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How EPA Faked the Entire Science of Sewage Sludge Safety: A Whistleblower's Story

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US EPA's 503 sludge rule (1993) allows treated sewage sludges, aka biosolids, to be land-applied to farms, forests, parks, school playgrounds, home gardens and other private and public lands. According to a recent EPA survey ^[1], biosolids contain a wide range of mutagenic and neurotoxic chemicals, which are present at a million-fold higher concentrations (ppm versus ppt) compared with their levels in polluted air and water (1). Biosolids contain all of the lipophilic (fat-soluble) chemical wastes that once polluted our rivers and lakes, but which now settle out at sewage treatment plants and become concentrated in sewage sludges. Most biosolids contain ppm concentrations of heavy metals, including chromium, lead, and mercury. They contain similarly high levels of polycyclic aromatic hydrocarbons (PAHs) and semi-volatiles, such as bis (2-Ethylhexyl) phthalate, Benzo(a)pyrene, and polybrominated diphenyl ether congeners (PBDE flame retardants). Most biosolids also contain pathogenic agents and ppm levels of many common drugs, including ciprofloxacin (Cipro), carbamazepine (Tegretol, Equetro), and fluoxetine (Prozac).

*While working at EPA Dr David Lewis published evidence that teenager Shayne Conner (of New Hampshire) died and other neighbors were harmed from living near land applied with sewage sludge (Lewis et al 2002 ^[2]). He furthermore became involved after dairy herds of two Georgia farms (McElmurray and Boyce) were poisoned after grazing on sludged land. He testified in lawsuits following each incident, against his employer (EPA), which is where many of the following depositions were obtained. The following article is an excerpt from Chapter 4 (Sludge Magic) of his new book (Science for Sale: How the US Government Uses Powerful Corporations and Leading Universities to Support Government Policies, Silence Top Scientists, Jeopardize Our Health, and Protect Corporate Profits ^[3]). The lawsuits referred to are **Lewis v. EPA 1999; Lewis v. EPA 2003; and USA, ex rel. Lewis, McElmurray and Boyce v. Walker et al. 2009.***

The depositions below piece together an unprecedented and coordinated multi-agency scientific scheme involving EPA, USDA, local and city municipalities, Synagro Technologies (a waste management company), various universities, and the National Academies of Science.



Rufus Chaney (C) and J. Scott Angle (R)
USDA Photo

The effort was intended to misleadingly present sewage sludge as scientifically safe, to hide the evidence that it was not, to deliberately misreport the contents of municipal sludges, and smear David Lewis with a scientific misconduct charge after he blew the whistle.

From "Sludge Magic" by Dr David Lewis:

The Men Behind the Curtain

1) Alan Rubin - EPA

Alan Rubin, who was a career chemist at EPA's Office of Water, is considered the primary author of EPA's 503 sludge rule. He was one of a number of office scientists at EPA headquarters involved in retaliations against scientists and private citizens who reported adverse health effects associated with biosolids. Time magazine (September 27, 1999) ran a short article about Rubin mailing "death threats" on EPA and Water Environment Federation ^[4] (WEF) letterhead to private citizens concerned about biosolids, saying, "Ask not for whom the bell tolls; it tolls for thee!"

When deposed in my U.S Department of Labor cases, Dr. Rubin explained what motivated these attacks:

RUBIN QUESTIONED BY ATTORNEY STEPHEN KOHN (1999) (2)

Q. Are you proud of the work you did?... Do you feel, in any way, hurt or upset to have someone like Dr. Lewis criticizing it?...Professionally hurt, a little?

A. Somewhat.

Q. How so?...

A. Well, I think my professional reputation, to a large extent, is based on my

association with biosolids, 503 and its technical basis.

So I feel my reputation would be somewhat disparaged if the basis of the rule, and the scientific findings were shown to be in error.

