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Coal Ash: The Hidden Story

How Industry and the EPA Failed To Stop a Growing Environmental Disaster

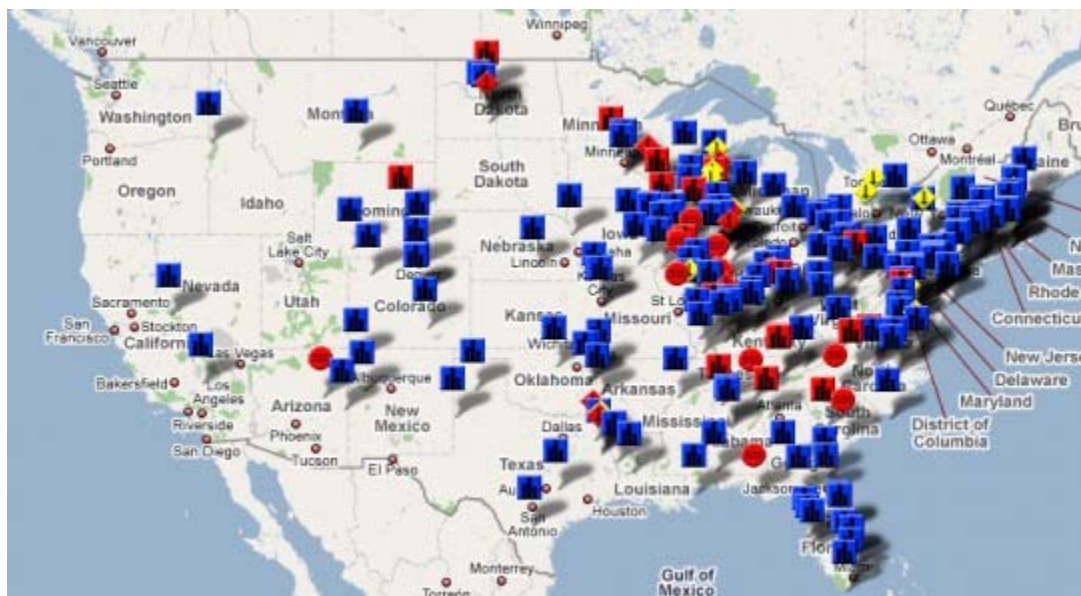
By Kristen Lombardi | February 19, 2009

Pat Nees never liked the water at the Moose Lodge. Almost everyone in tiny Colstrip, Montana, drank and dined at Lodge #2190, but the well water was notorious — it smelled like a sewer. It felt oily, gritty from sediment. Lodge members braving a drink — Nees among them — frequently doubled over from indigestion.

Nees, 57, a board member at the lodge, fielded numerous complaints about the water. But he and fellow Moose members, many of them equipment operators and technicians at the nearby Colstrip Steam Electric Station, a giant coal-fired power plant, never thought twice about the massive waste ponds a half mile away.

They never fathomed they were drinking water laced with coal ash.

Coal ash is the collective term for the various solid remnants left over from burning the black rock to produce electricity at more than 500 power plants nationwide. The ash amounts to dirty stuff, replete with toxic constituents — arsenic, chromium, lead, mercury, and many others — that can wreak havoc on the environment and human health. Exposure to its toxins can lead to cancer, birth defects, gastro-intestinal illnesses, and reproductive problems.



Coal Ash Country: Power plant wastes fill ponds and landfills nationwide. Explore the locations of these sites by clicking here and searching by zip code.

For decades, the dangers of coal ash had largely been hidden from public view. That all changed

in December 2008, when an earthen dam holding a billion gallons of coal ash in a pond collapsed in eastern Tennessee, deluging 300 acres in gray muck, destroying houses and water supplies, and dirtying a river.

But what happened in the Volunteer State represents just a small slice of the potential threat from coal ash. In many states — at ponds, landfills, and pits where coal ash gets dumped — a slow seepage of the ash's metals has poisoned water supplies, damaged ecosystems, and jeopardized citizens' health. In July 2007, the U.S. Environmental Protection Agency identified 63 "proven or potential damage cases" in 23 states where coal ash has tarnished groundwater and harmed ecology. Additional cases of contamination have since surfaced in states as far-flung as Maryland, New Mexico, Indiana, and Virginia. And in some locations, like Colstrip, the contamination has resulted in multimillion-dollar payouts to residents enduring the devastation.

