to protect health and the environment from coal ash disposal at landfills and impoundments. 80

Fed. Reg. at 21,387. EPA cannot now argue that this standard alone is sufficiently protective of health and the environment for MSW landfills that receive coal ash.

2. The Design of the Landfill Liner and Leachate Collection and Removal System Must Address Specific Risks from Coal Ash.

EPA established design criteria for composite liners, alternative composite liners and leachate collection and removal systems for all new coal ash landfills and lateral expansions of coal ash landfills. 40 C.F.R. § 257.70. EPA determined that both the coal ash “damage case history and the risk assessment clearly show the need for and the effectiveness of appropriate liners in reducing the potential for groundwater contamination at CCR landfills.” 80 Fed. Reg. at 21,371. Because adequate liners and leachate collection systems are the first line of defense against groundwater contamination from coal ash, it is essential that all new and expanded MSW landfills are required to employ systems that EPA has determined meet the subtitle D protectiveness standard for coal ash disposal. The design specifications for liner and leachate collection systems currently applicable to MSW landfills that receive coal ash are not, however, equivalent to these new standards. 40 C.F.R. § 258.40.

Despite the requirement in the CCR rule to install a composite liner or alternative composite liner, the MSW landfill criteria permit a State to approve a landfill design based solely on an outdated performance standard in lieu of a liner. *Id.* § 258.40(a)(1). Pursuant to section 258.40(a)(1), a State can approve a new MSW landfill or lateral expansion without a liner, if the unit is designed to ensure that the concentration of specified pollutants “will not be exceeded in the uppermost aquifer at the relevant point of compliance.” *Id.* There are multiple problems with this performance standard for MSW landfills that receive coal ash. First, the allowable contaminant concentrations in groundwater in the uppermost aquifer are based on outdated federal drinking water standards for three common coal ash contaminants—arsenic, cadmium

and lead. Table 1 of section 258.40, which contains the allowable concentrations of these heavy metals, permits 0.05 mg/L of arsenic and lead and 0.01 of cadmium in the groundwater. However, the current maximum contaminant level (“MCL”) for arsenic is 0.01 mg/L, the action level for lead is 0.015 mg/L, and the MCL for cadmium is 0.005 mg/L. *Id.* §§ 141.62(b), 141.80(c)(1). Consequently the MSW criteria would allow coal ash to contaminate an aquifer with up to five times the level of hazardous metals allowed under the CCR rule at the boundary of a coal ash landfill. Second, to make matters worse, the MSW criteria allow a State to set the “relevant point of compliance” up to 150 meters from the waste management unit boundary. *Id.* § 258.40(d). This allows the contaminated water to extend far beyond the waste unit boundary. These criteria thus provide significantly less protection of groundwater than the CCR rule, which requires compliance with groundwater protection standards (the MCL for these metals) at the waste boundary.⁷ *See* 40 C.F.R. § 257.94. Lastly, even if a performance standard was deemed acceptable in lieu of a composite liner requirement, the list of contaminants in Table 1 of section 258.40 would need to include all of the coal ash contaminants identified in the CCR rule as contaminants of concern. *See* Appendix III to Part 257, Constituents for Detection Monitoring and Appendix IV to Part 257, Constituents for Assessment Monitoring.

Secondly, the CCR rule requires all new coal ash landfills to have a leachate collection and removal system designed and operated to maintain less than a 30-centimeter depth of leachate. 40 C.F.R. § 257.70(d)(1). This requirement is consistent with the requirement for leachate collection systems required at MSW landfills. *See id.* § 258.40(a)(2). EPA, however, also explicitly recognized that leachate collection and removal systems for coal ash landfills require additional safeguards to operate correctly. 80 Fed. Reg. at 21,372. Consequently, EPA

⁷ “Waste [] boundary” is defined in the CCR rule as “a vertical surface located at the hydraulically downgradient limit of the [CCR] unit. This vertical surface extends down into the uppermost aquifer.” 40 C.F.R. § 257.5.

requires leachate collection and removal systems in coal ash landfills to “be constructed of sufficient strength and thickness to prevent collapse from the pressure of the CCR and to minimize clogging during the active life and post closure care period.” *Id.*; see 40 C.F.R. § 257.70(d)(2), (3); see also Exhibit 8, Christopher D. Hardin & Nick L. Perotta, *Operations and Maintenance Guidelines for Coal Ash Landfills—Coal Ash Landfill are NOT the Same as Subtitle D Solid Waste Landfills* (2011), available at <http://www.flyash.info/2011/127-Hardin-2011.pdf>. The criteria for MSW landfills do not require these important additional protections specific to coal ash management.