Rubin coined the term “sludge magic” when EPA’s proposed 503 sludge rule was undergoing internal peer review at EPA’s Office of Research & Development in 1992. Dr. Robert Swank, the research director at the EPA lab in Athens, Georgia, where I worked, called Dr. Rubin. When Swank asked him to explain how sewage sludge renders pollutants non-bioavailable, Rubin replied, “It’s magic.” During his deposition, Rubin deferred to USDA agronomist Rufus Chaney when questioned about scientific studies supporting sludge magic:

RUBIN QUESTIONED BY MR. KOHN (1999) (3)

Q. You called it sludge magic?

A. Yes, that is my term. “sludge magic” [means] there are unique properties in the biosolids matrix that sequester metals, that sequester organics. By sequester I mean significantly reduce the mobility to move from the biosolids out to the environment, and the matrix is really complex, and has organic material in it, organic pollutants, I’m talking about organic materials, like unit type materials, and carbohydrates, and manganese, and iron, and phosphorus, and all of these work together with the soil in a matrix to significantly reduce, if not eliminate movement of pollutants from the biosolids out to the environment. The processes, some of them are understood, some of them are not that well understood, but the whole thing taken together is called magic. So I coined the term magic.

Q. And the “sludge magic” which prevents harmful stuff that is in the sludge escaping the sludge?

A. Moving at any significant flux or rate out to the environment to create doses of pollutants that would harm plants, animals or humans.

Q. ...these studies [are] kept somewhere?

A. No, they are actually—well, Chaney is probably the one that has them all, he is like a walking encyclopedia.

So, after working in EPA’s biosolids program for over thirty years, the primary author of EPA’s 503 sludge rule still couldn’t explain how biosolids prevent potentially harmful levels of pollutants from being taken up by plants, animals and humans.

2) Rufus Chaney-USDA

My attorney, Ed Hallman, deposed Dr. Rufus Chaney at USDA's Animal Manure and By-Products Laboratory in Beltsville, Maryland. His position reflects the importance that the USDA places on protecting biosolids:

CHANEY ANSWERING MR. HALLMAN (2009) (4)

I've been appointed in a category which is above GS-18 called senior scientific research service. Within that, there are no subgrades.

There is a group —there is only about ten of us in all of my agency that have reached that level.... I would say I'm the US Department of Agriculture's most knowledgeable scientist about biosolids.

Chaney further testified that EPA scientists have never understood the science he developed, which proves heavy metals and toxic organic pollutants in biosolids cannot harm public health or the environment.

CHANEY ANSWERING MR. HALLMAN (2009) (5)

EPA withdrew the original proposed rule and completely rewrote it. Actually I played a very significant role in what the rule became. It's evident in the record. And even at the end I provided comments through USDA, approved at higher levels, saying that the rule needed a few more revisions before it was issued. But, yes, I was heavily involved in bringing to fore the science about biosolids that needed to be the basis for the rule.

Chaney explained that the unique properties of sewage sludge prevent pollutants from becoming bioavailable. In other words, they can't be taken up or absorbed by plants and animals' and they pose little or no risk to public health or the environment no matter which pollutants are present, or what their concentrations are.

One of Rufus Chaney's primary collaborators, Jay Scott Angle, replaced Gale Buchanan as the agricultural dean at University of Georgia (UGA) in 2005, the year we filed a *qui tam* lawsuit over "the Gaskin study" (Gaskin et al 2003 ^[5])(6). After EPA funded this study, one of its employees, Robert Brobst, who is charged with investigating reports of biosolids-related adverse health effects, provided UGA with data fabricated by the City of Augusta, Georgia (see Figure 1.). This fabricated data was used in the Gaskin study which EPA then used to discredit any links between biosolids and cattle deaths on two Georgia dairy farms owned by local farmers, the McElmurray and Boyce families (4). President Bush appointed Buchanan under secretary of agriculture for research,

education and economics the following year (7).

