

Myth # 1
Environmental regulations protect human health and the environment
A Short History Lesson
TOXIC AND HAZARDOUS CHEMICALS FROM EPA TO YOUR TABLE

By Jim Bynum, vp

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Help For Sewage Victims

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Edited by Gail Bynum, Ph.D

Abstract

For the most part Federal Laws such as the Solid Waste Act are intended to protect public health and the environment from sewage sludge (a solid waste) that is a hazardous waste if it contains chemicals or disease causing organisms that could cause illness or death. Congress has determined that land disposal facilities are not capable of containing hazardous waste and that landfill and surface disposal should be the least favored method of disposal. EPA has determined in its regulation that disposal on private land is the most favored disposal method even though it finds that the pollutants in sludge could cause death, disease, cancer and other assorted health effects (503.9(t)). To further put the public and environment at risk, EPA has help create a myth that Biosolids is something other than sludge and can be safely sold as an unlabeled fertilizer or soil amendment. No risk assessment was included for chemicals, disease causing organisms or cancer causing heavy metals.

What EPA should be doing according to its Charter: But Fails to Do.

“EPA's purpose is to ensure that:

- all Americans are protected from significant risks to human health and the environment where they live, learn and work;

When Congress writes an environmental law, we implement it by writing regulations. Often, we set national standards that states and tribes enforce through their own regulations. If they fail to meet the national standards, we can help them. We also enforce our regulations, and help companies understand the requirements.”

<http://www.epa.gov/aboutepa/whatwedo.html>

Introduction: A Good Law Turned into a Myth by Regulation

The 1972 Clean Water Act (CWA) with the implementing regulations is the best example of the primary myth that EPA regulations protect human health and the environment. EPA uses Section 405 of the Act to justify recycling hazardous toxic pollutant contaminated sewage sludge (biosolids) as a fertilizer or soil amendment where it will pollute our air, food, and water. There was a caveat in the CWA, "(1) Purpose - This section was not intended to be primary source of regulation of sludge but was intended as cautionary measure to provide additional protection against dangers to navigable waters caused by disposal methods unregulated by section 1311 of this title, i.e. careless land disposal and deep ocean dumping of sludge from vessels. ---" (Title 33, part 1345, note 1)

To understand just how just outside the law EPA has ventured with its sludge dumping regulation, we have to review the environmental laws where exclusions were used to justify this illegal activity. Congress was very specific in stating that EPA could not use the CWA to waive more stringent requirements of the CWA or any other law. Congress explains the national policies behind the CWA in "SEC. 101. (a) The objective of this Act is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. In order to achieve this objective it is hereby declared that, consistent with the provisions of this Act—"

- (1) it is the national goal that the discharge of pollutants into the navigable waters be eliminated by 1985;
- (6) The term "pollutant" means dredged spoil, **solid waste**, incinerator residue, **sewage**, garbage, **sewage sludge**, munitions, **chemical wastes**, **biological materials**, **radioactive materials**, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, **municipal**, and **agricultural waste** discharged into water.

Sewage sludge is composed of resident waste, chemical waste, biological materials, radioactive waste condensed during sewage treatment by municipal treatment plants and transferred to either agricultural land or permitted disposal facilities.

- (3) it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited;
- (13) The term "toxic pollutant" means those pollutants, or combinations of pollutants, including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will, on the basis of information available to the Administrator, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring.

That pretty well covers all of the biological, chemical, and radioactive components in sewage sludge aka biosolids. The initial 65 Toxic Pollutants were listed in the CWA regulation Part 401.15. This was followed by short Conventional Pollutant list in part 402.16 which included heat resistant E. coli and Klebsiella, better known as fecal coliform. EPA does not want to talk about the CWA list of 300 plus List of Hazardous Substances in Part 116.4. However, there is another list of 126 priority pollutants in Part 131.36 developed by EPA for use in municipal and industrial regulations because of their toxicity to humans and the aquatic environment. EPA says this list is restricted to specific chemicals in specific states?

http://deadlydeceit.com/401_15-Toxic-pollutants-CWA.html

http://deadlydeceit.com/401_16-conventional-pollutants-CWA.html

http://deadlydeceit.com/Toxic_pollutants.html (priority toxic pollutants)

- (7) it is the national policy that programs for the control of nonpoint sources of pollution be developed and implemented in an expeditious manner so as to enable the goals of this chapter to be met through the control of both point and nonpoint sources of pollution.
- (14) The term "point source" means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural stormwater

discharges and return flows from irrigated agriculture.

To put this in perspective, sludge/biosolids released from, or within, a treatment plant is a point source of pollution. When sludge is considered to be a fertilizer and dumped on agricultural land it becomes a nonpoint source of pollution with a statutory runoff exemption as an agricultural stormwater discharge.

