U. S. Environmental Protection Agency
Blog Round-up
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ROUND-UP OF MAJOR BLOGS

AIR

CBD responds: David Roberts is right and wrong on the Clean Air Act and the Senate climate bill (Grist)

by Kevin Bundy
8 Jun 2010 5:00 AM
When your house is burning down, you don't debate whether grabbing a fire extinguisher is better than calling 911 or vice versa. You do both, and if you can, you drag out the garden hose too.
Our global house is on fire. Congress and the president have answered the alarm by proposing a package of incentives that they hope will spur construction of a fire engine that will hold only a fraction of the water necessary to put the fire out. In exchange for these incentives, some in Congress want to shut down most of the existing fire department. And we in the environmental community -- the house we all love going up in flames around us -- are expected to act as if this is a good thing.

David is right: keeping the fire department (i.e., regulatory authority under the existing Clean Air Act) as a backup would be best. But he nonetheless concludes that adopting the incentives (i.e., the American Power Act) is "overwhelmingly" worth doing, even if the fire department gets closed down as a result. With respect, I think this is where he's wrong -- and here's why.

David essentially dismisses the idea that we should strenuously advocate for the best option: a bill that reduces carbon emissions, in accordance with scientifically defensible targets, while preserving existing environmental protections. This creates a catch-22: if we abandon our best option at the outset, we guarantee that it will be politically impossible to achieve. Put another way, if we assume right out of the gate that the correct outcome is too politically unrealistic to bother fighting for, we have already conceded the most important fight of all.

I also part company with David's analysis of what the APA does to the Clean Air Act. With respect to greenhouse gases -- and potentially even old-fashioned toxic pollutants from those dirty, wheezing, old coal plants -- it's more than fair to say that the APA "guts" the Clean Air Act. So let's get into the real "nerdy" details-starting with "performance standards" for those old coal-fired power plants.

The APA eliminates new source performance standards -- an emissions "bottom line" -- for greenhouse gases

The Clean Air Act's new source performance standards program allows state and federal authorities to set minimum emissions standards for particular classes of industrial polluters, such as industrial boilers, pulp and paper manufacturers, and chemical plants. Where so-called "criteria" pollutants are concerned-those for which EPA already has established national ambient air quality standards, like lead, ozone, and sulfur dioxide-the performance standards program applies only to new sources. For non-criteria pollutants, however, the Clean Air Act requires performance standards for existing sources as well.[1]

As David acknowledges in his updated analysis, the APA doesn't "give" EPA authority to establish greenhouse gas performance standards (essentially minimum emissions standards that an entire industry sector must meet) for existing coal plants. EPA and the states already have that authority under Clean Air Act section 111(d). In fact, the Clean Air Act requires greenhouse gas performance standards not only for old coal plants, but also for any other class of industrial sources whose emissions are endangering the climate. So what the APA really does is *take away* the possibility of performance standards for *everything but* older coal plants.[2] If the APA leaves an "Easter egg," it does so only by emptying the rest of the Easter basket.

That Easter egg also might turn out to be hollow -- or worse, rotten. The APA already creates a host of regulatory and financial incentives designed to increase efficiency and reduce greenhouse gas emissions at existing coal plants, and it isn't clear what more performance standards would do. Much more troubling is the possibility that dirty old coal plants could get a free pass from other pollution control requirements -- and thus get even dirtier -- in exchange for a promise to close down someday.[3]

Losing authority to impose performance standards on polluters outside the APA's cap and trade program also has serious consequences. Regulation of these sources -- many of which emit high-potency greenhouse gases like methane and refrigerants -- could provide dramatic, cost-effective emissions reductions in the very near term. Yet the APA precludes regulation of greenhouse pollution from these sources under *any* federal law, at least for the next decade, and instead treats emissions reductions from these sectors as *offsets* that can be purchased by capped entities.[4] So, instead of retaining EPA's power to reduce emissions from these sectors, the APA renders any reductions voluntary -- and then allows them to be cancelled out by emissions from capped entities. Thus a whole decade's worth of relatively cheap, efficient emissions reductions could go right up someone else's smokestack.

I agree with David that losing the authority to prescribe new source performance standards for greenhouse gases is a bad thing. And this is only one of the many powerful tools we'll lose if the APA passes as written.