Two years earlier, the director of UGA's School of Marine Programs was advised not to hire me as a faculty member "because we're dependent on this money...grant and contract money...money either from possible future EPA grants or [from] connections there might be between the waste disposal community [and] members of faculty at the university." (8)

Many wastewater treatment plants throughout the United States aren't working properly, and are constantly in need of being repaired or upgraded to keep up with population growth. To help with this problem, EPA created a revolving loan program under the Clean Water Act to pump billions of dollars into the states to keep their wastewater treatments plants pumping properly. Chaney reasons that because the system as a whole is in constant need of repair, and there are still no documented cases of adverse health effects in the peer-reviewed scientific literature, "sludge magic," as Rubin calls it, works even when waste treatment plants don't.

Chaney further reasoned that any peer-reviewed scientific articles claiming that land application of biosolids poses a risk to public health or the environment must be false because no scientists funded by the US government and other reputable institutions have documented adverse effects from biosolids since the 503 sludge rule was passed in 1993.

In 1992, EPA's sludge rule failed to pass a scientific peer review in EPA's Office of Research & Development. Chaney blamed scientists in EPA's Office of Water for this failure:

CHANEY ANSWERING MR. HALLMAN (2009) (9)

They originally proposed a rule where they even had the data screwed up. I don't know how much you know about that. But the original rule would have essentially prohibited all land application.... So there were lots of errors the first time around, stupid errors. They didn't—they didn't review it with USDA or Food and Drug Administration before they put it on the street and they suffered and had to withdraw it and start over.

In his deposition, Chaney stated that adverse health effects from biosolids were documented in the scientific literature before 1992, and that he himself authored many of those studies.

CHANEY QUESTIONED BY MR. HALLMAN (2009) (10)

Q. And you believe that all the studies you've seen, including the ones that you have coauthored and worked on, indicate that the land application of sewage sludge in accordance with 503 is safe...and is not a danger to human health and welfare, is that correct, if it's applied in accordance with those regulations?

A. I won't disagree with that. I had advised EPA that I wanted a lower cadmium limit.... I won the battle because pretreatment and the universal understanding of the unacceptability of cadmium in biosolids has led to biosolids declining to 1 to 2 ppm in most cities in the United States. Biosolids has become remarkably less contaminated because of what we've done with the 503 and because of the publications, such as mine, which showed adverse effects of previous practices.

The phenomenon by which biosolids have become far less contaminated with cadmium is clearly evident in the data that the City of Augusta reported to EPA and the State of Georgia. These are the same (Gaskin) data that EPA and UGA published and later used by the National Academy of Sciences to conclude that Augusta's biosolids were not responsible for hundreds of cattle that died on two dairy farms (McElmurray and Boyce) where it was applied. The data purportedly show (Fig. 1 pdf here ^[6]) that monthly cadmium levels in the city's sewage sludge fluctuated wildly up to 1, 200 ppm from January 1980 to February 1993, the very month that EPA promulgated the 503 rule.