To accomplish its purpose under Section 405, Congress ask EPA to:

- (A) identify uses for sludge, including disposal;
- (B) specify factors to be taken into account in determining the measures and practices applicable to each such use or disposal (including publication of information on costs);
- (C) identify concentrations of pollutants which interfere with each such use or disposal.

Congress ordered EPA to: “identify those toxic pollutants which, on the basis of available information on their toxicity, persistence, concentration, mobility, or potential for exposure, may be present in sewage sludge in concentrations which may adversely affect public health or the environment,” by November of 1986.

By July of following year, EPA was to: “identify those toxic pollutants not identified under subparagraph (A)(i) which may be present in sewage sludge in concentrations which may adversely affect public health or the environment, and propose regulations specifying acceptable management practices for sewage sludge containing each such toxic pollutant and establishing numerical limitations for each pollutant for each such use identified under paragraph (1)(A).”

The overriding concern was that: “The management practices and numerical criteria established under subparagraphs (A), (B), and (C) shall be adequate to protect public health and the environment from any reasonably anticipated adverse effects of each pollutant.”

However, Congress inserted a limitation on constructing the regulation for land application of sludge EPA could not legally overcome: “—**Nothing in this section is intended to waive more stringent requirements established by this Act or any other law.**”

Building The Myth

While most people believe the regulation is about sludge use and disposal, it is not, it is about corporate industrial removal credits for hazardous chemical substances discharged to municipal sewage treatment plants under 40 CFR 403 Appendix G. That is were you find what EPA really allows in sludge that is used as a fertilizer and soil amendment. The ten metals “regulated” in the original sludge guidelines are based on the premise that 98 percent of the 16,000 plus treatment plants could meet the designated levels in:

Part II, 40 CFR Part 257 et al., Standards for the Use or Disposal of Sewage Sludge; Final – 40 CFR Parts 257,403 and 503, Federal Register / Vol. 58, No. 32 / Friday, February 19, 1993 / Rules and Regulations / (FR 58, p. 9248) http://thewatchers.us/PDF_files/1993-503-searchable.pdf

Much of this short history is taken directly from the Preamble to the “regulation”. EPA was quite frank about the removal credits when it stated: “---- section 307(b) authorizes removal credits only if

*the resulting industrial discharges do “not prevent sludge use or disposal by such [POTW] in accordance with section 405 * * *”. Section 307(b), 33 U.S.C. 1317(b). The Third Circuit in NRDC v. EPA interpreted this language to mean that removal credits only can be granted if the comprehensive standards under section 405(d) of the CWA, as amended, are in place. Congress affirmed the Third Circuit’s holding by adopting section 406(e) of the Water Quality Act. The legislative history for section 406(e) indicates that Congress wanted standards to be developed and met prior to removal credits being authorized. As Senator Stafford, one of the sponsors of the Water Quality Act of 1987, pointed out (132 Cong. Rec. S16427, daily ed. October 16,1986):*

** * * Congress intended the existence of those regulations, to be a precondition to the sludge regulations, and compliance with granting of removal credits.” FR 58, p. 9382)*

See Part 403(g) removal credit comparison chart

[http://deadlydeceit.com/403-503-removal_credit Table.html](http://deadlydeceit.com/403-503-removal_credit_Table.html)

It takes a lot of work to establish a myth. The first step, according to Dr. James A. Ryan (EPA) and Dr. Rufus L. Chaney (USDA), was “Regulation of Municipal Sewage Sludge Under the Clean Water Act Section 503” (EPA 600A94023). It would appear that the small sludge “management” Cell at EPA may have been playing a joke on Congress when it named the sludge regulation after CWA Section 503. Section 503 actually established a Water Pollution Control Advisory Board at EPA composed of the Administrator and nine Presidential appointees. The party in power gets to name all ten members.

In the last 40 years EPA has never produced one study to show sludge is safe for use on fruits and vegetables. It would be impossible since sludge contains hazardous substances, toxic pollutants and infectious Etiologic disease causing agents. Furthermore, EPA's test for heat resistant E. coli (fecal coliform) does not assure any safety from disease causing agents that grow best at human body temperature. The most damning indictment is the approved laboratory testing requirement for safety equipment to collect and test sludge samples while claiming it is safe for ordinary people to handle. It doesn't matter if it is Class A or Class B.