3. Groundwater Monitoring and Corrective Action Must Include Coal Ash Pollutants.

EPA established groundwater monitoring and corrective action requirements in the CCR rule to ensure that groundwater contamination at new and existing coal ash landfills will be timely detected and thoroughly remediated as necessary to protect human health and the environment. The requirements reflect Congressional intent that protection of groundwater be a prime objective of any new solid waste regulations. 80 Fed. Reg. at 21,396. EPA’s documented damage cases and risk assessments indicate there is significant potential for coal ash landfills to leach hazardous constituents into groundwater, impair drinking water supplies and cause adverse impacts on human health and the environment. *Id.*; see also Exhibit 9, EPA’s Damage Case Compendium, Dec. 18, 2014. Indeed, EPA identified groundwater contamination as one of the key environmental and human health risks posed by coal ash landfills. 80 Fed. Reg. at 21,396. Groundwater monitoring is a key mechanism for facilities to verify that the existing containment structures, such as liners and leachate collection and removal systems, are functioning as intended. Thus, according to EPA, in order for a coal ash landfill to show no reasonable probability of adverse effects on health or the environment, a system of groundwater monitoring

to detect any contamination and corrective action requirements to address identified contamination, are essential. *Id.* In order for a MSW landfill receiving coal ash to show no reasonable probability of adverse effects, the same or equivalent groundwater monitoring and corrective action requirements must apply.

However, EPA's current groundwater monitoring and cleanup requirements for MSW landfills in part 258 are not equivalent to the requirements in the CCR rule. Although EPA's groundwater monitoring requirements for coal ash landfills are based on the MSW landfill requirements, there are some critical differences. The list of constituents for detection monitoring for MSW landfills, set out in Appendix I to Part 258, contains *none* of the coal ash constituents for detection monitoring found in Appendix III to Part 257. EPA recognized this critical omission and recommended that State Directors of approved municipal solid waste programs establish an alternative list of inorganic indicator parameters that include the missing coal ash parameters, namely boron, calcium, chloride, fluoride, pH, sulfate and total dissolved solids (TDS). *Id.* at 21,342. These inorganic indicator parameters are known to be leading indicators of coal ash releases. *Id.* Therefore, EPA "strongly" and explicitly recommended that State Directors add these constituents to the list of indicator parameters to be monitored during detection monitoring of groundwater if and when a MSW landfill receives coal ash. *Id.* Specifically, EPA stated that it "expects State Directors to utilize the provisions in § 258.54(a)(2) to revise the detection monitoring constituents to include those constituents being promulgated in this rule under § 257.90." *Id.* In light of the critical importance of effective groundwater monitoring and corrective action, EPA's reliance on State Directors to revise permit conditions voluntarily at some future date is insufficient to prevent the unreasonable probability of adverse effects and is thus impermissible under subtitle D.

Similarly, in order to ensure effective corrective action (cleanup) at MSW landfills that receive coal ash, all constituents for assessment monitoring in the CCR rule, set forth in Appendix IV of Part 257, must be included in Appendix II to Part 258. Appendix II of Part 258 is the list of constituents that drive cleanup actions at MSW landfills. The “List of Hazardous Inorganic and Organic Constituents” in Appendix II to Part 258 omits the following common coal ash constituents: fluoride, lithium, molybdenum and radium 226 and 228. Consequently, the corrective action requirements of part 258 are insufficient to ensure that releases of coal ash contaminants are promptly detected and remediated. If any of these missing toxic constituents are found in groundwater monitoring wells at MSW landfills as a result of coal ash leachate leaking from the landfill, *no cleanup will be required under part 258*. This omission presents an unreasonable probability of adverse effects on human health and the environment.