The APA forecloses National Ambient Air Quality Standards -- a nationwide pollution cap

The APA also eliminates the Clean Air Act's ability to set a scientifically based national pollution cap on greenhouse gases. We already know what that level should be: scientists tell us that we have to reduce carbon dioxide concentrations in the atmosphere to 350 parts per million (ppm) or less in order to have a good chance of avoiding the worst impacts of global warming.

The power of a national standard is twofold. First, the Clean Air Act requires that the cap or standard has to be grounded in current science. Physical reality, not political reality, must drive the program. Second, a national standard would unleash the full, coordinated power of federal and state governments under the Clean Air Act (a collaboration often called "cooperative federalism"). State and federal authorities would have to develop coordinated plans, covering all sectors of the economy, plotting a course for the United States to do its part in getting to 350. This is a global problem, so we can't do it alone -- but at least we'd be guided by emissions reduction targets dictated by the science, rather than the demands of a few recalcitrant senators from the coal and oil states. Losing sight of the science -- and the legal requirement that we act in accordance with it -- would be a major loss indeed.

Critics of the pollution cap idea have raised a number of objections, beginning with the fact that it would raise new implementation issues. These are presented by critics as daunting obstacles, but in fact none are insurmountable. State-level plans for complying with the cap could be coordinated by EPA so that each state would aim to achieve its fair share of emissions reductions. As David recognizes, moreover, under the existing Clean Air Act individual states wouldn't necessarily be punished for failing to "attain" the standard if emissions from the rest of the world continue to make it impossible. A national cap based on the United States' fair share of global emissions reductions, coupled with state-level plans to achieve

those reductions, also could function quite well within any future international climate change agreement. Of course there are hard political choices and difficult questions of international climate justice that we'll have to face -- but we'll have to face them anyway.

Critics also point out that declaring greenhouse gases to be "criteria" pollutants would limit the ability of EPA and the states to develop performance standards for existing sources of greenhouse pollution. Of course, the APA would mostly accomplish the same thing -- which many of these critics oddly don't seem to mind. They also raise the specter of years of litigation against any pollution cap. But much of the APA also depends on as-yet-undrafted regulations. Industry will certainly drag those regulations through the courts if they're any good -- just as we'll have to challenge them ourselves if they're bad. The specter of a Palin Administration cuts both ways here.

Perhaps the most unfortunate argument against the national cap is the one David offers in his post. It goes like this: establishing a national standard for greenhouse gas concentrations would be really ambitious and potentially very powerful -- so powerful, in fact, that Congress might try to take away EPA's authority to do it. So, we might as well let Congress take away that authority now. It's a variation on the same defeatist theme that has us constantly negotiating against (and often fighting amongst) ourselves: if we use the tools, they might take them away, so we shouldn't use the tools. But this is just a way of guaranteeing that our worst-case scenario occurs -- the only differences being that we've defeated ourselves, and that we've given up without a fight. We deserve better from one another -- and our planet deserves far better from us.

The APA scraps new source review and other Clean Air Act programs

The APA doesn't stop with eliminating new source performance standards and ambient air quality limitations. The bill also wipes out Clean Air Act authority to require permits for individual sources of greenhouse gases under the new source review and Title V programs -- permits that otherwise could require those sources to adopt the best available technology for controlling their emissions. EPA also would lose the power to regulate greenhouse gases as hazardous pollutants (which, admittedly, they would never use so long as greenhouse gas emissions are designated as criteria air pollutants) and the authority to address the international dangers of domestic greenhouse emissions (which other countries, already suspicious of U.S. climate intransigence, might kind of resent). The bill even goes out of its way to bar the government from addressing ocean acidification under most Clean Air Act programs.

As for regulation of so-called "mobile" sources like vehicles, ships, and airplanes, David states that the APA leaves this portion of the Clean Air Act "untouched." That isn't quite true; the bill creates new exemptions from greenhouse standards for certain heavy-duty vehicles and engines, and grants EPA broad discretion to delay implementing those standards where they still apply. The APA also authorizes an ill-defined "emissions credit" trading program among a wide range of mobile sources.

So what's left of the Clean Air Act as we now know it? New source performance standards for old coal plants. Explicit authority to adopt one more round of fuel economy standards for passenger cars and trucks. Power to regulate other mobile sources, subject to various exceptions and exemptions. And that's about it, at least for the next 10 years. We shouldn't be trying to convince ourselves or each other that these few crumbs are really half a loaf. If we're honest, we have to admit that the APA really does gut the Clean Air Act, at least as far as global warming pollution is concerned.