EPA offers the municipality an option to either violate the federal prohibition against open dumping of solid waste or comply with the law: "When the sewage sludge is not used to condition the soil or to fertilize crops or vegetation grown on the land, the sewage sludge is not being land applied. It is being disposed of on the land. In that case, the requirements in the subpart on surface disposal in the final part 503 regulation must be met." (FR. 58, p. 9330)

It should be pointed out here that in 1992 Ryan and Chaney were in charge of rewriting the Proposed 1989 40 CFR Part 257 et al., Part II (Part 503) Sludge Use and Disposal Regulation to make it acceptable. What was not acceptable was that early version included a list of 21 organic and inorganic cancer causing agents and 25 families of primary pathogens. That would not be acceptable to any farmer or compost user. These were excluded from the final guideline with the excuse, “EPA deferred consideration of pollutants for which EPA lacked human health criteria or sufficient data.” (FR 58, p.9264) The implication is that EPA only had human health criteria and sufficient data to address 10 toxic metal pollutants in the Part 503. They went on to insult scientists, politicians and the public when they state, "The term "toxic pollutant" is not used in the final part 503 regulation because this generally is limited to the list of priority toxic pollutants developed by EPA. The Agency concluded that Congress intended that EPA develop the part 503 pollutant limits for a broader range of substances that

might interfere with the use and disposal of sewage sludge, **not just the 126 priority pollutants.**" (FR. 58, 32, p. 9327)

It wasn't that the data wasn't available. EPA simple could not afford to acknowledge the scientific data in the regulation. As I wrote in a paper for the 1992 New Mexico Governor's Conference on the Environment, "The paper concludes that sludge can not be safely disposed of on farmland because: 1) only 28 out of 400 toxic pollutants are proposed for regulation, 2) 15 out of 25 toxic inorganics on the superfund list are not included, 3) Thirty-three pollutants considered hazardous for land disposal are not included." <http://thewatchers.us/New-Mexico-paper.html>

EPA could have found a serious amount of health data from the National Institute of Occupational Safety and Health's Guide to Chemical Hazards. Of course, that is a very short version of the 1991, 3rd edition of Sittig's Handbook of Toxic and Hazardous Chemicals and Carcinogens – Noyes Publications. To give you an idea of the data available, the 4th edition contains 2,608 pages covering over 1,500 chemicals and their health effects.

In discussing the risk assessment, they state, "EPA's confidence in the risk assessment is necessarily limited by the data available to the EPA and by the lack of accepted risk assessment methodologies in certain areas." (FR, 58, p.9273) It wasn't until 1995 that EPA admitted in "Chapter 6 of the Guide to the Biosolids Risk Assessment for the Part 503 Rule" that it did not do a cancer risk assessment for any organic chemical in developing the regulation and it did not consider any toxic inorganic metal to cause cancer, even though the early version list acknowledged five that were carcinogenic when inhaled.

I am amazed that Ryan and Chaney left the definition for all of these pollutants in the regulation, except it only refers to organisms, implying that humans are not large organisms: "503.9(t) Pollutant is an organic substance, an inorganic substance, a combination of organic and inorganic substances, or a pathogenic organism that, after discharge and upon exposure, ingestion, inhalation, or assimilation into an organism either directly from the environment or indirectly by ingestion through the food chain, could, on the basis of information available to the Administrator of EPA, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunction in reproduction), or physical deformations in either organisms [humans] or offspring [children] of the organisms."

That describes a hazardous waste under any environmental law. Based on Chaney's history, he has never seen a hazardous waste he did not want to dump on farmers who needed financial help to survive, the poor, and those with little political power. For those who did not need financial help, USDA had a free money program of farm subsidies. It should be pointed out that 62 percent of farmers receive no subsidies. The rest received \$157.7 billion over 15 years. <http://farm.ewg.org/region.php?fips=00000>

Chaney expressed his opinion on dumping hazardous waste on farmers in the July 3-4, 1997 article by Duff Wilson, "FEAR IN THE FIELDS". Chaney is quoted as stating, "It is irresponsible to create unnecessary limits that cost a hell of a lot of money." "Recycle and reuse, that's our national strategy," said Chaney...."It costs so much more to put it in a landfill." Chaney hasn't changed over the years. In a recent (4/23/2011) US Compost Council email thread on the definition of "organic waste" Chaney wrote, "Although "organic waste" may be a legal definition in some Agency, it is not such to the composting industry. --- So which definition was being sought? The legal definition, or the practical

definition?"

Wilson also quoted Edward Kleppinger, a former EPA employee who wrote hazardous waste rules, who said "The last refuge of the hazardous-waste scoundrel is to call it a fertilizer or soil amendment and dump it on farmland."

By the time Ryan and Chaney finished rewriting the 192,000 word sludge document, it seemed the only safe place to dispose of toxic sludge was on foodcrops, grazing land, parks, forest, school grounds, home lawns and gardens. It wasn't that they did not include a major part of the truth concerning the dangers to human health and the environment, but they covered it up with so many words, then gave it out in bits and pieces, and out of context, over the length of two major novels. Little wonder that even Congressional persons can't remember or make sense of all they read in Agency documents.

