



NOTHING TO CELEBRATE:

**EPA Coal Ash Rules Stuck in Neutral on Fourth Anniversary of TVA spill
A Billion Pounds of Arsenic/Toxic Metals Added to Impoundments/Landfills from 2009-11.**

December 21, 2012

December 22 marks the fourth anniversary of the catastrophic spill of a billion gallons of coal ash from the TVA Kingston plant in Tennessee. The USEPA vowed swift action, but its proposals to set safer disposal standards remain stuck in neutral, stymied by the power industry’s lobbyists and the Obama Administration’s own indecision. Meanwhile, as the “fiscal cliff” threatens to shut down the government before the New Year, the industry’s friends in Congress insist on lame duck passage of a bill to prevent EPA from setting any standards at all.

What is the price of EPA’s inaction, White House indecision, and Congressional interference? Coal plants deposited 218 million tons of ash or scrubber sludge into ponds (surface impoundments) or landfills between 2009 and 2011, the three years following the TVA spill.¹ Based on industry reports submitted to the Toxics Release Inventory, the waste disposed of by power plants over that three year period contained more than a *billion* pounds of arsenic and other toxic metals that are concentrated in the residues from coal combustion. About a third of those toxins in coal wastes were dumped in ponds, and the rest in landfills.

These toxic metals include carcinogens that make water unsafe to drink at concentrations as low as 10 parts per billion (arsenic). Yet in the three years immediately following the spill, these and other highly toxic compounds continued to flow to ponds and landfills at sites where groundwater contamination already exceeds Safe Drinking Water Act “Maximum Contaminant Limits” (MCL) or federal health-based advisories (see Appendix A).

Table 1: Disposal of Metals/Metal Compounds by Electric Generators, 2009-2011

Pollutant	Surface Impoundment (lbs)	Landfill (lbs)	Safe Drinking Water Maximum Contaminant Limit (parts per billion)
Antimony	288569	449809	6
Arsenic	5385221	9189194	10
Chromium	11050138	19993664	100
Lead	6688896	12732220	15
Selenium	674115	2049550	50
Thallium	1110064	1704241	2
Other Metals*	296967332	644826218	
Total Metals	322164335	690944897	

*See Appendix A for list of Toxic Metal/Metal Compounds.

Between 2009 and 2011, electric generators reported depositing an astonishing 5.4 million pounds of arsenic in surface impoundments, and another 9.2 million pounds in landfills. This disposal has continued at sites that already report serious groundwater contamination.

Table 2 identifies eleven such facilities, and indicates which contaminants have shown up in monitoring wells at concentrations exceeding Safe Drinking Water Act “MCL’s” or federal Health Advisories. Additional data can be found in Appendix B. Some contamination may be linked to sites that have closed, but that only illustrates how long toxic metals persist in groundwater.

Table 2: Disposal of Arsenic and Other Toxic Metals at Select Power Plants, 2009-2011

State	Facility	Arsenic		Total Metals		Toxic Metals Exceeding Federal Health Based Groundwater Standards
		Surface Impoundment (lbs)	Landfill (lbs)	Surface Impoundment (lbs)	Landfill (lbs)	
FL	TAMPA ELECTRIC CO BIG BEND POWER STATION	27	2310	18769	211754	Arsenic, Boron, Lead, Manganese, Mercury, Molybdenum, Thallium
FL	GULF POWER CO - PLANT CRIST	0	82000	39886	2365237	Arsenic, Cadmium, Manganese
IN	GIBSON GENERATING STATION	212830	414910	5550565	7668230	Arsenic, Barium, Manganese
KY	US TVA PARADISE FOSSIL PLANT	310000	0	4836970	0	Arsenic, Boron, Manganese, Nickel
KY	LOUISVILLE GAS & ELECTRIC CO - CANE RUN STATION	454	88230	294437	1677405	Arsenic, Cadmium, Lead, Selenium
ND	BASIN ELECTRIC LELAND OLDS STATION	13000	92000	4292066	2382378	Arsenic, Manganese, Selenium
OH	AMERICAN ELECTRIC POWER CARDINAL PLANT	186000	2175	4407641	106282	Arsenic, Molybdenum
PA	BRUCE MANSFIELD POWER PLANT	246250	0	5757175	0	Arsenic, Boron, Manganese
SC	CROSS GENERATING STATION	141132	0	3908844	0	Arsenic, Cadmium
SC	WINYAH GENERATING STATION	41359	0	1138244	0	Arsenic
TX	WA PARISH ELECTRIC GENERATING STATION	0	36000	0	11187930	Arsenic, Barium, Selenium, Boron, Manganese, Molybdenum

The estimates are conservative because (with the exception of mercury) the reporting requirements do not apply to any toxins in coal burned in power plants that do not add up to at least 10,000 pounds per year. Also, some of the largest power plants are either not required to monitor groundwater for arsenic and other coal ash pollutants, or do not provide such data to state agencies or the public.