Despite the litany of damage, there's no meaningful federal regulation of coal ash on the books; indeed, oversight of ash disposal — much of it stunningly casual — is largely left to the states. Argument over EPA's potential role in regulating the waste has flared for 28 years, most prominently in a furious inter-agency battle back in 2000. The machinations back then tell a little-understood story about the raw politics and hard-edged cost-benefit analyses that often determine the outcome of national environmental policy. And that story still resonates today, as the U.S. coal industry engages in a massive publicity campaign pitching "clean coal" as a solution to both global warming and energy independence. In the wake of the Tennessee spill, as fervent new demands for action ring out on Capitol Hill, the debate over federal regulation of coal ash is flaring anew. But the outcome of that debate remains far from certain.

A RIVER OF WASTE



Units 1 to 4 of the Colstrip Steam Electric Station rise behind a coal-ash disposal pond in Colstrip, Montana. *Photo by Bob Zellar. Reprinted with permission from the Billings Gazette.*

Each year, power companies generate approximately 130 million tons of coal ash — enough to fill a million railroad cars. Industry representatives estimate 43 percent of coal ash now gets recycled in such items as concrete or wallboard — two "beneficial uses" that use one type of coal ash. But that still leaves more than 70 million tons of ash annually for companies to dump in lagoons, landfills, and, more recently, mine pits. Today, there are 194 landfills and 161 ponds containing coal ash in 47 states, according to 2005 data

from the Department of Energy, the latest available. Estimates from the EPA in 2000 were higher: 600 total landfills and ponds containing coal ash. And an unknown number of active and abandoned coal mines also are filled with the stuff. These sites are ground zero for the ongoing controversy over coal ash.

Although the industry professes that these sites are safe, the problem is that every year, some of them leak. And what oozes into the soil and water are dangerous substances: antimony, boron, cadmium, selenium, mercury. In July 2006, the National Academy of Sciences identified 24 potentially hazardous metals in coal ash. And the list is likely to grow. As the EPA tightens controls on emissions through the air, power companies are capturing more particulates and metals in the solid wastes, like coal ash. The Academy's 2006 report documents that result. Commissioned by the EPA, the study examined risks associated with the burgeoning practice of "minefilling," or dumping coal ash in mines, and catalogued the way the ash can pollute ground

and surface water. “The presence of high contaminant levels in many [coal ash] leachates,” says the report, “may create human health and ecological concerns at or near some mine sites over the long term.”

The EPA’s own research mirrors this conclusion. An August 2007 draft report prepared for the agency analyzed hazards associated with ponds and landfills, and found that coal ash doesn’t pose a problem for nearby residents when power companies employ such protections as liners. But the threats arise when utilities dump the waste in unlined or partially lined ponds and pits, and there have been more than 180 such sites identified nationwide. Indeed, the analysis determined such sites pose a cancer risk from arsenic at 900 times the level of what was deemed safe. And concentrations of boron soared beyond safety levels for birds, frogs, and fish. Some EPA scientists believe that recent toxicity data would double the assessment of the hazards.

“These materials are definitely dangerous,” notes Mark Squillace of the University of Colorado’s Natural Resources Law Center, who served on the committee behind the NAS report. “The environmental risks [associated with disposal] are grave.”

Victims of the TVA coal ash spill in eastern Tennessee speak out about the disaster during a recent trip to Washington, D.C. *Video by Ariel Olson Surowidjo.*

Perils are further evidenced in the EPA’s list of “damage cases.” By July 2007, the agency had confirmed 24 “proven” cases in 13 states where coal ash has compromised water quality, as well as the local ecology — more than twice the number identified in 2000. The EPA has also recognized another 39 “potential” damage cases in 17 states. In some instances, pollution has degraded water supplies enough to exceed safety standards. In others, the pollution has so defiled lakes and streams that some fish species have gone extinct. Consider this roster:

- In Pines, Indiana, one million tons of coal ash dumped at an unlined landfill contaminated 163 residential wells with boron, arsenic, lead, and manganese; in January 2002 the state proposed listing it as a Superfund site and EPA has since overseen the ongoing clean-up.
- In Cartersville, Georgia, an ash pond leaked 2.25 million gallons of sludge containing 281 tons of coal ash into a tributary, resulting in a \$31,250 fine.
- In South Carolina, near the Savannah River, two leaking ponds have sullied a wetland, where bullfrogs have suffered deformities..

EPA’s critics believe that such cases reflect the proverbial tip of the iceberg — partly because the agency doesn’t investigate ash dumpsites, and partly because many disposal facilities lack adequate monitoring. A 2006 Energy Department study found that groundwater at 20 percent of recently constructed ponds examined was not being monitored; an earlier study of existing ponds had found 62 percent unmonitored.