Since the Solid Waste Act designated sewage sludge as a solid waste and potential hazardous waste, which must be safely disposed of in a sanitary landfill, EPA had a serious problem. EPA outlined the problem and blamed Congress. According to EPA, "Sewage sludge use or disposal involved a myriad of site specific circumstances, could result in multimedia effects, and depended on proper planning and decision-making at the local level. The Agency lacked experience in developing performance standards for solid waste that would attenuate multimedia environmental effects. Furthermore, at that time, Congress had not provided a compliance mechanism for the regulations." (FR 58, p.9261).

As noted in Section 405, Congress could not authorize EPA to waive more stringent laws. but EPA's sludge Cell presented that thought with a different twist, "Congress provided little guidance for the Agency in carrying out its broad mandate to protect public health and the environment. For example, Congress did not speak directly or provide the Agency guidance about how to interpret certain key phrases in the statute. Consequently, the Agency in determining appropriate sludge standards has faced a number of difficult policy issues." (FR 58, p.9250)

In building this myth EPA knew it could not comply with the Congressional intent. Therefore, it had to build a case for creating a regulation outside the law. EPA presented its reasoning, "The statute requires that the sludge regulations "adequately protect human health and the environment from reasonably anticipated adverse effects." What level of risk adequately protects human health and the environment? By requiring "adequate protection" of public health and the environment did Congress intend to leave to EPA's discretion the determination of what adverse effects public health and environmental protection required? Is a consideration of whether the effects are widespread, particularly with respect to non-public health effects, part of the determination of what constitutes adequate protection?" (FR 58, p.9251)

EPA was heavily restricting sludge disposal and guiding the municipalities toward unregulated use in the in late 70s. In 1981, Project Officer Robert K. Bastian explained in "Institutional Constraints and Public Acceptance Barriers to Utilization of Municipal Wastewater and Sludge for Land Reclamation and Biomass Production", "Public opposition and institutional red tape have often caused delays and have resulted in some projects being abandoned." However, "traditional environmental organizations, such as the National Wildlife Federation, National Resources Defense Council, Sierra Club and Audubon Society have typically not mobilized their membership against such projects. – EPA has restricted incineration, ocean dumping, land disposal, and landspreading of sludges. – Each of these measures has effectively made the disposal of sludge more complex and more costly, and in part has

contributed to a shifting of the focus away from disposal methods that are regulated **to methods that remain unregulated, or regulated less severely.**”

<http://thewatchers.us/EPA/1981-constraints-sludge.pdf>

The only way EPA could construct a sludge use regulation was to use exclusions in the laws and a 1994 public relations program to debunk “Sludge Horror Stories” run by the retirement home for EPA employees – the Water Environment Federation (WEF). The most damning “Horror Story” was number "(14) BLM policy opposing use of biosolids on Federal lands: equating it(s) use to hazardous waste dumping and landfiling raising SUPERFUND liability concerns."

<http://deadlydeceit.com/EPA-PR.html>

As will be seen later, EPA claims a federal permit resolves that concern and no one has any liability, but the owner still has an illegal hazardous waste dump. From a public, and Congressional, perspective, it would be assumed to be highly unlikely that EPA would put farmers and home owners health at risk by using exclusions in federal environmental laws to construct the sludge regulation for unlabeled hazardous waste disposal. But then any human health effects to one farmer and his farm workers, or one home owner's family, would not be considered regulatory significant (cost 100 million dollars) or widespread. Therefore, “EPA concluded that its statutory duty to protect against reasonably anticipated adverse effects required it to consider reasonable risks to exposed populations and not the risk associated with highly unlikely or unusual circumstances.” (FR 58, p.9280) For the final sludge guidelines, "EPA concluded that adequate protection of public health and the environment did not require the adoption of standards designed to protect human health or the environment under exposure conditions that are unlikely and where effects were not significant or widespread." (FR. 58, p. 9252)

An example of this confusing and conflicting guideline is found in the Part 503.32 restrictions where pathogen contaminated farm raised grass can not be harvested for one year after sludge application, but food crops can be harvested after 30 days. The difference at the time was that contaminated food crops and animals could not be easily traced back to sludge used as a fertilizer. Which brings up the question, why is EPA protecting the people who walk on grass from this toxic hazardous material, but show no concern for the people and animals who eat the crops? The bigger question is why would EPA or Ryan and Chaney insert the term food crop into the 30 day feed and fiber crop restriction. It wasn't there before the rewrite where the minimum harvest restriction on food crops was for 14 months after sludge/biosolids application.

(b)(vi)“Turf grown on land where sewage sludge is applied shall not be harvested for one year after application of the sewage sludge when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority”

(b)(iv) Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of sewage sludge.

(v)Animals shall not be grazed on the land for 30 days after application of sewage sludge.

One of the major difficulties introduced in the ultimate use of the land for disposal was disease causing organisms that infect animals and humans as well as contaminating the air, crops, land and water. Dr. John Walker noted in 1973 that liming sludge raised the pH and Salmonella disappeared for about 30 days. When the pH dropped, even in the highest limed sludge, Salmonella was found. He also confirmed that fecal coliform was found in the high limed sludge.