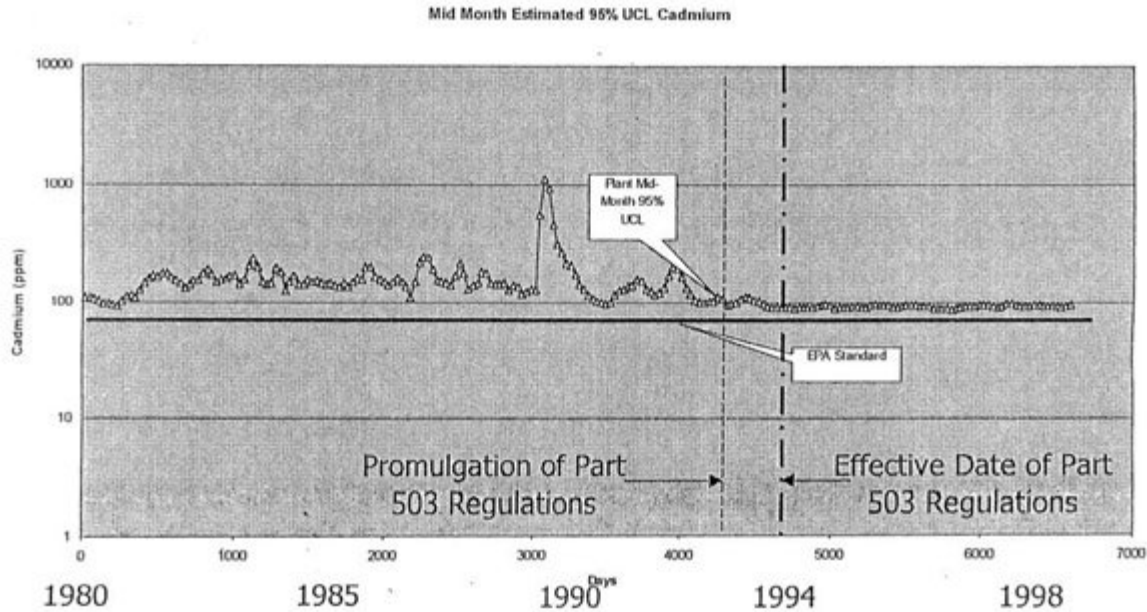
Chaney wants everyone to believe that cadmium, which was making people and animals sick, dropped to safe levels all across the country the moment EPA passed its sludge regulation in February 1993. No regulatory agency at the state or federal level, however, ever monitors levels of cadmium, or anything else, in biosolids (11). They simply accept whatever data the cities provide.

In Augusta's case, we know that the city's "sludge magic" was faked. The city's former plant manager, Allen Saxon, confessed when deposed by Mr. Hallman.

Judge Anthony Alaimo, who ruled on a lawsuit against the USDA filed by the McElmurray family, ordered the USDA to pay for crops the family couldn't plant because their land was too contaminated with cadmium and other hazardous wastes from Augusta's biosolids. Judge Alaimo wrote, "In January 1999, the City rehired Saxon to create a record of sludge applications that did not exist previously." (12)

That same year, EPA gave UGA a federal grant to publish Augusta's data as part of the

Dramatic Change in Data



Augusta, Georgia's fraudulent Reporting of Cadmium in Sewage Sludge began in 1993.

Gaskin study (Gaskin et al 2003). As soon as Mr. Saxon finished making "sludge magic" happen, all of the original data Augusta reported to the Georgia Environmental Protection Division (EPD) between 1993 and 1999 magically disappeared, and not just in Augusta. They turned up missing from the EPD records in Atlanta as well. EPA doesn't know what happened to the data, nor does the EPD, nor the City of Augusta, nor UGA. All of the data just magically disappeared from city and state records at the same time cadmium purportedly disappeared from Augusta's sewage sludge.

According to Rufus Chaney, it just doesn't matter whether the data are fake or real. He explained in his deposition: (13)

CHANEY QUESTIONED BY MR. HALLMAN (2009)

Q. Ms. Gaskin could have totally made up all that data and you would still rely on it because it was in a peer-reviewed study; is that accurate?

A. As long as it—as long as it was in general agreement with general patterns established in hundreds of papers....

To sum up Chaney's position, because Gaskin's paper concluded that Augusta's sludge did not pose a health risk, it's valid research even if the data were fabricated. On the other hand, people should disregard scientists who report problems with biosolids, even if their work is published in the peer-reviewed scientific literature. That's because researchers at universities funded by government and have published hundreds of papers concluding that biosolids don't put public health or the environment at risk.

In 2004, Chaney commented on the US Composting Council's (USCC's) list serve about my termination by EPA acting assistant administrator Henry Longest, who developed EPA's sludge policies in the late 1970s (14). USCC is headed by Lorrie Loder, Synagro's product marketing director. Chaney, of course, supported Longest's decision to end my career for publishing research that raised public concerns over biosolids (Lewis et al. 2002 [2]). He contrasted our BMC study with the Gaskin study:

CHANEY USCC (2004) (15)

The paper by Gaskin et al. [Gaskin, J. W., R. B. Brobst, W. P. Miller, and E. W. Tollner. 2003. Long-term biosolids application effects on metal concentrations in soil and bermudagrass forage [5] J. Env. Qual. 32:146-152.] reports objective measurements on the soil metal concentrations, and metals in forages growing on the soils...[Lewis's] publication [Lewis D. L., D. K. Gattie, M. E. Novak, S. Sanchez, and C. Pumphrey. 2002. Interactions of pathogens and irritant chemicals in land-applied sewage sludges (biosolids). BMC Public Health 2:11.] contains none of the data from examination of biosolids exposed subjects, and lacks the comparison with randomly selected individuals from the general populations. It is not valid epidemiological science....