4. CCR Acceptance Plans Must Address Potential Problems of Waste Compatibility and Placement at MSW Landfills.

In the preamble to the final CCR rule, EPA makes several critical recommendations pertaining to waste compatibility and placement when coal ash is disposed in a MSW landfill. 80 Fed. Reg. at 21,342. The potential for interactions between coal ash and municipal waste raises an unreasonable probability of adverse impacts to health and the environment. Some of these harmful interactions can cause severe odors in the form of hydrogen sulfide gas, chemical incompatibility with landfill liners, filter incompatibility in leachate collection systems, changes in pH due to acid or alkaline coal ash, rises in temperature that may affect landfill gas temperature, and geotechnical problems that may result in saturated zones and slip planes. *See* Exhibit 10, Don Grahlherr, EPA Coal Ash Rule, Impacts to the Waste & Recycling Industry, Apr. 21, 2015, *available at* <http://awmastl.org/blog/wp-content/uploads/CCR-Rule-Impact-to-MSW-Industry.pdf>. EPA concluded that coal ash can readily be handled in permitted MSW

landfills, but only if the coal ash is “evaluated for waste compatibility and placement as required under the part 258 requirements.” 80 Fed. Reg. at 21,342.

To this end, and consistent with the recordkeeping requirements in section 258.29, EPA “expects” State Directors to encourage MSW landfills receiving coal ash after the effective date of the CCR rule to conduct a waste compatibility and placement evaluation pursuant to a “CCR acceptance plan” that is maintained in the facility operating record. *Id.* In light of the serious adverse interactions that may occur when coal ash is co-disposed in MSW landfills, this detailed evaluation must not simply be an “expectation,” but must be a mandatory requirement prior to the disposal of any coal ash in MSW landfills. Absent a mandatory requirement to formulate and follow a CCR acceptance plan, the part 258 program is insufficient to prevent the reasonable probability of adverse effects to health and the environment. A CCR acceptance plan would ensure that the MSW landfill operator is aware of the specific physical and chemical characteristics of the coal ash and that the coal ash is handled with the additional precautions necessary to avoid dust, maintain structural integrity, and avoid compromising the gas and leachate collection systems of the landfill so that human health and the environment are protected.

5. MSW Landfills Receiving Coal Ash Must Be Subject to Inspections and Remediation Requirements.

The operating criteria for MSW landfills do not include any inspection requirements. In contrast, the CCR rule requires weekly and annual inspections of all coal ash landfills. 40 C.F.R. § 257.84. First, a qualified person must examine all coal ash landfills at intervals not exceeding seven days and inspect for any appearances of actual or potential structural weakness and other conditions that are disrupting or have the potential to disrupt the operation or safety of the landfill. *Id.* § 257.84(a)(1)(i). The results of weekly inspections must be documented in the

owner/operator's operating record. *Id.* § 257.84(a)(1)(ii).

Second, coal ash landfills must be inspected on an annual basis by a professional engineer to ensure that the design, construction, operation, and maintenance of the landfill are consistent with recognized and generally accepted good engineering standards. *Id.* § 257.84(b). The inspection must, at a minimum, include: (i) "a review of available information regarding the status and condition of the [landfill], including, but not limited to, files available in the operating record (e.g., the results of weekly and annual inspections)"; and (ii) a visual inspection of the landfill "to identify signs of distress or malfunction." *Id.* § 257.84(b)(1)(i)-(ii). The professional engineer must prepare a report following each inspection that addresses: (i) "any changes in geometry of the structure since the previous annual inspection"; (ii) the approximate volume of coal ash contained in the unit; (iii) "any appearances of an actual or potential structural weakness of the [landfill], in addition to any existing conditions that are disrupting or have the potential to disrupt the operation and safety" of the landfill; and (iv) any "other change(s) which may have affected the stability or operation of the [landfill] since the previous annual inspection." *Id.* § 257.84(b)(2). The owner/operator must place all annual inspection in the operating record, submit a notification to the State at completion, and post the inspection report on a publicly accessible internet website. *Id.* §§ 257.105(g), 106(g), 107(g). Lastly, if a deficiency or release is identified during an inspection, "the owner or operator must remedy the deficiency or release as soon as feasible and prepare documentation detailing the corrective measures taken." *Id.* § 257.84(b)(5).

Although these periodic inspections are an essential safeguard for coal ash landfills, the criteria for MSW landfills require no inspections whatsoever. Because disposal of coal ash can involve serious and time-sensitive problems involving structural stability, fugitive dust, noxious

gas generation and adverse waste interactions, frequent inspections are essential to ensure no reasonable probability of adverse effects. For these reasons, EPA must incorporate equivalent inspection requirements into the part 258 criteria for MSW landfills that receive coal ash.