The real question on the table, of course, is whether it's worth it. David seems to think so. But his posts barely mention the bill's shamefully inadequate emissions targets, its incentives for expanded offshore drilling, its "Hail Mary" subsidies for carbon capture and sequestration in order to continue building *new* coal-fired power plants, and its promotion of a new generation of nuclear facilities, even though we still lack solutions to the known risks, long-lasting impacts, and extreme cost of nuclear energy relative to other cleaner energy sources.

Given all this, I can't agree that it's a good idea to dismantle the fire department in exchange for a bunch of untested incentives for new fire engine construction -- especially when we already know that the fire engine won't be up to the task. By the time we're finally ready to fight this fire, if that day ever comes, our house will be long gone. That's why I firmly believe that whatever new climate legislation does -- whether it's encouraging efficiency, creating incentives for cleaner energy and transportation, setting a price on carbon, or some combination -- it must backed up by the solid, proven, science-based programs that EPA has successfully implemented under the Clean Air Act for the last 40 years.

In the midst of a crisis, we have to be honest with one another. We can't afford to kid ourselves about what we're gaining and what we're giving up. So go ahead and build that new fire engine -- but let's make sure someone is still there to answer when we dial 911.

Murkowski Measure to Block EPA From Regulating Greenhouse Gases FAILS (*Huffington Post*)

First Posted: 06-10-10 05:03 PM | Updated: 06-10-10 05:03 PM
WASHINGTON (AP) -- The Senate has rejected a bid to stop the Obama administration from imposing regulations on greenhouse gases, giving a boost to President Barack Obama as he pursues broader clean energy legislation.
Senators turned back a resolution that would have rescinded the authority of the Environmental Protection Agency to regulate greenhouse gases under the Clean Air Act.
Supporters of the measure, mostly Republicans, argued that the EPA had usurped the authority of Congress to set climate policy and that the EPA regulations would increase energy costs and kill jobs.
But the White House, which threatened to veto the measure, said depriving the EPA of its ability to regulate carbon and other greenhouse emissions would result in greater dependence on oil and more pollution.
THIS IS A BREAKING NEWS UPDATE. Check back soon for further information. AP's earlier story is below.
WASHINGTON (AP) - In an important test on global warming, the Senate neared a vote Thursday on whether to stop the Obama administration from cracking down on greenhouse gases from power plants and other polluters.
The outcome could signal how Congress will deal with broader White House clean energy legislation to come.
Thursday's Republican-led resolution would prevent the Environmental Protection Agency from moving ahead with rules under the Clean Air Act to regulate carbon and other greenhouse gas emissions from power plants and other major sources. Support from several moderate and coal-state Democrats should make vote close.
It's one of the first this year to put lawmakers on the record in the climate change debate.
Those trying to block the EPA rules argue that Congress, not bureaucrats, should be crafting climate change policy. But there's little prospect that the Senate will act soon on the broader energy bill, and the administration and most Democrats contend steps must be taken in the meantime to hold down greenhouse gas pollutants.
"We can't let big oil have a free pass to pollute," said Sen. Jeff Merkley, D-Ore.

The EPA crafted standards on greenhouse gas emissions by big polluters after the Supreme Court ruled that those emissions could be regulated under the Clean Air Act if it could be shown that such gases were a danger to human health. The rules are to go into effect next January.

The White House has issued a veto threat against the resolution to stop the rules, saying it would "increase the nation's dependence on oil and other fossil fuels and block efforts to cut pollution." The measure also would undercut efforts to reduce the risks associated with environmental disasters such as the Gulf oil spill, the administration says.

With a veto looming, the measure is unlikely to ever become law. That did not deter debate on the most important climate change vote to come before the Senate this year.

Senate Republican leader Mitch McConnell of Kentucky called the new rules a "blatant power grab by the administration and the EPA." With an energy bill unlikely to pass this year, "the administration has shifted course and is now trying to get done through the back door what they haven't been able to get done through the front door."

But Senate Majority Leader Harry Reid, D-Nev., called the measure, "a great big gift to big oil" that would "increase pollution, increase our dependence on foreign oil and stall our efforts to create jobs" in the clean energy sector.

The sponsor of the resolution, Republican Sen. Lisa Murkowski of oil-rich Alaska, said her intent was to protect the authority of Congress, not the interests of the oil industry. "It should be up to us to set the policy of this country, not unelected bureaucrats within an agency."

Her Democratic allies used similar arguments. "The regulatory approach is the wrong way to promote renewable energy and clean energy jobs in Arkansas and the rest of the country," said Sen. Blanche Lincoln of Arkansas.