And environmental groups have documented a substantial number of cases yet to make the EPA’s list. Last February, 66 organizations petitioned the agency to recognize 16 incidents in nine states where, they say, coal ash has caused severe degradation. And more cases have cropped up since. In Chesapeake, Virginia, for example, developers used 1.5 million tons of coal ash to build a golf course over a shallow aquifer, only to watch the ash blacken 30 residential wells. In the Four Corners region, where New Mexico, Arizona, Colorado, and Utah meet, environmental groups say millions of tons of ash annually generated by two power plants have poisoned area springs.

Still other cases have caught the attention of environmental lawyers, who are busy testing water sources and laying groundwork for possible legal action. Just last November, the largest class-action lawsuit involving coal-ash contamination ended in a



\$45 million settlement for hundreds of residents of Gambrills, Maryland, where a utility had tossed 3.8 million tons of coal ash into two gravel pits. The lax disposal had polluted 84 wells with arsenic, lead, and cadmium.

Back in Colstrip, Montana, the coal-ash ponds have caused such widespread damage that the consortium which owns the plant paid \$25 million last spring to settle a similar suit filed by 57 residents. Here, the ash hasn't tarnished individual wells so much as entire aquifers. Its toxic plumes have traveled far over two decades. "It's obvious the pollution has gone farther than was initially reported," says Tom Ring, of the Montana Department of Environmental Quality. "It's clearly spreading."

A COAL-BURNING BEHEMOTH

Colstrip sits above the Rosebud seam, a layer of sub-bituminous coal running through the Powder River Basin, a perfect place for a power plant. The hamlet of trailers and bungalows that makes up the town exists solely because of the electric station. The place boomed in the '70s and '80s, when plant construction drew thousands. And while it's faded since, Colstrip remains a company town, populated by 2,300 folks toiling at the utility or the local mine that feeds nine million tons of coal a year into the power plant's furnaces.

A metal behemoth, the plant's four generators give off a constant rumble. Operated by PPL Montana and owned by a consortium including other firms — Avista Corporation, PacifiCorp, Portland General Electric, NorthWestern Energy, and Puget Sound Energy — it burns a boxcar of coal every five minutes, powering a million and a half households up and down the West Coast. As the operator, PPL Montana speaks for the plant.

Residents near the plant don't seem to mind the air pollutants pouring out of the stacks — Colstrip station "scrubs" 95 percent of noxious gases from the smoke. What gets them is the coal ash — 964,000 tons of waste in 2005, the most recent year for which Energy Department statistics are available. The plant's scrubbers pump ash slurry into an elaborate pond system at 7,500 gallons per minute. The acidic smell of the pond isn't easily forgotten. The two biggest ponds — one spans 168 acres; the other, 367 — bookend the town. Tom Ring, the state environmental-science specialist overseeing the plant, describes a six-page list of almost two dozen chemicals in the ponds as "a table of woe."

State records and company documents revealed in court peg the so-called Stage Ponds as top culprits for leakage of some of those chemicals. Built in 1976 with a clay buffer, the Stage 1 Pond began oozing pollutants as far back as 1979 and has continued to do so — even though it was "capped" — covered over with a liner — in 1997. Its companion, the Stage 2 Pond, came online in the '90s, and still receives coal ash at 3,000 gallons per minute; lined with plastic, this pond has failed 18 times.

The consequences weren't known until residents sued the consortium over groundwater issues in 2003. Through the discovery process, documents obtained by the plaintiffs show that coal ash has befouled groundwater hundreds of feet beyond the ponds with boron, sulfate, and chloride, among other chemicals. Pollutants have also corrupted a handful of wells in neighborhoods below the Stage ponds; other wells, drilled through the pollution, have been rendered inoperable.



"We were in the dark for so long," says Wayne Johnson, a slight, stoic retiree who lives with his wife, Virginia, beneath the 80-foot dam holding ash in the Stage 2 Pond.

Not that there weren't warning signs. Take the water at the Moose Lodge,

for instance. Nees says the board eventually tested the well, only to find contaminants hovering above safety levels. Members began hauling water in jugs, never tying their predicament to the ponds situated on an overlying plateau. And neither did Nees, a 29-year veteran of the plant.

But the power companies were documenting coal-ash contamination. Since the mid-'80s, plant hydrogeologists had tracked a filthy plume of boron emanating from the Stage ponds. Essential to plant life in low doses, boron turns lethal at levels of 2 milligrams per liter, and presents a litany of other health hazards. The EPA has issued in draft a "health reference level" for boron not to exceed drinking-water standards of 1.4 milligrams per liter. By 1993, the lodge's well had already exhibited unsafe concentrations at twice that level. In 2000 and subsequent years, records show its boron levels were reaching up to 13 times the limit.