6. Siting Restrictions for MSW Landfills Must Require Placement of Coal Ash Above the Uppermost Aquifer.

Under the CCR rule, EPA is requiring new coal ash landfills and all lateral expansions to be constructed with a base that is located no less than 1.52 meters (five feet) above the uppermost aquifer or to demonstrate that there will not be an intermittent, recurring, or sustained hydraulic connection between any portion of the base of the landfill and the uppermost aquifer due to normal fluctuations in groundwater elevations (including groundwater elevations during the wet season). 40 C.F.R. § 257.60(a). New coal ash landfills and lateral expansions cannot be constructed unless they meet one of these two standards. *Id.* EPA is imposing this condition because when the groundwater elevation is high enough to intersect the base of a coal ash landfill, the hydraulic connection enhances the transport of contaminants of concern from the landfill into groundwater. 80 Fed. Reg. at 21,362.

In fact, EPA found that in some recently documented cases of water contamination from coal ash, the placement of large volumes of coal ash into highly permeable strata in the disposal area promoted ash-water interactions and consequently resulted in significant contamination of groundwater. *Id.* For example, from 1995 to 2006 in Anne Arundel County, Maryland, 4.6 million tons of coal ash “were placed directly in two sand and gravel quarries without a geomembrane liner or leachate collection system.” *Id.* “Rainwater infiltration into exposed [coal ash] coupled with groundwater-[ash] interactions and the transmissivity characteristics of local strata contributed to rapid migration of heavy metals, including antimony, arsenic, cadmium, nickel, and thallium to residential drinking water wells located near the [] pits and

significant deterioration of water quality” as a result of ash placement. *Id.*; *see also* Exhibit 9. EPA also found that from 1980 to 1997 in Lansing, Michigan, around 500,000 tons of coal ash was dumped into a gravel pit with an elevated water table. 80 Fed. Reg. at 21,362. “A remedial investigation [] established that groundwater mounding [had] immersed the [coal ash] into the upper aquifer resulting in on-site exceedances of groundwater quality protection standards for sulfate, manganese, lead, selenium, lithium, and boron.” *Id.* EPA noted that placement of coal ash into “un-engineered, unlined units in permeable strata has plainly led to significant adverse impacts to groundwater.” *Id.*

Thus EPA requires separation from groundwater for all new and expanded coal ash landfills. In addition, the owner or operator of the landfill or expansion must obtain a certification from a qualified professional engineer stating that the demonstration of separation meets the requirements of the rule. 40 C.F.R. § 257.60(b). For a new coal ash landfill or any lateral expansion, the owner or operator must complete the demonstration no later than the date of initial receipt of coal ash in the new or expanded landfill. *Id.* § 257.60(c)(2). The owner or operator must place the demonstration in the facility’s operating record, submit a notification to the state, and post the demonstration on the landfill’s publicly available website. *Id.* §§ 257.60(c)(3), 257.105(e), 257.106(e), 257.107(e). An owner or operator of a new coal ash landfill or lateral expansion who fails to make the demonstration showing compliance is prohibited from placing coal ash in the landfill or expansion. *Id.* § 257.60(c)(5).

In contrast, the siting criteria for MSW landfills contain no prohibition against siting the landfill or landfill expansion in or close to the water table. Because the criteria do not contain this critical requirement to separate coal ash from the underlying groundwater, the criteria cannot ensure no reasonable probability of adverse effects on health or the environment. EPA must

amend subpart B of part 258, which contains the criteria for location restrictions, to include the requirement to place all coal ash above the uppermost aquifer, as specified in the CCR rule.

7. MSW Landfills Receiving Coal Ash Must Be Required To Make Compliance Data Publicly Accessible.

The criteria pertaining to MSW landfills lack notification and posting requirements sufficient to ensure impacted communities are able to access groundwater monitoring data, inspections and other documents critical to the health and safety of their communities and environment. Because the addition of coal ash to a MSW landfill raises significant new threats and often involves substantial increases in the volume of waste disposed in the landfill, nearby residents must have prior notice of dumping as well as access to health and safety data during the operation of the facility. While section 258.29 requires an owner/operator of a MSW landfill to record and retain certain records “near the facility,” these records are not necessarily available to the public. Therefore residents near such facilities are not guaranteed the right to view critical compliance documents that provide information concerning monitoring, cleanup and siting. *See* 40 C.F.R. § 258.29. EPA needs to amend part 258 to require public notifications equivalent to those in section 257.107 to ensure no unreasonable probability of adverse effects to health and the environment.