I support the whistle-blower rule and process as strongly as any other citizen or government employee. I happen to believe that Dr. Lewis has been treated fairly. Claims and opinions about public health are not peer-reviewed scientific evidence. EPA and other agencies have to base rules on the peer-reviewed papers, and to consider the weight of evidence. Some papers are more complete in proof of the issue tested, as I noted above regarding proof that some source caused a specific human infection.

Our study published in BMC-Public Health had documented several cases linking Synagro's biosolids to illnesses and deaths, including the death of Shayne Conner in

New Hampshire (Lewis et al. 2002 [2]). Chaney's statements about our study are drawn from a white paper Synagro published in 2001, which contains false allegations of research misconduct against me and my coauthors. In 2004, Synagro withdrew its allegations after EPA dismissed the allegations as meritless and not based in any facts (16). Synagro's white paper, which Chaney parroted, states, for example:

SYNAGRO WHITE PAPER (2001) (17)

[Steps Lewis should have taken] include analysis of biosolids composition, fate and transport of chemicals and pathogens, determination of dose-response relationships, and methodology for and identification of the cause of health ailments purportedly associated with an environmental contaminant....

Such studies should involve a comparison of outcomes for subjects who are exposed to biosolids (treatment groups) and other subjects who are not exposed (control groups).... The leading study, a comprehensive multi-year study of Ohio farm families living near land-applied fields, reported "no adverse health effects...in either people or animals." (Cit. 38.) While Dr. Lewis admitted that this study was based on sound epidemiology, he refuses to apply its techniques....

Our *BMC* paper does, in fact, contain this information. It includes, for example, data we obtained from the patients' medical records, and a dose-response analysis of exposed and unexposed individuals in an area near a field treated with biosolids (Figure 2)(18). This field lay approximately 300 feet from a house where Shayne Conner suddenly died from respiratory failure. Conner's parents, Tom and Joanne Marshall, sued Synagro, which bought out the company that applied the biosolids. EPA ethics officials approved of my serving as an expert witness for plaintiffs, and required that I donate any expert witness fees to EPA or other governmental or nonprofit organizations. By serving as an expert witness, I was able to obtain access to medical records and other critically important information tied up in *Marshall v. Synagro*.

In Conner's neighborhood, we were able to gather information on symptoms from all but one family, including family members who reported no symptoms. We found:

LEWIS ET AL. BMC PUBLIC HEALTH (2002) (19)

Based on a least-squares analysis, proportions of individuals with symptoms increased linearly from 40 to 80 h (r^2 0.98) with time exposed to wind blowing from the field; all occupants in households with exposure \geq 80 h reported symptoms (Fig. 2). Proportions of individuals with symptoms also decreased linearly with distance from

the field from 130 to 320 m (r^2 0.95); all occupants in households living \leq 130 m from the field reported symptoms.

As reported in our BMC article, we mainly investigated the most common form of treated sewage sludges, called Class B biosolids:

LEWIS ET AL. *BMC PUBLIC HEALTH* (2002) (20)

County records indicated that biosolids-related complaints for individual patients described in this study were concurrent with land application of Class B biosolids.

As mentioned earlier, most bacterial populations that are killed back can re-establish themselves within a few days after biosolids are stockpiled, or spread on land (21). It's like cooking the Thanksgiving turkey. Eating it fresh out of the oven is one thing, but after it's been sitting out for a few days is a different matter. Biosolids are rich in proteins, which allow *staphylococci* to proliferate just as they do with turkey dinners (22).