"It's amazing, isn't it?" asks Nees. Now retired, Nees is soft-spoken and exceedingly polite, but his face reddens when he talks about the bouts of diarrhea he suffered after drinking the lodge's water. In their lawsuit, the plaintiffs don't tie illnesses directly to the coal-ash contamination. But Alan Nye, a Montana toxicologist who reviewed the contamination data on their behalf, noted in court records that "private wells contaminated by the... plume should not be used for irrigation water or for drinking by people or animals."

Judie Soiseth, a petite woman who ignored the rainbow film in her water, ceased using it once her cats refused to lap it up. "Every time I used [the water] I felt maybe I shouldn't," confides Soiseth, who was diagnosed with nodules on her thyroid and believes they are somehow tied to the water.

In a statement, the company calls the \$25 million settlement reached in May "a good outcome for all parties involved." It stresses that PPL Montana "inherited the groundwater issues after it purchased an interest in Colstrip in 1999 and took immediate steps to correct them" — installing monitoring wells and modern pond liners. The lawsuit prompted the company to spend \$900,000 to extend municipal water to the neighborhoods below the ponds.

"PPL Montana will continue to take appropriate actions to help alleviate concerns that people have about their wells," the statement reads, "and help prevent any risk of contamination."

According to state records, however, the coal-ash ponds are still leaking, forcing PPL Montana to build wells to recover contamination. Made of giant metal cylinders, the wells are drilled 300 feet into the ground and topped by electric pumps that pull out the polluted water and cycle it back to the ash ponds. A second lawsuit over ash contamination, filed by residents in 2007 and currently pending, suggests more trouble. It claims that the plant's largest pond has unleashed slurry towards two cattle ranches and tainted a creek.

' DANGEROUS STUFF '

Nothing about the existence of the Colstrip ash ponds violates state regulations. Nor are there federal rules for dumping the toxic slurry. Coal ash is hazardous by any common definition — "It's dangerous stuff. ... That's what the public thinks of when thinking of the word 'hazardous,'" says one former EPA employee. But the agency has yet to designate coal ash "hazardous" under federal waste laws — a key designation that triggers strict



A Colstrip construction site where new recovery wells are being installed. Photo by Kristen Lombardi

controls for handling, transporting, and dumping waste: power plants, for instance, would have to use expensive protections such as liners at disposal sites, or regularly monitor groundwater for any leaching. Instead, coal ash disposal falls under rules for “non-hazardous” waste, leaving oversight to the states. The result is a patchwork of standards; at least 20 percent of the states, including Montana, exempt some or all coal ash from solid-waste regulations.

This isn't to say the EPA has ignored the issue; the agency, in fact, has been involved in a debate over coal ash regulation for almost 30 years. In 1980, Congress passed the so-called “Bevill Amendment,” named for former Representative Tom Bevill of Alabama, establishing hurdles for hazardous-waste regulation of coal ash. The amendment required the EPA to study the health and environmental effects of coal ash before deeming it hazardous, and even laid out eight factors to be considered. The son of a coal miner, Bevill, now deceased, made plain his motivation. “We possess the world's largest reserves of coal,” Bevill said. “We must provide incentives, not disincentives, for its use.” The EPA later released two reports to Congress — first in 1988, then in '99 — affirming that coal-ash damage did not reach a threshold high enough for hazardous-waste regulation under the Bevill amendment's criteria.

But in 2000, after a vigorous push by environmental groups including the Clean Air Task Force and Citizens Coal Council, agency officials reassessed the situation. By then, advocates for more regulation had documented 59 cases in which they said coal ash caused degradation — almost 10 times as many as those identified by EPA. “The information,” says Michael McCabe, then EPA's deputy administrator, “forced EPA to take a look at the issue again and really try to assess the potential environmental and public health impacts of large quantities of this material.”

What to do about coal ash soon became a topic of vigorous debate within the agency. According to interviews with more than a dozen former and current EPA insiders, many staff in the Office of Solid Waste agreed with the non-hazardous regulatory approach — partly because they'd already run up against the Bevill amendment, and partly because they believed the risks posed by coal ash were low. Others argued that going forward with hazardous-waste regulations would eliminate unsafe dumping of coal ash in unlined or partially lined lagoons and landfills nationwide — 350 of them at the time. Debate extended to staff in the EPA's Office of Air and Radiation, which was working to regulate mercury emissions from power plants. “We saw that more emissions controls meant more solid waste,” relays one policy analyst from the air office, “and we didn't want to create more harm.” One top official in the air office who backed a “hazardous” designation even appealed directly to Carol Browner, who then headed the EPA and who now serves as President Barack Obama's top adviser on energy and climate change issues.