The EPA's delay has allowed the industry to continue pouring dangerous pollutants into leaking dumps that drain into groundwater, and sometimes into wetlands, creeks or rivers that are hydrologically connected to the aquifers underneath coal ash dumps. Notably, while the Agency has continued to "study" the issues, its Office of Solid Waste has never attempted to require groundwater sampling or even to obtain the monitoring data that is available from state agencies or the industry itself, although collecting such information is an integral part of any serious rulemaking. The industry's argument that making land disposal more expensive through regulation would somehow discourage recycling is counterintuitive, and at odds with healthy recycling markets that have developed when cheap but unsafe dumping is stopped.

Encouraged by the Obama Administration's silence, coal and power company lobbyists are pushing a bill that would block any EPA regulation, and instead substitute vague and unenforceable guidelines for state programs. For example, states would be required to have permit "programs," but there no deadlines for actually issuing those permits, and no real opportunity for the public or EPA to review or challenge them before they are adopted. The bill also lets polluters profit from delay by imposing no requirements (other than monitoring) on power plants until permit programs are adopted and permits actually issued, which could take a decade or longer. A report from the nonpartisan Congressional Research Service, after trying to determine whether the bill imposed any standards at all, concluded that:

"The absence of any directive or indication that the program has some objective to achieve a standard of protection is unique among all federal environmental laws. Within the framework of RCRA, it raises the question: Why is this program required?"ⁱⁱ

Four years after the TVA spill, power plants have piled more than a billion pounds of arsenic, chromium, lead, selenium and other pollutants into pits and ponds that continue to leak these toxins into groundwater or nearby rivers and streams. Further delay will only increase the likelihood that contamination will spread and increase both the risk to human health and the long term cost of cleanup. The evidence is in and the election is over. What is EPA waiting for?

ⁱ AMERICAN COAL ASH ASSOCIATION, 2008-2011 COAL COMBUSTION PRODUCT (CCP) PRODUCTION AND USE SURVEY REPORTS, <http://www.acao-usa.org/associations/8003/files/Final2011CCPSurvey.pdf> (last visited Dec. 20, 2012).

ⁱⁱ LINDA LUTHER, CONG. RESEARCH SERV., R42847, H.R. 2273 AND S. 3512: ANALYSIS OF PROPOSALS TO CREATE A COAL COMBUSTION RESIDUALS PERMIT PROGRAM UNDER RCRA, 23 (2012).

Appendix A

Drinking Water Standards and Health Advisories		
Pollutant	Maximum Contaminant Level (ppb)	Child Health Advisory (ppb)
Antimony	6	10
Arsenic	10	
Barium	2000	700
Beryllium	4	30,000
Cadmium	5	40
Chromium	100	1000
Cobalt		
Copper		
Lead	15	
Manganese		1000
Mercury	2	2
Nickel		1000
Selenium	50	
Silver		200
Thallium	2	7
Vanadium		
Zinc		6000

U.S. EPA, 2012 Edition of the Drinking Water Standards and Health Advisories, 8-10

<http://water.epa.gov/action/advisories/drinking/upload/dwstandards2012.pdf>

Appendix B

Electric Utility Plants Arsenic and Total Metal Disposals to Surface Impoundments and Landfills/Land Disposal, 2009-2011						
State	Facility	Arsenic		Total Metals		Toxic Metals Exceeding Safe Drinking Water Act Maximum Contaminant Levels or Health Advisories
		Surface Impoundment (lbs.)	Landfill (lbs.)	Surface Impoundment (lbs.)	Landfill (lbs.)	
AL	US TVA COLBERT FOSSIL PLANT			329962	3706480	Antimony, Arsenic, Boron, Lead, Manganese, Molybdenum
AR	AMERICAN ELECTRIC POWER FLINT CREEK PLANT			578489	1302587	Manganese, Selenium
FL	TAMPA ELECTRIC CO BIG BEND POWER STATION	27	2310	18769	211754	Arsenic, Boron, Lead, Manganese, Mercury, Molybdenum, Thallium
FL	GULF POWER CO - PLANT CRIST	0	82000	39886	2365237	Arsenic, Cadmium, Manganese
GA	YATES STEAM ELECTRIC GENERATING PLANT	72000	69000	1784005	1850865	Chromium, Nickel, Selenium
IA	MIDAMERICAN ENERGY CO GEORGE NEAL NORTH			1053247	2144710	Arsenic, Manganese
IA	CORN BELT CO-OP WISDOM GENERATING STATION			0	2151	Manganese
IA	PRAIRIE CREEK GENERATING STATION			0	134955	Arsenic, Boron, Manganese
IA	CENTRAL IOWA POWER COOPERATIVE (CIPCO) - FAIR STATION			0	71943	Manganese, Selenium
IL	WILL COUNTY GENERATING STATION			0	15068	Antimony, Manganese
IL	CRAWFORD GENERATING STATION			0	0	Manganese
IL	WAUKEGAN GENERATING STATION			0	1690	Antimony, Arsenic, Boron, Manganese