Murkowski, too, said Congress should be working harder to come up with an energy bill. The question was whether a consensus on the issue was possible this year.

"Here's the real rub," said Sen. Lindsey Graham, a South Carolina Republican who has worked with Democrats on energy legislation. "If we stop them (the rules), are we going to do anything?"

There were other disputes about the consequences of the Murkowski resolution. EPA Administrator Lisa Jackson and the White House said the resolution would force the EPA to rescind standards for emissions from future-model cars and light trucks that it came up with earlier this year with the Transportation Department. The result, she said, would be a need for the country to consume an extra 455 million barrels of oil.

Murkowski and others countered that the Transportation Department has long been able to set fuel efficiency standards without the help of the EPA.

Jackson also denied the argument of critics that the EPA rules would impose devastating costs on small businesses and farmers, resulting in major job losses. The EPA came up with what it calls a tailoring rule that would exempt small sources of pollution from the regulations for six years.

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CLIMATE CHANGE

June 11, 2010

Michael KieschnickPresident of CREDO Mobile
Posted: June 10, 2010 05:44 PM BIO Become a Fan Get Email Alerts Bloggers' Index

The Senate Almost Votes to Join the Flat Earth Society (*Huffington Post*)

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Today, 47 senators voted that the earth is flat.

Sen. Lisa Murkowski, Republican of Alaska, convinced Sen. Harry Reid that there should be a vote to "disallow" the Environmental Protection Agency's scientific finding that global warming represents a danger to human health. This scientific finding, supported by essentially all climate scientists other than those financially seduced by the dirty energy industry, is the key underpinning for any approach to addressing the global warming crisis.

Yet, 47 senators voted yes on the so-called Murkowski Amendment.

What kind of country elects 47 senators who deny basic science?

The Murkowski vote was an incredibly revealing vote. Not a single Republican senator -- including the supposedly pro-environment senators from Maine (Susan Collins and Olympia Snowe) voted to defend the science or the Environmental Protection Agency. This battle is far from over.

One of the senators voting yes was Sen. Jay Rockefeller, Democrat of West Virginia, who now has agreement from Sen. Reid to allow a vote on his backup position -- that the EPA cannot act on this scientific finding for two years.

There should be no doubt that a vote to delay is just as much a defeat for the environment as a vote to disallow the scientific finding. Two more years of the status quo is two more years of accelerating warming and two more years for the dirty energy industries to try to elect more members of Congress and a new president who might not veto such legislation.

Sen. Rockefeller's proposal could come to a vote quickly. It will be far more difficult to defeat.

A Walk Through the Week's Climate News (*Grist)*

The Climate Post: U.S. Senate Gives a Disapproving Look
by Eric Roston
10 Jun 2010 8:44 PM

First Things First: U.S. senators rose one after the next in support of or opposition to a measure that would strip the Environmental Protection Agency of its authority to declare heat-trapping gases pollutants. The piece in question, a "disapproval resolution," was sponsored by Sen. Lisa Murkowski (R-Alaska). In her floor speech, she skewered the Obama administration's move to regulate greenhouse gases, saying that approach is too harsh in general, and particularly at such a economically sensitive time. Republicans thrashed the EPA's endangerment finding, arguing mostly that added regulations would cause economic hardship. Several suggested that the day's vote was not about the science, although it's worth keeping in mind that EPA officials evaluated the vast scientific literature on climate change as a part of its decision-making process. Six Democrats voted with the 41 Republican senators against the resolution; it failed, 53-47.

The Murkowski resolution wasn't necessarily expected to pass. But, as expected, it feeds the conventional wisdom that the Senate won't be able to pass a bill this year. Wednesday Sen. Lindsey Graham (R-S.C.) told reporters he would vote against the leading Senate energy-and-climate bill, which he helped write, because it doesn't have strong enough provisions for offshore oil drilling. He's suggested that his colleagues "start over and scale down your ambitions." Earlier, he supported the idea to begin lowering emissions in the utility sector.

Sen. Richard Lugar (R-Ind.) entered the fray with legislation that would aim to reduce U.S. greenhouse gas emissions by about half of the president's target–17 percent below 2005 levels by 2020.