“You don't just go to the administrator unless you care strongly about something,” the official says today, “and I remember being convinced that coal ash should be regulated as hazardous.”



Pat Nees, a former power plant worker who now heads the local union. Nees was one of many Moose Lodge members sickened by drinking well water with coal ash contaminants. *Photo by Kristen Lombardi.*

In March 2000, the agency seemed on the verge of proposing stricter federal controls. Staff in the solid-waste office wrote a draft determination essentially classifying coal ash as “contingent hazardous waste” — a hybrid designation. In the 91-page document, which the Center for Public Integrity obtained from the White House's Office of Management and Budget, the agency proposed to regulate the dumping of coal ash in ponds, landfills, and mine pits with “tailored” national standards. If power companies were to abide by them,

the document states, “wastes would remain non-hazardous.” If not, the coal ash would be classified as “hazardous.” In effect, agency officials were straddling the regulatory line to encourage better management. The draft determination states, in part, that the tailored regulations are the best solution in light of “the evidence of actual and potential damage to human health or the environment from these wastes, the sheer volume of wastes... [and] the significant number of facilities that do not currently have basic controls in place...”

Browner, who declined to comment for this article, sent the draft determination, dated March 5, 2000, to the OMB for review, which set off a frenzy of lobbying by the utility industry. The White House was inundated with letters from trade organizations such as the Edison Electric Institute and the Utility Solid Waste Activities Group (USWAG) — the industry’s voice on coal-ash disposal — criticizing the draft. One letter, signed by then-USWAG chairman Fred McGuire and 13 other industry representatives, warned that “the high costs of [hazardous] regulation... will ultimately be shared nationwide by employees, taxpayers, ratepayers, investors, and customers.” Another letter, from the presidents of 16 energy companies, blasted the proposal as “over-regulation and an unwarranted intrusion into an area of primary state responsibility.”

By late March, more than two dozen industry representatives had met with OMB policy analysts and EPA senior managers — in two meetings — during which they stressed the “stigma” of a hazardous label. Consider the notes taken by an EPA staffer at one such meeting — notes obtained by the Center for Public Integrity through the Freedom of Information Act:

Industry — any control under [the hazardous designation] would have a chilling effect. Dramatic and immediate effect... Bad public policy — this would create a burdensome cost on consumers with no benefit... More and more controls are in place — the problem is healing itself.

Public officials in 13 states, including Montana and Tennessee, also voiced their opposition to the EPA’s draft determination, as did federal agencies such as the Department of Energy and the Department of Interior’s Office of Surface Mining. Seventy-seven members of Congress wrote letters to senior officials at the EPA, OMB, and the White House opposing the proposal. One letter, signed by 11 representatives, summed up the tone. “[Coal] combustion wastes have long been recognized as posing little if any environmental compliance problems,” it reads. “No one can seriously claim that the states have failed to act responsibly in this area, or that Federal intervention is necessary.” Among the signers was Rep. Nick Rahall of West Virginia, who currently serves as chair of the House Committee on Natural Resources.

The draft determination, recalls an EPA policy analyst, “really hit a brick wall at OMB.” The issue, insiders say, was cost; indeed, a March 16, 2000, record of questions from the OMB to EPA staff shows a focus on the economic impact that hazardous-waste regulations would have on utilities. The EPA estimated that additional expenses would hover around \$1 billion a year, but the utility industry later termed that figure “woefully underestimated.” One analysis commissioned by USWAG pegged the costs as high as \$13.8 billion annually.

Beyond economics, some of EPA’s research seemed weak. Andrew Wittner, the agency economist who analyzed the risks of coal ash from 1995 to 2003 remembers that some toxic metals, especially arsenic, exceeded the threshold for safety standards — but only based on limited data. Attributing problems to a faulty computer model, he says, “I could not show these materials were



sufficiently hazardous.”

Ultimately, the EPA had to reverse the draft “hazardous” designation. Instead, in a final regulatory determination published on May 22, 2000, the agency pledged to issue less stringent national standards under a “non-hazardous” designation — which essentially would have amounted to guidelines telling states what their coal ash disposal rules should look like. In the 24-page notice in the Federal Register, the agency went on to note the utility industry’s improving practices, as well as the states’ improving regulations as the primary reasons for the reversal.