8. Critical Gaps In MSW Landfill Criteria Raise Significant Environmental Justice Concerns That Must Be Addressed

- a. *The disposal of coal ash in MSW landfills has caused in the past and is likely to cause in the future a disproportionate impact on environmental justice communities.*

The disposal of coal ash in MSW landfills is likely to have disproportionate impacts on the health, environment, and economic well-being of low-income and minority communities.⁸ Although nationwide statistics for MSW landfills are not available, a 2007 study of solid waste landfills in North Carolina indicates that such landfills are disproportionately located in communities of color and low wealth. *See* Exhibit 11, Jennifer M. Norton *et al.*, *Race, Wealth, and Solid Waste Facilities in North Carolina*, 115 *Environ Health Perspect* 1344, 1344-50 (2007). This study concludes that the likelihood of finding a solid waste facility was 2.8 times greater in neighborhoods (census block groups) with 50 percent or higher people of color compared with neighborhoods with less than 10 percent people of color, and 1.5 times greater in neighborhoods with median house values less than \$60,000 compared with neighborhoods with median house values \$100,000 or higher. *Id.* at 1344. Among neighborhoods that did not have a previously permitted solid waste facility, the hazard of a new permitted facility was 2.7 times higher in neighborhoods with 50 percent or higher people of color compared with neighborhoods with less than 10 percent people of color. *Id.*

The study also found that an existing solid waste facility is the most important determinant of the location being selected for a new solid waste landfill during the time period studied. *Id.* at 1348. According to the authors, this provides support for the hypothesis that existing landfills attract additional solid waste facilities. Consequently “the burden of solid

⁸ See, e.g., Physicians for Social Responsibility and Earthjustice, *Ash in Lungs*, at 11-15, *available at* http://earthjustice.org/sites/default/files/files/Ash_In_Lungs_1.pdf. *See also*, Statement of Lisa Evans, Earthjustice submitted to the U.S. Commission on Civil Rights, “Coal Ash Pollution and Impacts on Minority and Low-Income Communities,” January 22, 2016, attached as Exhibit 16.

waste on people of color [and low-income communities] will be difficult to reverse without addressing the momentum created by the historical pattern of disproportionate siting of solid waste facilities.” *Id.* In sum, the finding of disproportionate impact and the likelihood that these communities are more likely to be additionally burdened by multiple solid waste disposal facilities, or expansions of existing facilities, increases the urgency to ensure that the federal criteria for MSW landfills is sufficiently protective of health and the environment.

One example of the pattern of adding to an already burdened low-income or minority community is the proposed expansion of the Broadhurst Landfill in Wayne County, Georgia. In this instance, Republic Industries, Inc. is seeking to greatly expand an existing MSW landfill to allow it to receive up to 10,000 tons of coal ash per day. *See* Exhibit 5. Wayne County meets EPA's criteria for a “low income population.”⁹ As stated earlier, more than a dozen permit revisions of the Broadhurst Landfill since 2001 have yielded no significant increase in health and environmental protections from coal ash from the Georgia Environmental Protection Division.

Lastly, many factors cause low-income communities and communities of color to experience greater adverse impacts to their health and environment from MSW landfills receiving coal ash than communities with greater resources. These factors include decreased access to quality health care, higher disease prevalence, less access to nutritious foods, and increased exposure to occupational hazards. Factors that could promote increased chemical exposure include unprotected and untested drinking water sources, poorly insulated housing, and lack of money for household protection (e.g., filters and water purifiers). Lack of financial

⁹ Wayne County has a median income of \$37,970 (less than 77 percent of Georgia's median income) and a per capita income of \$18,139 (71 percent of Georgia's per capita income of \$25,427). More than 25 percent of Wayne County residents live in poverty, compared to 18.3 percent of Georgia citizens. The median value of a home in Wayne County is \$85,300 compared to \$148,000 for Georgia. *Compare* US Census Bureau QuickFacts, Wayne County, Georgia, <http://www.census.gov/quickfacts/table/PST045215/13305> with US Census Bureau QuickFacts, Georgia, <https://www.census.gov/quickfacts/table/PST045215/13>.

resources in a community may limit the collective ability, both physically and politically, to prevent or ameliorate negative impacts of MSW facilities, such as improving the environment when it is threatened or damaged, implementing bigger buffers, employing better engineering, and requiring better management practices. Lastly, the very presence of a MSW landfill receiving coal ash may create barriers to siting health-promoting facilities such as food stores, parks, sports facilities, and walking trails. See Exhibit 11 at 1349.

b. EPA must ensure compliance with Title VI of the Civil Rights Act of 1964 to prevent disproportionate impact from disposal of solid waste.