***Climate Post Book Club, Part IV*:** Given the ever-increasing repercussions of the BP oil spill, Sens. John Kerry and Joe Lieberman's American Power Act, Lugar's Practical Energy and Climate Plan, Murkowski bill, and on and on and on, this is a great week for the world to lose itself in a political history book about climate change. However, until this week, there wasn't one. On Tuesday, Hyperion published *The Climate War* by Eric Pooley. The author is deputy editor of *Bloomberg Businessweek*, former managing editor of *Fortune*, and former national political correspondent at *Time* (where I first met him about a decade ago).

The Climate War profiles heavyweights in this saga–including two members of the Nicholas Institute Board of Advisers, EDF President Fred Krupp and Duke Energy Chairman and CEO Jim Rogers, among other leaders in the now years-long campaign to bring climate policy to Washington.

The director of the Nicholas Institute, Tim Profeta, rose to prominence during this period. As Sen. Joe Lieberman's environmental policy adviser 10 years ago, Profeta and his counterpart Floyd Deschamps in Sen. John McCain's office together spent the hot months of 2001 working on the Climate Stewardship Act, known informally as McCain-Lieberman. Pooley:

Profeta and Deschamps stayed up late drafting the bill, pilfering ideas and language from the acid rain cap-and-and trade program and 'dreaming up big dreams for our little baby that lived in my computer,' as Profeta recalled it. How were they going to create a new market and put the industrial economy on a carbon diet? There were a million vexing issues. They drew from academic papers written by economists at EDF, Harvard, Resources for the Future, and other think tanks, and did a good enough job that all of the major climate bills to follow would draw from their work.

Profeta's work and the Nicholas Institute belong to and serve this very large, very consequential story.

The climate story is many things–overwrought, overhyped, misunderstood, ignored, underhyped, overblown, neglected, arcane, overpoliticized, a no-brainer, and endlessly fascinating. When I ask myself why I'm drawn to the topic (frequently), I always come up with the same answer: Climate change is an everlasting gobstopper, however long you chew it, there's always more to chew over. But until this week, no traditional political journalist with Pooley's pedigree has chewed through the now 20-year (plus) history of U.S. climate politics. The book is beginning to make its media rounds: Andy Revkin at the *New*

York Times' DotEarth blog; an excerpt about Rogers in *Bloomberg Businessweek*; a piece on Obama Chief of Staff Rahm Emanuel; Marc Gunther at GreenBiz.com; and Al Gore's blog.

***Remind me who has the cards?*:** Battles over climate policy are being fought on several fronts. Incoming U.N. climate chief Christina Figueres prefaced her tenure as lead convener and negotiator with a memorable foray into "expectations management." She told reporters gathered for a briefing about talks in Bonn, "I do not believe we will ever have a final agreement on climate change, certainly not in my lifetime… If we ever have a final, conclusive, all-answering agreement, then we will have solved this problem. I don't think that's in the cards."

Eric Roston is Senior Associate at the Nicholas Institute and author of The Carbon Age: How Life's Core Element Has Become Civilization's Greatest Threat*. Prologue available at* Grist*. Chapter about Ginkgo biloba and climate change available at* Conservation*.*

SUPERFUND

How we poisoned the Passaic (*Grist*)

by Mary Bruno
10 Jun 2010 3:33 PM

Living Green, Natural World, Placemaking, rivers and watersheds

In June 1983, Newark's close knit Ironbound community was overrun by investigators in Hazmat suits after EPA officials found dioxin at the Diamond Alkali chemical plant site.Photo: wirednewyork.comOn the morning of June 2, 1983, the governor of New Jersey declared a state of emergency. Speaking at a press conference in his Trenton office, then Governor Thomas Kean told reporters that the state's Department of Environmental Protection had detected disturbingly high levels of dioxin at the former Diamond Alkali chemical plant at 80 Lister Avenue in Newark's Ironbound neighborhood. With a three-page executive order, he shut down the Newark Farmer's Market, a major food distribution center about a block from the Diamond site; stopped all train traffic around 80 Lister Avenue; and expanded an already existing ban against eating fish or shellfish from the Passaic River. Governor Kean stopped short of evacuation, but he offered temporary housing in Newark's YMCA to those residents who lived closest to the plant site, and advised everyone to stay indoors during the cleanup operation.

The next morning, June 3, a dozen or so federal Environmental Protection Agency investigators, dressed in Hazmat gear, fanned out across the Ironbound. They searched the Diamond Alkali plant site, the adjacent banks of the Passaic River and the surrounding streets, homes, schools, and businesses for any signs of stray dioxin. Press photos from the next few days show white-suited EPA workers literally vacuuming the streets of the Ironbound.