<http://thewatchers.us/science/properties-sludge-8.html>

It should be mentioned at this point that sludge experts and scientists have been less than candid about the fact that the deadly carcinogenic Hexavalent chromium (VI) is produced by three methods, high-lime, low-lime, and lime-free processes. Chromium compounds are very sensitive to pH balance above pH 4 and will be oxidized by oxygen into Chromium-VI. The oxidization process would appear to be extremely effective in transforming even natural occurring chromium-III from the soil into Chromium-VI when the pH is raised to 11 or 12. The recommend pH for agricultural soil is 6.5, well above the pH at which Chromium VI would revert to Chromium III.

Sludge experts and scientists have also been less than candid about the fact that Salmonella is one of the coliform (i.e., gram negative Enterobacteriaceae family). Fecal coliform are heat resistant forms of E. coli and other Enterobacteriaceae. However, that is a separate EPA myth for another article as the Drinking Water Act's contaminate list states "Total Coliforms (including fecal coliform and E. Coli) [are] Not a health threat in itself; it is used to indicate whether other potentially harmful bacteria may be present" E. coli has been a documented killer of infants and their mothers for over a hundred years – and sludge scientist don't know this small fact??? The medical profession quit using the the term coliform infection in the 1980s. However, Coliform bacterial (e.g., Escherichia coli, Klebsiella spp) diseases are still the scourge of Veterinary Medicine today.

Many of the coliform are actually potential bioterrorism agents named in "The Public Health Security and Bioterrorism Preparedness and Response Act of 2002 (Public Law 107-188; June 12, 2002) [which] requires that the United States improve its ability to prevent, prepare for, and respond to acts of bioterrorism and other public health emergencies that could threaten either public health and safety or American Agriculture. " Unfortunately, the Act does not cover the bioterrorism agents shipped to farmers in sludge/biosolids.

EPA documented in its publication EPA/625/R/92/013 "Control of Pathogens and Vector Attractions" that bacteria could survive on land for one year and on crops for six months. As an example, in 2004, USDA reported, "E. coli O157:H7 persisted for 154 to 217 days in soils amended with contaminated composts and was detected on lettuce and parsley for up to 77 and 177 days, respectively, after seedlings were planted." Furthermore, "In all cases, E. coli O157:H7 in soil, regardless of source or crop type, persisted for >5 months after application of contaminated compost or irrigation water." This information is not new, in 1975 Hess and Breer reported "Salmonella species in 90% of the sludges they examined and observed that the organisms could survive for up to 72 weeks on grassland. They said, "One of our most important findings was the fact that neither aerobic stabilization nor anaerobic digestion significantly reduces the contamination with Salmonellae."

<http://thewatchers.us/book/secrets-sludge.html>

The reality is that all sludges and composts are contaminated with chemicals and pathogens because EPA has no current process to destroy al of them, and/or, prevent regrowth/reactivation. That is a hazardous situation for farmers, farm animals, their neighbors and the public who eat the contaminated crops and use sludge/biosolids composts. EPA employees are quite willing to tell the truth about putting public health at risk and make it sound like they are really interested in protecting public health. As an example, in a letter (5-4-1990) to Congressman Tom Coleman of Missouri, the Assistant Director of the EPA Office of Water, LaJuana Wilcher, stated "the Office of Water will continue to coordinate the development of the final sewage rule with the [EPA] Office of Solid Waste to ensure that the scientific basis of the sludge rule closely parallels that of the hazardous waste rule". There is no science, but she was right –it does parallel the hazardous waste rule. <http://deadlydeceit.com/paper.html>

Federal Policies Behind the Sludge Guidelines

EPA is a political animal with many small Cells (departments--kingdoms) whose primary purpose is to control the disposal of waste in the cheapest manner possible for corporations with little concern for public health or the environment. As an example, according to the EPA OIG, in 2002, there were only 4 full time employees in the Office of Water involved in management of the sludge program. Legal had 2/10s of a person and Research and development had another 1 and 6/10s of a person involved. Last years budget was 10.5 billion dollars with over 17,000 employees. None of the 17,000+ employees or money was involved in the Compliance or Enforcement Cell to deal with sludge issues or health complaints. Where did all the money go and what were those 17,000 plus employees doing to protect public health and the environment?

While Congress enacts laws which could be enforced in a court of law, EPA creates confusing guidelines (regulations) limiting the ability of attorneys, courts and the public to understand the complexities involved between these Cells and what they actually do. Not only that but some Cells have the power to issue policies and permits to violate the laws, and at the same time, other Cells have to power to refuse to enforce the laws and regulations..