Title VI of the Civil Rights Act of 1964 prohibits discrimination on the basis of race, color and national origin in programs and activities receiving federal financial assistance. 42 U.S.C. § 2000d et seq. EPA must take steps to ensure recipients of federal funds are issuing permits that are compliant with Title VI. Thus recipients of EPA funding, including state environmental agencies, must ensure that their solid waste programs do not unlawfully discriminate in violation of Title VI. This includes requiring such programs to complete a disproportionate impact analysis when permitting or siting MSW landfills. Effective January 23, 2013, EPA has required that grant recipients acknowledge the following grant condition:

In accepting this assistance agreement, the recipient acknowledges it has an affirmative obligation to implement effective Title VI compliance programs and ensure that its actions do not involve discriminatory treatment and do not have discriminatory effects even when facially neutral. The recipient must be prepared to demonstrate to EPA that such compliance programs exist and are being implemented or to otherwise demonstrate how it is meeting its Title VI obligations.

EPA, Civil Rights Obligations (Jan. 25, 2013) available at http://www.environmental-justice.org/Civil_Rights_Obligations.pdf. In addition to including this grant condition, EPA should require state agencies to demonstrate compliance with Title VI in its permitting and siting decisions for MSW landfills that receive coal ash for disposal.

c. EPA must comply with Executive Order 12,898 by amending the MSW landfill criteria to ensure protection of minority and low-income populations.

EPA must comply with Executive Order 12,898, which requires the agency to identify and address disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority populations and low-income populations in the United States and its territories and the District of Columbia, the Commonwealth of Puerto Rico and the Commonwealth of the Mariana Islands. Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, Exec. Order 12,898 § 1-101, 59 Fed. Reg. 7629 (Feb. 11, 1994). Because disposal of solid waste often disproportionately impacts minority and low-income communities, as described above, EPA must ensure that the disposal of coal ash in such landfills does not cause additional harm. According to EPA, Executive Order 12,898 and the agency's environmental justice policies demand that agency decisions be informed by a consideration of environmental justice issues. Where feasible, federal actions should prevent or address and mitigate environmental justice concerns. EPA, 2015 Screening Report for Municipal Solid Waste Landfills at 4, Apr. 22, 2015, *available at* <https://www.regulations.gov/#!documentDetail;D=EPA-HQ-OAR-2014-0451-0102>. The requested amendment of the MSW landfill criteria will help protect communities from exposure to toxic substances, prevent the exposure of already over-burdened communities, and lessen the cumulative impacts of waste disposal. In addition, the requested amendment will increase the information available to the public concerning disposal activities, monitoring and pollution threats posed by municipal solid waste landfills.

Lastly, EPA must follow through on the specific commitments made in Plan EJ 2014 concerning the permitting that plays a key role in providing protection of public health and the environment in low-income and minority communities. EPA, Plan EJ 2014, Sept. 2011,

available at <http://nepis.epa.gov/Exec/ZyPDF.cgi/P100DFCQ.PDF?Dockey=P100DFCQ.PDF>.

Plan EJ 2014 stated:

EPA will develop and implement tools to: (1) enhance the ability of overburdened communities to participate fully and meaningfully in the permitting process, and (2) assist permitting authorities to meaningfully address environmental justice issues in permitting decisions to the greatest extent practicable. To achieve our goals, the Environmental Justice Permitting Initiative will “identify and develop tools to support the consideration of environmental justice during implementation of permitting programs” to reduce “exposures for those at the greatest risk,” as stated in the FY 2011-2015 EPA Strategic Plan, Cross-Cutting Fundamental Strategy: Working for Environmental Justice and Children’s Health.

Id. at 10. The directives of Executive Order 12,898 make these actions and the amendments requested in this rulemaking petition absolutely imperative.