"It was like an invasion," recalls Nancy Zak, a longtime neighborhood resident, who works for the Ironbound Community Corporation, a local nonprofit. "All these guys in these moon suits

were walking around. We're wearing our regular clothes. Nobody's telling us we should dress or do anything differently. It was a shocking day for people."

In the weeks following Governor Kean's announcement, the men in the moon suits went house by house, street by street, factory by factory in the vicinity of 80 Lister Avenue. They collected dirt and weeds and street grit and the dust from vacuum cleaner bags and industrial air filters -- 532 samples in total -- and analyzed it all for the presence of dioxin. When the EPA released the final results of its cleanup operation, investigators reported "massive" amounts of dioxin on Diamond's 80 Lister Avenue property, including a 51,000 ppb reading in the ground beneath an old storage tank. EPA workers also recorded high levels of dioxin off-site -- in an air duct at the abandoned waste treatment facility next door to the Diamond plant, and in dust from the vacuum cleaner bag of Carol De Francis, who lived nearby at 13 Esther Street. In total, the off-site samples contained levels of dioxin ranging from zero to 15 parts per billion. At the time, the U.S. Centers for Disease Control considered concentrations above one ppb to present "an unacceptable risk to human health."

As it approaches Newark, the Passaic River loops sharply north and then just as sharply south again, as if the river is recoiling from the city. The Passaic's S-shaped course around Newark creates a unique polyp of Ironbound land that is bordered on three sides by water. Diamond Alkali's plant at 80 Lister Avenue sat at the very edge of the polyp, on 3.4 acres along the western bank of the Passaic. Diamond shared its bulbous peninsula with three other chemical manufacturing companies. To the east there was Sergeant Chemical, which Diamond eventually bought. To the south and west was the paint giant Sherwin-Williams. In the southwest corner was Duralac, Inc., a small producer of varnish, lacquers and enamel coatings. All the land occupied by these four chemical companies lies within the Passaic River flood zone. Sherwin-Williams is the only one of the four still operating, albeit in a different locale. Benjamin Moore Paints occupies the old Sherwin-Williams space now.

The Passaic River loops around the Ironbound. Diamond Alkali had riverfront property.
This swath of Ironbound is a knot of homes and heavy industry. The factories, arrayed along Lister Avenue, command the riverfront. Behind them, modest homes line the streets. Industrial manufacturing -- mostly of farm chemicals -- has been going on at 80 Lister Avenue since Alfred and Joseph Lister bought the property in 1850. The brothers built the Lister Agricultural Chemical Works factory where they ground cattle bones into fertilizer. Kolker Chemical Works acquired the Lister Avenue property in the early 1940s. Kolker made farm chemicals too. But the pesticides and herbicides it produced on the site were not so benign.

Kolker manufactured DDT and the phenoxy herbicides 2,4,5-T (2,4,5-trichlorophenoxyacetic acid) and 2,4-D (2,4-dichlorophenoxyacetic acid). DDT is a pesticide that killed insects by attacking their nervous systems. Diamond stopped making DDT in the late 1950s, more than 20 years before the EPA banned its use. From the late 1950s until 1969, when Diamond closed the Lister Avenue plant, phenoxy herbicides were the only products manufactured there. Phenoxy herbicides were the ingredients in Agent Orange.

In August 1983, two dioxin-related lawsuits were filed on behalf of the Ironbound community: one against Diamond and one against the state's Department of Environmental Protection, as a

way to compel the agency to modernize and organize so that it could properly direct Diamond's cleanup efforts. Diamond was sued for damages, and for a peek into the company's files. This was one of the earliest hazardous waste cases in New Jersey and it was difficult to get information at the time.

A group of Viet Nam veterans frustrated by government inaction also filed suit against Diamond Alkali, Dow Chemical, Monsanto, and other manufacturers of Agent Orange. The plaintiffs -- more than two million veterans -- were after compensation for health problems they blamed on wartime exposure to Agent Orange. Their 1982 class action lawsuit forced Diamond and its co-defendants to hand over reports, memos, letters, invoices, manufacturing diagrams, every scrap of paperwork that might shed light on the claims.

The discovery process and the decontamination of the Ironbound proceeded in tandem over the next few years. While teams of private contractors dismantled and sealed the Diamond plant site, and Ironbound activists agitated for more and better public health studies, attorney Michael Gordon spent his days sifting through box after box of yellowed paperwork. He was looking for a memo or a letter or a report, some written evidence that Diamond had been aware of its dioxin problem and yet had done nothing to address it.