We discovered that one out of four residents who reported irritation of the skin, eyes, or respiratory tract from exposure to biosolids had staphylococcal infections involving *S. aureus* or *S. epidermitis*. Two of the three deaths linked to biosolids were caused by *S. aureus* infections. Because multi-antibiotic resistant bacteria are common at wastewater treatment plants, biosolids-related infections are of particular concern (23).

During her depositions, Julia Gaskin testified that she believed Augusta's biosolids harmed the McElmurray and Boyce dairy farms; and she pointed out that her study included ample data supporting the dairy farmers' lawsuits.

GASKIN ANSWERING MR. HALLMAN (2009) (24)

A. Now, you have characterized that the EPA has used this against them. There is certainly data in here that could have been used to support them as well.

Q. What data?

A. The fact that we had high cadmium and molybdenum in three fields that had been—and forages in three fields that had been greater than six years. The fact we saw a reduction in copper and molybdenum ratios with long-term biosolids application.

3) Thomas Burke - EPA

Responding to congressional hearings into EPA retaliations against ^[7] me, my EPA laboratory director, and others who have questioned the science EPA uses to support

its sludge rule, EPA called upon the National Academy of Sciences National Research Council (NRC) to reevaluate its scientific basis. Ellen Harrison, an NRC panel member from Cornell University, provided the panel with copies of my unpublished manuscripts and two in-press, peer-reviewed journal articles (*BMC Public Health*, 2002; *ES&T*, 2002) (25). Harrison, director of the Cornell Waste Management Institute, and her coauthors published a well-documented, peer-reviewed article ^[8] concluding that EPA's current sewage sludge regulation does not protect human health, agriculture, or the environment (26). She was also part of a group of NRC panel members selected to brief EPA on the academy's findings when their report was electronically released on July 2, 2002. She testified in my labor case: (27)

HARRISON QUESTIONED BY MR. KOHN (2003)

Q. I'm looking for a larger-picture question here, what would you state would be Dr. Lewis' major contribution in terms of the concerns he was raising to the National Academy review process?

A. David is the only scientist that to that time had raised the scientific issues that might lead to exposure and disease and so David's ideas in that regard, I think, were important to sort of framing the National Academy panel's in recognizing that...there are a lot of gaps here, there are plausible routes of exposures that we haven't assessed. So David's role was—I mean in my book David was a hero in this regard basically. Despite the incredible flack he was getting, [he] put forward reasonable scientific theories, backed by some research to suggest that there were plausible routes of exposure and that in fact illness might be resulting. He, I mean as far as I'm concerned, he kind of turned the whole thing around...I think without David's involvement we wouldn't be at all where we are today in terms of looking at the safety issues anew. David raised-David gave a legitimacy to the allegations that has made it impossible to ignore the alleged health issues.... So I think David has probably been the most important player in all this.

Although the report drew heavily upon my unpublished manuscripts, the electronic version only cited one paper, an *ES&T* article. Susan Martel, an NRC staff member, explained to Harrison that all but one reference to my work were removed from draft versions of the NRC report based on input from panel members. Then, according to Martel, the panel chair, Thomas Burke, removed the one remaining reference to my *ES&T* article from the final copy of the report, which is posted on the NRC's website (28). Burke, who was Dean of Johns-Hopkins School of Public Health at the time, was recently appointed head of EPA's Office of Research & Development by President

Obama.

Burke removed the one remaining reference to our research after he and Martel received the following email from panel member Greg Kester, who was the biosolids coordinator for the State of Wisconsin: (29)

Hi Tom and Susan—In contrast to your message that the briefings went well, I am quite disturbed by what I have heard transpired at the EPA briefing this morning. Among other items, I heard that EPA staff in the biosolids program were referred to as “the usual suspects” and basically denigrated for their work in the program. The message was also taken that their work should be devalued and the work of David Lewis should be elevated. I did not agree to such representation nor do I believe much of the committee did. We specifically noted that EPA should not be criticized for the work they did.... While EPA may not have been moved by the criticism, there are those on the Hill who would love nothing more than to criticize EPA.