EPA's William Sanjour (retired) explains the problem, "Earlier, in 1975, the Hazardous Waste Management Division, in which I was a Branch Chief, was working with Congressional staffers interested in drafting legislation to regulate hazardous waste disposal. **Since many municipal sludges would meet any reasonable definition of a hazardous waste**, I wrote a memo(3) warning of the implications of including municipal sewage sludge in the definition of solid waste in any of the proposed bills that were being discussed. In light of the Construction Grant Juggernaut, we did not want to be involved in that can of worms. In that memo I concluded:

What will happen, then, if Congress gives EPA regulatory authority over hazardous wastes? Will we have one policy for hazardous wastes which go through municipal treatment plants and a different policy if it goes through an industrial treatment plant? if so, we will end up in court looking like fools. Will we fail to adequately regulate industrial wastes for fear of compromising EPA's policy on municipal sludge? If so, we will be brought into court for failure to perform our duty. Clearly there is a confrontation ahead, which can only be avoided by not getting regulatory authority or by changing EPA sewage sludge policy. ----

Nevertheless, when RCRA became law in October of 1976, municipal sewage sludge was included in the definition of solid waste and my worst fears came true. As we shall see, the result of this inclusion was not to strengthen the laws concerning the safe use of municipal sludge but rather to weaken the regulation of hazardous waste disposal." <http://deadlydeceit.com/1978-sludge-wars-epa.html>

The March 2002 EPA Inspector General's Status Report on the Land Application of Biosolids shows EPA's claim to protect public health is a total myth. According to the OIG, "EPA officials said investigating health impacts from biosolids is not an EPA responsibility; rather, they believe it is the responsibility of the National Institute of Occupational Safety and Health, the Centers for Disease Control, and local health departments." A complete fabrication since environmental departments have more statutory power. These entities can not get involved unless invited. Not only that but, the OIG states EPA's "Compliance and Enforce has disinvested from the program."

http://www.deadlydeceit.com/EPA_OIG.html

Generally, the guidelines have some basis in law. However, in this case, according to EPA's "History of Land Application as a Treatment Alternative", (EPA) 430/9-79-012 (1979), p.6, God ordered land application of sludge. The document states, "At least two references in the Bible refer to land application of wastes (Deuteronomy xxiii, 13, and Judges iii, 20)." Most people would not question EPA's word on something that easy to check, but EPA lied. Neither verse refers to land application of waste. The first referenced verse is an order to shit outside the camp and bury it. The next verse states God walks through the camp and does not want to see anything unclean. The second referenced is that about God's messenger stabbing King Eglon in the gut and the shit falling out through the cut in his stomach. While sewage farms were in vogue in the mid 19th century before industrial revolution, there were few chemicals and little was known about disease causing organisms.

<http://thewatchers.us/EPA/4/1979-history.pdf>

Notwithstanding God's order, we know the sludge guideline is based on exclusions in several laws, EPA's 1980 policy, "Acceptable Methods of Sludge Disposal" and a court requirement that sludge guidelines must be in effect before "pollutant removal credits" could be issued to corporations who discharge hazardous and toxic chemicals to municipal sewage treatment plants. The 1980 policy was in response to a 1971 policy statement on stopping ocean dumping of sludge by prohibiting grants for new facilities using the ocean for disposal of solid waste. It was noted that even in land disposal "toxic materials complicated the problem and introduces difficulties in the ultimate use of the land."

<http://thewatchers.us/EPA/4/1980-acceptable-methods.pdf>

The 1980 policy also applied to the beneficial use of any hazardous solid waste exhibiting the characteristics of ignitability, corrosivity, reactivity, toxicity. This set the stage for subverting the laws and recycling contaminated waste on agricultural land as, "The Agency decided that growth of food-chain crops need not be banned at hazardous waste land treatment facilities but rather should be carefully regulated." (3) By 1983, the EPA decided, "- to avoid conceivable stigmatization, we are willing to re-name recycled hazardous wastes "regulated recyclable materials." (4) And, in 1985, the "regulated recyclable materials" title was shortened to "recyclable material." (5) Not only that, but "--- commercial hazardous waste derived fertilizers would not have to undergo chemical bonding to be exempt." from the law."