It was a tedious job. But one afternoon in 1986, Gordon found the smoking gun: a file of correspondence -- and related internal memos -- between a Diamond employee and officials at the C.H. Boehringer Sohn chemical company in Germany. The exchanges left no doubt that Diamond managers knew dioxin was contaminating their manufacturing process; that they knew dioxin was the cause of the chloroacne outbreak among workers at the Newark plant; that they knew how to eliminate the dioxin from the process; and that they knew all of this as early as 1957. "I went back and read [the file] a few times," says Gordon. "And I remember saying, okay, that's it. I'm done."

Although dioxin was first synthesized in a German laboratory in 1872, it really is a 20th Century phenomenon, a nasty little legacy from the age of chlorine. As early as the 1920s, organic chemists began stitching chlorine atoms to hydrocarbon molecules. In so doing, they created whole new classes of chemicals, from durable oily substances like PCBs to powerful herbicides like DDT to unintended poisons like dioxin. The most dangerous dioxin, TCDD, was the one being generated in massive quantities by workers at 80 Lister Avenue.

Temperature, as it turned out, was the key to preventing TCDD from contaminating the Agent Orange batches. Above 320 degrees F, trichlorophenol, one of the two phenoxy herbicides used to make Agent Orange, becomes unstable. The chemical bonds that hold its chlorine and carbon and oxygen atoms together come undone. As the compound unravels, new molecular matchups lead to new compounds. One of the new compounds is- TCDD. The hotter the reaction, the more TCDD is produced.

The remains of the old Diamond Alkali factory were sealed inside 932 shipping containers and buried beneath this six-acre concrete mound at 80 Lister Avenue.Photo: Mary BrunoIn 1967, a decade after it was first warned about dioxin, Diamond finally took some action, upgrading the ventilation system in its Lister Avenue factory. By then the company was one of the largest

Agent Orange manufacturers in the U.S. The Newark plant turned out 16 million pounds of trichlorophenol between 1952 and 1968. Diamond workers turned out the last batch in June of 1969. Two years later, in March 1971, Diamond sold the property to Chemicaland, a corporation that made benzyl alcohol, a multipurpose organic solvent used by ink, paint, and lacquer manufacturers.

It took awhile, 14 years to be exact, but dioxin came back to haunt Diamond. In the deluge of documents, depositions and media stories unleashed by all the litigation, the truth about operations at Diamond Alkali came tumbling out. It became painfully clear that the only thing more careless than the chemistry at 80 Lister Avenue was the housekeeping.

In testimony, Diamond plant worker Chester Myko called the floor in the trichlorophenol building the "dirtiest place in the entire plant." The amount of Agent Orange batter that was regularly slopped onto the plant floor made the surface so slick that walking across it was treacherous. Workers hosed down the floor with sulfuric acid every week or so, directing the wastewater into open trenches, which took it outside the building and into the Passaic.

Aldo Andreini cleaned the 10,000-gallon tanks that were used to store the Agent Orange ingredients. Once or twice a month, Andreini shoveled sediment from the storage tanks into metal drums. The liquid and solid waste that got spilled onto the ground during the transfer would be washed away -- into the Passaic.

Harry Heist was employed at Diamond from 1966 to 1969. "There were spills all the time," Heist told The Newark Star-Ledger in June 1983. "The reactors would run away, boil over and stuff would flow down the sides of the tanks and troughs on the floor that led to the river. The stuff was all over the place." Diamond's waste disposal strategy, in the words of its workers, amounted to "dumping everything" into the Passaic River.

As Michael Gordon prepared the Ironbound case for trial, the Marisol Corporation, hired by Diamond and supervised by the state, took the 80 Lister Avenue plant apart. Marisol workers broke down and gathered up all the equipment that was used to make Agent Orange. They packed up every square inch of flooring and wall board, every pipe and valve, every beam, brick, gate, fencepost, lock, chain, window, door, shelf, closet, light fixture, sink, toilet, desk, filing cabinet, phone, wastepaper basket, clipboard, pencil -- everything. They laid the bits and pieces of Diamond Alkali to rest, without ceremony, right there at 80 Lister Avenue in the six-acre, clay-sealed, membrane-capped, gravel-topped grave with the white planters on top. Federal EPA officials proposed cremating Diamond Alkali on site. Ironbound residents soundly rejected the EPA's "on-site incineration" plan as unsafe. Instead, the remains of Diamond Alkali were sealed inside 932 shipping containers along with the neighborhood's toxic dirt and the dust from Carol De Francis's vacuum cleaner bag.