One year earlier, Synagro VP Robert O’Dette had emailed Kester a copy of his white paper accusing me of research misconduct. Kester, in turn, forwarded it to senior officials at EPA headquarters and other EPA offices throughout the country (30). In his email, Kester stated: (31)

This paper presents many of the issues raised by Dr. Lewis in the New Hampshire case and provides compelling refutation. It was written by Bob O’Dette of Synagro.

The NRC panel used Synagro’s white paper in its deliberations over my research, and rewarded O’Dette by using a photo he submitted for the cover of the NRC report. Although the panel liberally borrowed from my unpublished and in-press papers without citing the source, it was careful to credit O’Dette as the source of its cover photo. Then, after removing my in-press, peer-reviewed articles documenting scores of cases of adverse health effects across the country, the NRC panel falsely reported: “There is no documented scientific evidence that the Part 503 rule has failed to protect public health.” (32)

But the fallout from what the NRC panel did wasn’t over yet. In 2008, a *Nature* reporter called me wanting my response to a federal judge, Anthony Alaimo, ruling that data in the Gaskin study were fabricated to cover up cattle deaths linked to hazardous wastes in Augusta’s sewage sludge. *Nature*, as it turned out, was putting together a two-page news article and editorial about our research at UGA, pointing out that a multi-

university study in Ohio had independently confirmed our findings:

NATURE EDITORS (2008) (35)

In what can only be called an institutional failure spanning more than three decades—and presidential administrations of both parties—there has been no systematic monitoring programme to test what is in the sludge. Nor has there been much analysis of the potential health effects among local residents—even though anecdotal evidence suggests ample cause for concern. In fact, one of the studies used to refute potential dangers, published in the Journal of Environmental Quality in 2003 by researchers at the University of Georgia in Athens, has been called into question

Even the National Academy of Sciences seems to have been taken in. A 2002 report from the academy cited the then unpublished Georgia work as evidence that the EPA had investigated and dismissed claims that sewage sludge had killed cattle, but the study had not looked at the dairy farms in question. And although it may be technically true that there was no documented evidence of sludge applications causing human illness or death, the academy also cited work by an EPA whistleblower, David Lewis, suggesting at least an association between these factors. If anything, recent research underscores those findings. The Georgia citation notwithstanding, the academy did outline a sound plan for moving forward. It recommended among other things that the EPA improve its risk-analysis techniques; survey the sludges for potential contaminants; begin tracking health complaints; and conduct some epidemiological analyses to determine whether these reports merit concern.

To read the NRC report, the Nature reporter located it on EPA's website rather than the NRC's website. After I filled the reporter in on what happened, Nature ran the following correction, which contained even more misinformation from the NRC in an attempt to explain why it removed the last remaining reference to our work in the final version of its report.

NATURE EDITORS (2008) (36)

Correction: The 2002 biosolids study from the National Academy of Sciences (NAS) did not reference research into health impacts by Environmental Protection Agency (EPA) whistleblower David Lewis, as reported in our News story "Raking through sludge exposes a stink" (Nature 453, 262-263; 2008). The citation was included in a

prepublication draft that is still posted on the EPA's internet site, but the NAS panel voted to remove the reference before final publication. An NAS spokesman said the panel decided the information was not relevant as the panel was not charged with evaluating health impacts.

At least panel member Ellen Harrison got in the last word about the National Academy of Sciences removing the last remaining reference to our work:

HARRISON TO NATURE EDITORS (2008) (37)

The NAS made this change to the report without permission from the panel. This is a violation of the NAS procedures requiring full committee consensus on reports. I would not have approved the removal of this reference since it was clearly relevant to the work of the committee....the unilateral action of NAS to remove the reference was highly inappropriate.

4) Robert O'Dette - Synagro Technologies Inc.