Matthew Hale, director of the EPA’s solid-waste office, declined requests to be interviewed, as did Richard Kinch, the manager who has overseen the coal ash research and policy work. In answer to written questions, the EPA’s press office provided a five-page statement which states that, “a range of issues came up during administrative review of EPA’s draft determination on coal combustion residue, including cost.” The final regulatory determination, the EPA says, “reflected the Agency’s judgment as to the most appropriate regulatory approach.”

Timothy Fields, who ran the EPA’s Office of Solid Waste and Emergency Response in 2000, remembers the agency’s final determination having more to do with internal discussions between top officials at the EPA, OMB, and White House Council on Environmental Quality than any outside pressure. Throughout the OMB review, he says, it became apparent that the EPA lacked not only the administrative record to justify its draft, but also the needed inter-agency backing.

“There was some consensus that the draft determination was going too far and the problems of coal ash could be dealt with in another way. This wasn’t the way to do it,” says John Spotila, Clinton’s administrator in OMB’s Office of Information and Regulatory Affairs in 2000.

EPA deputy administrator McCabe puts it more bluntly: “We felt [non-hazardous regulation] was appropriate at the time given the little effort we’d made to do the political groundwork.” He and his EPA colleagues had failed to reach out to Congress, federal officials, and the industry to inform them of the proposed policy change, he says, and to win their support. “You cannot just spring these things on the process,” McCabe adds. “You’ve got to... do your science work and your political homework, too, so you’re not shot out of the water.”

Insiders say the calculus was fueled in part by a belief that then-Vice President Al Gore would win the 2000 presidential election, opening up the prospect that top EPA officials could implement the non-hazardous federal standards, and work toward building a case for hazardous-waste regulations.

But that didn’t happen. And the Bush administration’s EPA never followed through on the 2000 promise to issue those non-hazardous standards. The EPA’s solid-waste office shifted its focus from disposal of coal ash to promotion of its beneficial reuse, launching programs to encourage the ash’s safe recycling in concrete, wallboard, and construction fill (where the toxic metals act like cement, as opposed to leaching). Marianne Horinko, the solid-waste office’s assistant administrator from 2001 to 2004, admits she made beneficial reuse a top priority, but insists that “there sure was not a conscious effort on my part to stop the rulemaking from happening.” Horinko says her tenure was consumed by the environmental fallout of 9/11; “To say that I was greatly distracted would be the understatement of the century.”

Meanwhile, the EPA has kept up a dialogue on its proposed rulemaking with the utility industry. The discussions would yield what the industry’s USWAG calls its “voluntary action plan,” issued in October 2006. Power companies signing on effectively promise, first, to implement groundwater monitoring at disposal sites; second, to install liners and other controls before dumping coal ash in pits; and third, to “consider” the more environmentally sound option of dumping coal ash in dry landfills, as opposed to wet lagoons. Jim Roewer, the USWAG director, says 75 percent of the trade group’s membership has agreed to the plan, which he claims “will result in fewer problems that we’ll have to take care of down the road.”

Environmentalists disagree. After all, they note, the “voluntary action plan” does not require power companies to install the most protective and thus expensive controls, let alone force them to clean up contamination. “It’s really a sham,” charges Lisa Evans, an attorney for EarthJustice who used to enforce federal waste laws for the EPA. “It would in no way be a replacement for real regulations.”

The EPA, in its statement, says that voluntary plans have perks — “they can often be implemented more quickly than new regulations” — but that “it has not determined that it is considering this voluntary plan in lieu of [non-hazardous] regulation.”



An 80-foot-high containment wall for a coal-ash storage pond blends into the landscape near the Colstrip plant. *Photo by Kristen Lombardi.*

Industry representatives still argue that the states have adequate regulations. This time, their claims seem bolstered by a 2006 energy department survey examining newly constructed ponds and landfills. The report found a trend toward more modern controls — ponds with monitoring wells grew by 20 percent, for instance — as well as more stringent state regulations.

“The question isn’t whether we should regulate coal ash,” Roewer argues, “but who should be regulating the materials. We support

the state regulations in place today.”

Roewer maintains that most cases involving coal-ash contamination stem from old practices no longer in vogue. “When we have seen damage cases, the utilities have moved to address the problem and clean up the sites,” he says, citing the 15 cases on the EPA’s damages list for which the agency has confirmed corrective action, such as laying new liners.

“The industry gets so much mileage out of saying, ‘Oh, that happened in the ‘80s,’” counters Evans of EarthJustice, even though it can take decades to detect coal-ash contamination. What the damage cases show her is that state regulators haven’t done a good job at preventing harm. Asks Evans, “Do we want to have this slow, inconsistent approach and leave this trail of pollution — or not?”