The plant managers and executives at Diamond Alkali couldn't have known about dioxin's destructive effect at the cellular or molecular level. They did know what was causing their chloroacne problem though, and they had been warned about the potential for far more serious health consequences. Chemical companies in the U.S. and Europe were freely, if quietly, exchanging information and concerns about dioxin. "Tragically," writes toxicologist Ellen K.

Silbergeld in the 1993 book Toxic Circles, "while industry shared this information within its own circle, industry medical and toxicological staff withheld such knowledge from those most at risk, the workers." No dermatologist or plant manager ever told the crews at 80 Lister Avenue about the true nature of the chemicals they were handling every day.

The Ironbound community's case against Diamond Alkali -- by then the Diamond Shamrock Corporation -- was settled, out of court, on Thursday, Jan. 24, 1991. Diamond agreed to pay plaintiffs $1 million in damages, but refused to admit any liability. The settlement came rather abruptly about seven weeks into the trial. Diamond had yet to present any of its expert witnesses. Diamond's settlement offer was far less than the millions in damages being sought.

When I ask Michael Gordon whether he was satisfied with the outcome of the case, he offers a qualified yes. "Given where the Ironbound Community was and the resources it had, and the point in time in the development of these kinds of cases, it was an excellent result. We got a few million and made sure there was a proper recognition of the extent of the problem." In big picture terms, says Gordon, the dioxin case was a wake up call for New Jersey's environmental regulators. In its aftermath, the state's standards for hazardous waste regulation and litigation became far more rigorous and sophisticated.

Twenty-seven years after Governor Kean's emergency 1983 press conference, the dioxin that Diamond Alkali dumped into the river is still there. The New Jersey Supreme Court took pains to mention this sad fact in its 1992 opinion from the Diamond vs. Aetna case. The Honorable David S. Baime, writing for the majority said: "We digress to note that neither Federal nor State environmental protection agencies have directed Diamond to remediate the damage to the river. As Diamond correctly points out in its brief, the claims which are the subject of this litigation do not encompass losses resulting from the discharge of substances into the Passaic River. We nevertheless recount this evidence because it bears upon the state of Diamond's knowledge and intent regarding the environmental damage caused by its operations. At least to some extent, this evidence disclosed a less than benign indifference to the consequences of Diamond's operations that directly bears upon whether other discharges and their effects were accidental or inadvertent."

The talk nowadays, and there is lots of it, involves whether and how to safely dredge the dioxin-drenched sediments, and even more controversial, who should pay for it. Michael Gordon is helping the state sort through the complex legal issues.

We paddle into Newark with the dusk -- Carl, my kayaking buddy, and I -- around a bend in the river and past a decommissioned Bascule bridge frozen in the open position with a welcome message spray-painted on its underside: Newark Sucks.

Coming into Newark, just upstream from the Diamond superfund site where dioxin remains buried in the river sediments.Photo: Mary Bruno
The river is narrow on the approach, almost a culvert, corseted by bulkheads on both banks and domed by closely packed rusting iron bridges. The modest skyscrapers of downtown rise up from the western shore. The water before us is dead calm, an obsidian mirror as shiny and

impenetrable as the windows of a stretch limousine. It is Sunday evening. In a few minutes streetlights will begin to flicker on, but for now the city is hushed and shrouded in twilight.

I slow down as I approach the rusting New Jersey Transit Bridge, and start to back paddle when I notice a train pulling out of Penn Station. I don't want to be under the bridge when the train crosses it. I lay my paddle across the cockpit and cover my ears against the squeal and rattle of the train wheels on the steel tracks above.

Ten feet below me, buried in the dark pudding of silt and muck at the bottom of the river, is the world's second largest deposit of dioxin. There are other poisons down there too: PCBs, and DDT, and the whole cast of heavy metals. All the toxic byproducts of Newark's electroplating, hat-, paint-, varnish-, leather-, fertilizer-, and pesticide-producing past are there below me, bound up in the Passaic River mud. Dioxin is the most deadly of them all, man's most carcinogenic creation. I draw my paddle up out of the water and slide the small rubber drip guards as close to the paddle blades as they'll go. I don't want any of this water dribbling down the paddle shaft and dripping on to me.

This is the second installment of a two-part excerpt from This American River: From Paradise to Superfund, Afloat on New Jersey's Passaic.