EPA and Water Environment Federation (WEF) officials involved in the National Biosolids Public Acceptance Campaign systematically funded scientists who supported the 503 sludge rule while eliminating those who did not. In 2002, a Texas county commissioner invited me to speak at a public hearing about a growing number of illnesses linked to Synagro's biosolids in his area. I agreed on the condition that he invite Synagro to have its own expert rebut my arguments. So, the commissioner wrote a letter to the company's VP for government relations, Robert O'Dette, who had authored Synagro's white paper containing allegations of research misconduct against me and my coauthors at UGA. In his reply, O'Dette explained how the system works:
(38)

What we don't need are more so-called scientists whose research findings are predetermined by scientific or personal bias. These people will find their work rightly discredited and their funding will disappear while credible researchers continue to have funding.

Synagro sent its own expert, Ian Pepper from the University of Arizona, to give a presentation at our conference, and it held its own conference across the street with others speaking on its behalf.

5) Tracy Mehan, III - EPA

On December 24, 2003, Tracy Mehan, Asst. Administrator for EPA's Office of Water,

issued a letter in which he used the Gaskin study to dispel any link between biosolids and cattle deaths on the two dairy farms (39) Attorney Ed Hallman read Brobst's testimony, then questioned Gaskin:

BROBST, GASKIN QUESTIONED BY MR. HALLMAN (2009) (40, 41)

[Brobst]

We, the authors, at least Julia and I, will stand by that the study had nothing to do with the dairy farms. I mean, we both said that on several occasions, and I believe we will both stand by that. And I have conveyed that to headquarters. If they choose to not listen or choose to listen, that's up to them. I don't have any say in how they make these paragraphs and how they form things and form their conclusions. I wouldn't have done it that way.

[Gaskin]

Q. Do you recall any conversations that you've had with Mr. Brobst about the study had nothing to do with the Boyce and McElmurray farms?

A. Yes.

Q. Tell me the substance of those conversations.

A. I, the substance of the conversations were concerns that our study was being used, that people were citing our study as if the dairy farms were part of what we had sampled, and they were not. And I had concerns about that, that even though the JEQ article clearly said beef cattle farms, that some people were not being clear about that fact.

Q. Did you ever voice those concerns to anyone besides Mr. Brobst?

A. I voiced those concerns to Mr. Brobst and also at one point Ned Beecher.

Q. Who is that?

A. He is the director of the Northeast Biosolids Association.

Q. What did you tell him?

A. I told him that I was concerned that the JEQ article was being conflated with the dairy and that our study did indicate that there was not a widespread problem, but it did not specifically address the dairy concerns.

5) Henry Longest, II - EPA

When Speaker of the House Newt Gingrich greeted me in his office overlooking the National Mall in 1996, he looked at me and said, "You know you're going to be fired for this, don't you?" "I know," I replied, "I just hope to stay out of prison." The speaker had

just read my commentary in *Nature*, titled “EPA Science: Casualty of Election Politics.” It reflected the proverbial crossroads in my life. Since I was five years old, I wanted to become a scientist and have my own laboratory. Giving up my research career was not something I took lightly. It reflected my conclusion that EPA’s commitment to removing pollutants from water and concentrating them on land will eventually cause as much, if not more, harm to public health and the environment than these same pollutants caused in rivers and other aquatic systems. As soon as I turned age 55 in 2003, EPA’s Acting Administrator for EPA’s Office of Research & Development, Henry Longest, terminated me – the Agency’s only research scientist to ever publish first-authored research articles in *Nature*, *Lancet* and *Nature Medicine*. As acting deputy assistant administrator for the Office of Water in the late 1970s, Longest was the first high-ranking EPA administrator to promote land application of sewage sludges.

Science for Sale: How the US Government Uses Powerful Corporations and Leading Universities to Support Government Policies, Silence Top Scientists, Jeopardize Our Health, and Protect Corporate Profits by David Lewis can be obtained here ^[3].



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For more information go to the Bioscience Resource Project webpage on Sewage Sludge. ^[10]

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