REALITY CHECK

Back in Colstrip, the situation seems to undermine the industry’s claims. Montana lawmakers have actually loosened key protections preventing coal-ash contamination — first, by exempting on-site disposal from the state’s solid-waste regulations; second, by gutting a law meant to manage the siting of coal-fired power plants. Both acts have left the state’s Department of Environmental Quality with little authority over this waste.

As a result, Colstrip station — a “legacy” plant built when those regulations were still in effect — is now the only plant whose coal ash the state oversees. But its widespread plumes of ash have laid bare the fact that the power companies long operated their ponds as if state regulatory agency rules didn’t apply. The plant’s January 1976 permit mandates that the ponds act as a “closed-loop system” that “does not discharge effluents from the plant downstream or into other waters.” Any seepage, it states, “is not anticipated to impair the quality of [area] groundwater.” Under the permit, state regulators can fine the companies \$10,000 a day for tarnishing water. Yet, Ring, the Montana regulator, confirms, “That has never happened.”

“The moral of this story,” argues Jory Ruggiero, the lawyer representing Colstrip residents and handling the second suit, “is that... a regulatory rule on the books isn’t enough.”

Neither, apparently, is the promise that each utility will carefully manage its ash waste. At Colstrip, plant supervisors were forecasting that the Stage 2 Pond would “definitely cause degradation” of residential wells as far back as the ‘80s, according to one company memorandum. Back then, the companies not only allocated \$250,000 for a city water line to residents — the same line they would install 20 years later — but also did exactly what USWAG’s plan dictates: they considered using a dry ash landfill, instead of a pond, for the ash. Still, the companies ended up going with the dirtier option — the pond — because, as a February 1985 analysis makes plain, “the pond method is less expensive.”

Today, PPL Montana, under the state’s direction, is installing recovery wells to cycle contamination back into them. Last October, 17 electric pumps and metal tanks appeared behind the Moose Lodge, area businesses, and two subdivisions. That’s beyond the 12 wells PPL Montana had already drilled. Even more were popping up along the polluted creek, a golf course, and a baseball field — more than 1,400 feet beyond the Stage 2 pond. Ring says the decades-old strategy for cleaning up spills is working “to the extent [it] has been capturing a large amount of contaminated water.” But residents such as Chris Coats, an earnest housewife, find it “a joke.” As she says, “It is effectively allowing the ponds to continue to leak.”



The Colstrip plant’s Stage 2 coal-ash storage pond is barely visible from the surrounding roadways. *Photo by Kristen Lombardi.*

PPL Montana has begun to use a so-called “paste” on some ponds, turning the slurry into a toothpaste-like consistency to reduce its water content. But the practice pales in comparison to the \$30 million to \$80 million it would take to cap the ponds for good.

Environmental advocates have long argued that some sort of federal standards would help plug such state-regulatory shortfalls. Jeff Stant of the Environmental Integrity Project, who in 2000 lobbied the EPA to regulate coal ash, considers the Colstrip case “one of the best examples of why you need federal regulations.” In the wake of the Tennessee spill, Stant and his fellow advocates are pushing for federal regulation again. “We cannot have industry regulating itself,” he said at a January news conference. “That has got to end.”

Current and former EPA insiders alike claim that national standards — even broad federal guidelines under a non-hazardous designation — would prevent more Colstrips. Wittner, the retired EPA economist, argues that, because of the political power of the utilities, “these [industry] guys have been getting away with murder at the state level.” Wittner, like most insiders who see a need for federal regulations, backs the non-hazardous approach. He believes that even non-hazardous federal guidelines could have forced Montana regulators to ban the Colstrip ponds and phase them out of service — or, at least, stop their chronic leakage.

“EPA should be drafting up regulations as we speak,” adds Wittner, who wrote a June 3, 2008, letter to staff of the House Natural Resources Committee stating as much and criticizing the EPA for what he called “an unquestioned violation of public trust.”

Now that the Tennessee disaster has thrust the coal-ash debate into headlines, the EPA is facing renewed pressure. On January 8, the Senate Committee on the Environment and Public Works held a hearing on the massive spill, during which senators expressed support for some kind of

federal intervention. The committee chair, Senator Barbara Boxer of California, took aim at the EPA for refusing to set national standards. “Inaction has allowed this enormous volume of toxic material to go largely unregulated,” she said. “It may be that EPA needs to regulate coal ash as hazardous. Some argue it goes too far but, clearly, the lack of any regulation is not good enough.”