3. FR 45, No. 98, Monday, May 19, 1980, p. 33207.

4. FR 48, No. 65, Monday April 4, 1983, p. 14485.

5. FR 50, No. 3, Friday January 4, 1985 p. 646.

<http://deadlydeceit.com/nsa/112.html>

This included composted hazardous solid waste sold or given away to the public as a fertilizer. EPA ignored the infectious characteristics reference in the Solid Waste Act, which also make solid waste a hazardous waste. As Bastin noted, the guidelines actually instigate municipalities and states to violate federal law. As an example, any hazardous solid waste sent to another person for beneficial use as a fertilizer or soil amendment was/is unregulated. However, if the municipality ships the hazardous solid waste to a Land Disposal Unit (landfill) this must be done by permit. It is EPA's contention that the intent determines the legal point. If the intent is to fertilize grass on a plot of ground, it is beneficial use. If the intent is disposal of sludge on the same plot, it is an illegal open dump prohibited by federal law and required to be enforced by the states. <http://thewatchers.us/EPA/1980-sludge-hazardous-questions.pdf>

In 1981, EPA's project summary for "Lime Stabilization and Ultimate Disposal of Municipal

Wastewater Sludge” reported that study “demonstrated that liming sludge to a pH of 12 is an effective means of inactivating total and fecal coliform, (Enterobacteriaceae and its heat resistant forms) although organisms can regrow as pH drops in stockpiled sludge.” It is noted that operators don't always do it right. Not only that but, fecal streptococcus “were proven to be resistant to inactivation by lime.” The implication of the recommendation is that fecal coliform and fecal streptococcus are something other than the pathogenic bacteria capable of being Superbugs. <http://thewatchers.us/EPA/1981-lime-stabilization.pdf>

With that in mind, in 1981, EPA released the “Land Application of Municipal Sewage Sludge For The Production of Fruits and Vegetables – A Statement of Federal Policy and Guidance” --- Signed by EPA, FDA, USDA. All three agreed that heavy metals, toxic organic compounds, and pathogenic microorganisms are a great concern. EPA, FDA and USDA stated that the safety of food grown on sludge is assured as long as the guidance is followed. However, there is a major caveat, the “government can not offer any indemnity against product recall, seizure, or other enforcement actions, -- However, the risk of such enforcement actions would be no greater than the risks associated with normal farming and processing practice.” <http://thewatchers.us/EPA/1981-policy-EPA-USDA-FDA.pdf>

EPA, FDA, and USDA have kept their word through all of the major contaminated food recalls and the many deaths associated with them. While the cost to farmers and food processor have been many hundreds of million dollars, until recently there were no criminal penalties. After 30 years of allowing EPA, FDA, and USDA to poison our agricultural food-chain, on April 14, 2011 the Senate unanimously approved the Food Safety Accountability Act (S 216), which puts the above statement in perspective for farmers using sludge/biosolids as a fertilizer or reclaimed sewage effluent as irrigation water. The Act, “Amends the federal criminal code to impose a fine and/or a prison term of up to 10 years for knowingly and intentionally to defraud or mislead, with conscious or reckless disregard of a risk of death or serious bodily injury: (1) introducing into interstate commerce any food, drug, device, tobacco product, or cosmetic that is adulterated or misbranded; (2) adulterating or misbranding any such item; (3) receiving or delivering any such item in interstate commerce;”

It is the duty of municipalities (pretreatment and removal credit programs) to know the full analytic range of toxic chemicals and pathogens entering the treatment plants and being discharged in sludge and irrigation water sold or given to farmers. A failure to supply that information is fraud against the farmers. On the other hand a farmer's failure to research the literature and EPA documents leaves him/her at the mercy of the courts with little or no defense. Not only that but he has no recourse if the farm is turned into a Superfund site. As an example, Chaney was one of the first to document cadmium contamination of tobacco in 1984. "Chaney et al. (84)--- observed Cd (Cadmium) content in tobacco to be 15 to 20 ppm at 1 ppm in the soil, and 45 ppm with 2 ppm Cd in the soil." Yet, the allowable limit in sludge dumped on agricultural land and for food crops is 85 ppm. Contrast this with the original sludge regulation Part 257.3-5, a facility (farm) shall not exist for growing food-chain crops such as tobacco, leafy vegetables or root crops grown for human consumption unless “The pH of the solid waste and soil mixture is 6.5 or greater at the time of each solid waste application, except for solid waste containing cadmium at concentrations of 2 mg/kg (dry weight) or less.”

Tobacco is just one of the leafy vegetable food crops Chaney knows will take up serious levels of toxic metals. As an example, in 2006, promoters of toxic sludge, Chaney and Professor Sally Brown, University of Washington, [who call sludge activists again sludge compost “Ecoterrorist”] wrote,

“Leafy vegetables grown on the farmer's fields had such high levels of Cd that remediation was required. But when we tested application of limestone to increase Cd binding by the soil matrix, lettuce Cd did not decline in strong contrast with many other experiments which have showed that limestone markedly reduced Cd uptake by plants.” “Zn Deficiency Promotes Cd Accumulation by Lettuce from Biosolids Amended Soils with High Cd:zn Ratio”
http://www.ars.usda.gov/research/publications/publications.htm?seq_no_115=193554

I am happy to add my name to the growing list of “Ecoterrorists” which include my heroes, EPA's Hugh Kaufman, William Sanjour, and David Lewis. They took their oath seriously and tried to protect the public from this toxic poison. Being on the same list with Abby Rockefeller and John Stauber (who co-wrote “Toxic Sludge is Good for You”) is not bad either.