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		Surface Impoundment (lbs.)	Landfill (lbs.)	Surface Impoundment (lbs.)	Landfill (lbs.)	
IL	JOLIET GENERATING STATION (#9 & #29)			0	1739154	Antimony, Manganese
IL	EDISON INTERNATIONAL POWERTON GENERATING STATION			0	3328663	Arsenic, Lead, Manganese
IL	PRAIRIE POWER INC PEARL STATION			385430	0	Arsenic, Boron
IL	AMEREN ENERGY GENERATING MEREDOSIA POWER STATION			708850	0	Arsenic, Boron, Manganese
IL	CITY WATER LIGHT & POWER CITY OF SPRINGFIELD			318253	7535	Arsenic, Boron, Manganese
IL	ELECTRIC ENERGY INC			952042	0	Boron, Lead, Manganese
IN	GIBSON GENERATING STATION	212830	414910	5550565	7668230	Arsenic, Barium, Manganese
KY	LOUISVILLE GAS & ELECTRIC CO - TRIMBLE COUNTY STATION	117190	0	2992714	0	Boron
KY	US TVA SHAWNEE FOSSIL PLANT			1257913	5919360	Arsenic, Barium, Beryllium, Boron, Chromium, Lead, Manganese, Nickel
KY	LOUISVILLE GAS & ELECTRIC CO - CANE RUN STATION	454	88230	294437	1677405	Arsenic, Cadmium, Lead, Selenium
KY	US TVA PARADISE FOSSIL PLANT	310000	0	4836970	0	Arsenic, Boron, Manganese, Nickel
LA	BRAME ENERGY CENTER			1030776	314120	Arsenic
MI	J H CAMPBELL GENERATING PLANT			0	5267993	Boron, Molybdenum, Selenium

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		Surface Impoundment (lbs.)	Landfill (lbs.)	Surface Impoundment (lbs.)	Landfill (lbs.)	
NC	CAROLINA POWER & LIGHT CO - MAYO ELECTRIC GENERATING PLANT	32500	55871	912059	1329557	Manganese, Selenium
NC	DUKE ENERGY CORP RIVERBEND STEAM STATION			338869	0	Manganese
ND	BASIN ELECTRIC ANTELOPE VALLEY STATION	0	337000	0	13514009	Manganese
ND	OTTER TAIL POWER CO COYOTE STATION	1020	65768	429481	3163337	Boron, Manganese, Selenium
ND	BASIN ELECTRIC LELAND OLDS STATION	13000	92000	4292066	2382378	Arsenic, Manganese, Selenium
NV	SIERRA PACIFIC POWER CO NORTH VALMY STATION			5442	1248534	Arsenic, Manganese
OH	AMERICAN ELECTRIC POWER CARDINAL PLANT	186000	2175	4407641	106282	Arsenic, Molybdenum
OK	AMERICAN ELECTRIC POWER NORTHEASTERN PLANT			1093979	1222301	Arsenic, Cadmium, Chromium, Lead, Nickel, Selenium
PA	BRUCE MANSFIELD POWER PLANT	246250	0	5757175	0	Arsenic, Boron, Manganese
PA	HATFIELD POWER STATION	0	137005	0	4275529	Boron, Chromium, Manganese, Molybdenum
PA	EME HOMER CITY GENERATION LP	0	225034	0	3375082	Manganese
SC	MCMEEKIN STATION			18699	8202	Chromium, Lead
SC	CROSS GENERATING STATION	141132	0	3908844	0	Arsenic, Cadmium

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		Surface Impoundment (lbs.)	Landfill (lbs.)	Surface Impoundment (lbs.)	Landfill (lbs.)	
SC	WINYAH GENERATING STATION	41359	0	1138244	0	Arsenic
TN	US TVA GALLATIN FOSSIL PLANT			7190211	449	Cadmium, Nickel
TN	US TVA ALLEN FOSSIL PLANT			2092434	3714463	Arsenic, Manganese
TX	WA PARISH ELECTRIC GENERATING STATION	0	36000	0	11187930	Arsenic, Barium, Selenium, Boron, Manganese, Molybdenum
TX	COLETO CREEK POWER STATION			3048226	0	Arsenic, Boron, Lead, Nickel
WV	ALLEGHENY ENERGY INC ALBRIGHT POWER STATION			0	101531	Lead, Manganese, Thallium