The cooling tanks at the Colstrip plant site where about 12 coal-ash ponds are located. *Photo by Kristen Lombardi.*

On January 13, Representative Edward Markey, of Massachusetts, who heads the House Energy and Commerce subcommittee that oversees the EPA, wrote to then-EPA administrator Stephen Johnson, terming the lack of a national policy “unacceptable.” The next day, Rahall — the West Virginia Congressman who objected to coal-ash regulation in 2000 — filed legislation requiring federal design, engineering, and performance standards for ash ponds such as the one that collapsed in

Tennessee. And later that day, Senator Boxer pressed the issue with the incoming EPA administrator, Lisa Jackson, during her confirmation hearing. Jackson promised to immediately assess all ponds and landfills, and to reconsider the regulatory options.

To hear congressional observers, the drama of the Tennessee spill has shifted the dynamic of the coal-ash debate enough to sway some who once doubted the severity of the problem. Case in point: Congressman Rahall, who so vigorously opposed the hazardous label, but who now remains open to the prospect. “We wouldn’t be opposed to it,” says Jim Zoia, Rahall’s staff director, explaining: “The amount of toxic material has changed with the advances of air-pollution control technologies over the last 20 years... We see coal ash as more of a threat [today].”

Rahall sent a letter dated Feb. 3 to the new EPA administrator, urging the agency to “expeditiously move forward with a rulemaking governing the disposal of coal combustion wastes under the auspices of the Resource Conservation and Recovery Act,” although he does not push for a specific approach. Aides for Boxer and Markey sound a similarly vague note, saying that they want the nuances — hazardous versus non-hazardous — to come from the new administration.

The EPA’s press office states only that the agency is continuing to mull over the data and has yet to reach any conclusions, although it does acknowledge that the “EPA could revisit the May 2000 Regulatory Determination.”

Environmentalists want the agency to return to the ill-fated “contingent hazardous waste” designation, but they know that won’t be easy. “The utilities are very well entrenched in Congress,” is how Stant puts it. In 2007 and 2008, according to the Center for Responsive Politics, power companies donated \$16 million to federal lawmakers’ political campaigns — split between Republicans (\$8.1 million) and Democrats (\$7.9 million) — and spent \$269.6 million on lobbying efforts. USWAG alone — the industry organ on coal-ash disposal — has reported spending about \$360,000 on influencing the EPA, the White House, and both houses over the past nine years. “There may be a lot of citizens who are up in arms about [coal ash],” Stant says, “but we don’t have nearly as much power as [the utilities].”

Industry representatives, for their part, don’t seem especially worried. USWAG’s Roewer says he’s had not one conversation with anyone pushing for hazardous-waste regulations, although he warns that, “if there were a draft [from EPA] saying as much, we’d certainly mount a campaign.” He suspects the agency will at some point propose to follow through on its delayed rulemaking

regarding non-hazardous federal guidelines. And “those would still be implemented by the states,” he points out, “which is what we support.”

LINGERING DOUBTS

Such Washington debates seem far away to Colstrip residents such as Wayne and Virginia Johnson, sitting in their kitchen, staring at an 80-foot-high dam holding back coal ash from their home. A half dozen recovery wells surround their backyard and form a second barrier between them and the Stage 2 pond. Now that residents have public water, the Johnsons try not to think about all those years of bad water — all their washing, cooking, and drinking with it; all their “utter concern and fear,” as Wayne says. Still, they wonder what the ash-laced water has meant for them and their neighbors. Did it contribute to Virginia’s breast cancer? Or cause the thyroid nodules afflicting their neighbor, Judie Soiseth? Is it doing the couple harm just to stay here now?



An entrance to the Colstrip Steam Electric Station. *Photo by Kristen Lombardi.*

“The settlement never answered those questions,” Virginia says, “and we probably won’t get any answers for another twenty years.”

The Johnsons, like many Colstrip residents, feel a deep sense of betrayal. They still remember the day several years back when PPL Montana sought a right of way to build recovery wells along their property line. Two representatives sat at the couple’s kitchen table, explaining how the wells would pump polluted groundwater back into the pond above their house.

“They said, ‘You’ll never have any trouble,’” Wayne recalls.

“They lied to us repeatedly,” Virginia interjects, her eyes flashing in rage. “You’ve been so deceived and you feel so violated. It would be like someone coming with a garbage truck and dumping a load of garbage in your kitchen.”

Except that garbage has tougher federal regulations for disposal than coal ash.

Data Editor David Donald contributed to this report.

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