E. EPA Must Not Rely On States To Amend Voluntarily MSW Landfill Requirements For MSW Landfills That Receive Coal Ash

The coal ash-specific landfill safeguards in the CCR rule, enumerated above, are vital to the protection of the health and environment of communities near MSW landfills receiving coal ash. An examination of several permits of MSW landfills that are currently accepting coal ash indicates, however, that States are not amending MSW landfill permits to include the missing safeguards. In the case of the R & B Landfill in Banks County, Georgia, the Georgia Environmental Protection Division approved a minor modification of the permit which addresses, in part, some fugitive dust issues, but the permit does not correct other critical gaps including the absence of groundwater monitoring parameters specific to coal ash, lack of public notification, absence of inspections, etc. *See* Exhibit 3. Similarly, the Georgia Environmental Protection Division has failed to require Republic Industries, Inc. to revise its “Design and Operation Plan” for the Broadhurst MSW Landfill to include monitoring groundwater for common coal ash contaminants or suppressing coal ash fugitive dust during disposal. This is despite the fact that Republic Industries, Inc. has revised its “Design and Operation” plan more

than a dozen times from 2001- 2015. *See* Exhibit 12, Broadhurst Landfill Design and Operation Plan Revisions 1993-2015. Similarly the Virginia Department of Environmental Quality did not amend the Solid Waste Facility Permit for the Maplewood Recycling and Waste Disposal Facility in Amelia County to address the gaps identified in this petition.¹⁰ Clearly, these examples indicate that states may be unwilling or unable to address these critical issues on a site-by-site basis.

In addition, a regulatory agency that imposes additional safeguards on MSW landfills may be challenged by a waste generator alleging the agency is exceeding its authority. This is the case in Puerto Rico when the Environmental Quality Board (“EQB”) imposed in 2014 additional protections at sanitary landfills (“SLF”) that receive coal ash. The EQB resolved:

It is advised that any SLF that is interested and is eligible to receive CCPs for disposal will need to submit to the EQB, previous to delivery, a modification to its permit of operation. Additionally, the facility will have to present an amended plan of operation and emergency to the EQB which will need to, at a minimum, include adequate methods to control the particulate material and to compact the waste; a description of the safety equipment and protection of the operators and employees of the facility; a detailed description of the run-off control system; and a description of the plan for the monitoring of subterranean waters.

See Exhibit 14, Resolution and Notification, Puerto Rico Environmental Quality Board, Aug. 27, 2014. Within months of the EQB resolution AES Puerto Rico, L.P., the electric utility that disposes of coal ash in Puerto Rico’s MSW landfills, brought suit against the Board, claiming that the agency did not have authority to impose such conditions. *See* Exhibit 15, AES Complaint, Oct. 1, 2014. In the absence of federal criteria requiring such safeguards, the actions of state regulatory agencies may be open to challenge.

¹⁰ *See also*, Exhibit 13, ADEM Permit Modification and Public Comment Response, July 20, 2009.

F. EPA Failed To Provide Notice And The Opportunity To Comment On The Exemption for MSW Landfills in the Final CCR Rule

The public had no notice of EPA's intent to exempt MSW landfills from the requirements of EPA's CCR rule. The exemption contained in EPA's final CCR rule was not found in EPA's 2010 proposed CCR rule. 75 Fed. Reg. 35,128. In fact, the proposed rule clearly required all off-site landfills receiving coal ash to comply with the new requirements. The preamble to the proposed rule stated explicitly "[u]nder a subtitle D regulation, regulated CCR wastes shipped off-site for disposal would have to be sent to facilities that meet the standards [of the CCR rule]." *Id.* at 35,210; *see also* 80 Fed. Reg. at 21,341. Because there was no indication that EPA intended to wholly exclude MSW facilities, the public lacked notice of the exemption and was deprived of the ability to comment.

G. A Moratorium Is Requested for Disposal of Coal Ash Remediation Waste at Municipal Solid Waste Landfills

We request that EPA place an immediate moratorium on the disposal of coal ash from spills remediated under the Comprehensive Emergency Recovery and Liability Act ("CERCLA") in MSW landfills. 42 U.S.C. § 9601 et seq. Section 104(c)(3) of CERCLA mandates that CERCLA remediation waste be managed and disposed of in an environmentally sound manner. 42 U.S.C. § 9604(c)(3). Pursuant to the National Oil and Hazardous Substance Contingency Plan, EPA determines the acceptability of any facility selected for the treatment, storage or disposal of CERCLA waste. *See* 40 C.F.R. § 300.440(a)(4). Until EPA establishes criteria under Part 257 that requires MSW landfills to provide health and environmental protection equivalent to CCR landfills, EPA must not approve disposal of remediation waste resulting from a CERCLA removal or remedial action in MSW landfills.

IV. CONCLUSION

Harm to human health and the environment from disposal of coal ash at a MSW landfill has already occurred. Currently there are no rules in place to ensure that communities near our nation's nearly 2,000 MSW landfills are protected from the release of coal ash pollutants. As more coal ash is transported offsite for disposal as a result of the CCR rule, it is essential that federal criteria be amended to ensure that the disposal of coal ash at MSW landfills does not pose an unreasonable probability of adverse effects to human health or the environment.

To ensure such protection, as required by subtitle D of RCRA, EPA must amend the part 258 criteria applicable to MSW landfills that receive coal ash, as follows:

- (1) Protect human health and the environment from fugitive dust: Section 258.24 must be amended to incorporate the fugitive dust criteria of the CCR rule in section 257.80. 40 C.F.R. §§ 258.24 and 257.80. The criteria must effectively minimize coal ash from becoming airborne at the facility, including coal ash fugitive dust originating from the landfill as well as roads and other ash management and material handling activities.
- (2) Ensure effective and appropriate design of liners and leachate collection and removal systems: EPA must amend section 258.40 to incorporate the liner design and leachate collection and removal system criteria of the CCR rule at 40 C.F.R. § 257.70 for new and expanded MSW landfills to prevent the leaching of toxic coal ash contaminants into groundwater.
- (3) Establish an effective groundwater monitoring and cleanup program: EPA must amend part 258 subpart E to incorporate the relevant groundwater monitoring and corrective action requirements of the CCR rule at sections 257.90-98 to ensure that

releases of coal ash contaminants are promptly detected and remediated. 40 C.F.R. Part 258, Subpart E, Appendices I and II; 40 C.F.R. §§ 257.90-98.

- (4) Protect health and the environment from harm caused by incompatible wastes and dangerous placement of coal ash: EPA must amend section 258.20 to require landfills to evaluate coal ash for waste compatibility and placement by establishing a “CCR acceptance plan” maintained in the facility operating record that ensures facility operators are aware of the physical and chemical characteristics of the coal ash and handle it with the additional precautions necessary to avoid dust, maintain structural integrity, and avoid compromising the gas and leachate collection systems of the landfill so that human health and the environment are protected. 40 C.F.R. § 258.20.
- (5) Ensure timely and effective inspections of MSW landfills that receive coal ash: EPA must amend subpart C of part 258 to require weekly and annual inspections of MSW landfills, which are equivalent to the inspections required by section 257.84, and require owners and operators to cure all deficiencies found, as required by section 257.84. 40 C.F.R. Part 258, Subpart C; 40 C.F.R. § 257.84.
- (6) Protect groundwater by requiring separation of coal ash from the uppermost aquifer: EPA must amend subpart B of part 258 by restricting the siting of new MSW landfills that receive coal ash, as well as lateral expansions that receive coal ash, to placement above the uppermost aquifer as required by section 257.60. 40 C.F.R. § 257.60.
- (7) Increase transparency and provide access to critical public health data: EPA must require public notifications equivalent to section 257.107 to ensure impacted communities are able to access groundwater monitoring data, inspections, and other

documents demonstrating compliance with public safety and environmental safeguards. 40 C.F.R. § 257.107.

- (8) Incorporate environmental justice into permitting activities for municipal solid waste landfills that receive coal ash. EPA should require permitting agencies: (1) to identify and address disproportionately high and adverse human health or environmental effects of coal ash disposal on minority populations and low-income populations; (2) to employ tools to avoid or reduce potential environmental justice effects, including increasing public involvement; and (3) to consider cumulative impacts of waste disposal on already over-burdened communities.

Because of the substantial volume of coal ash currently being disposed of at municipal solid waste landfills, Petitioners request immediate attention to this petition. Petitioners request that EPA publish proposed criteria no later than six months from the receipt of this petition and finalize amended criteria no later than one year from the receipt of this petition.

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Respectfully submitted this 8th day of June 2016.



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