What Chaney and Brown were dealing with is the scientific version of Russian Roulette. The bullet was there, they just didn't expect the gun to work. The Agency for Toxic Substances and Disease Registry (ATSDR states, “There are no known good effects from taking in cadmium – cadmium can severely damage the lungs and may cause death – may result in kidney disease – and fragile bones.”

Which brings up the point that the government can send you to jail for lying or fraud. Yet, government employees and some Land Grant Colleges and University scientists promoting toxic sludge feel free to lie, or commit fraud against the public, and get a nice retirement out of it. One is reminded of the Gospel of Matthew, Thirteenth chapter, "For to him who has shall be given, and it shall increase to him; but to him who has not, even that which he has shall be taken away." That verse makes perfect sense to sludge victims, who are ignored by sludge regulators, while the corporations making a fortune off sludge dumping are protected.

EPA's Sludge Cell claims it lacks the data to establish human health criteria for most chemicals in sludge/biosolids, yet it pays people to promote toxic sludge use on food crops, grazing land, parks, school grounds, home lawns and gardens without any regulation. The sludge guidelines have no basis in law. In fact, the guidelines, as I mentioned, are based on exclusions in the environmental laws and ignoring the health aspects of the chemicals and pathogens. The sludge guidelines also ignore the long lists of hazardous substances in each law. Congress would not have included those hazardous substances in the laws unless they were known to be hazardous to your health and the environment.

The Laws versus the Regulations

The original intent of Congressional enacted environmental laws was to protect human health and the environment. Unfortunately, EPA's regulations on sewage sludge do tend to intentionally subvert the intent of the primary environmental laws: The Solid Waste Act (Resource Conservation and Recovery Act, RCRA); the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), aka Superfund and the 1986 Superfund Amendments and Reauthorization Act (SARA); the Clean Water Act (CWA); the Drinking Water Act (DWA), the Clean Air Act (CAA); and the Toxic Substance Control Act (TSCA). In subverting these environmental laws, EPA has put our environment and health at risk by exposing the public to disease causing organisms and toxic chemical contaminated air, food and water through land application as a beneficial fertilizer soil amendment. Somehow that is suppose to be safer than land disposal, landfills and surface impoundments.

The Solid Waste Act

The RCRA – Solid Waste Act applies to protection of the environment, land and human health from mismanaged hazardous and solid waste disposal sites. Congress states, “(7) certain classes of land disposal facilities are not capable of assuring long-term containment of certain hazardous wastes, and to avoid substantial risk to human health and the environment, reliance on land disposal should be minimized or eliminated, and land disposal, particularly landfill and surface impoundment, should be the least favored method for managing hazardous wastes;”

As EPA's Region 7 Sludge Coordinator, John Dunn, pointed out almost 20 years ago when he sent me a copy of the following terms in the Solid Waste Act, the proposed sludge rule was based on the exclusion in the definition of solid waste for “solid or dissolved material in domestic sewage”. He forgot to say, as does Part 503.9(g), “Domestic sewage is waste and wastewater from humans or household operations that is discharged to or otherwise enters a treatment works.” It didn't take a Ph.D degree to see that EPA ignored the major provisions of the RCRA where a hazardous waste is:

(5) The term “hazardous waste” means a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or **infectious characteristics may--**

(A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or

(B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

(26A) The term “sludge” means **any solid, semisolid or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant**

(27) The term “solid waste” means any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, **but does not include solid or dissolved material in domestic sewage**, [in pipeline] Domestic Sewage Exclusion

(14) The term “open dump” means any facility or site where solid waste is disposed of which is not a sanitary landfill which meets the criteria promulgated under section 6944 of this title and which is not a facility for disposal of hazardous waste.

(26) The term “sanitary landfill” means a facility for the disposal of solid waste which meets the criteria published under section 6944 of this title.

Ryan and Chaney claimed EPA had no health criteria or data on most chemicals in the revised guidelines. Yet, the RCRA Hazardous Constituents list includes substances that meet the following criteria:

1. Inclusion in the Clean Water Act list of [126] priority pollutants. [Expanded toxic pollutant list from 65 to 126] <http://water.epa.gov/scitech/methods/cwa/pollutants.cfm>
2. Chemicals considered hazardous to transport by the Department of Transportation
 1. Those items identified in 49 CFR § 172.101;
http://setonresourcecenter.com/transportation/49CFR/172_101tb.pdf
 2. Hazardous wastes and hazardous substances (as determined under statutes administered by
and regulations issued by the Environmental Protection Agency); and
[40 CFR 261.24 Toxicity characteristic – Maximum Concentration of Contaminants for the Toxicity Characteristic and Part 261, Appendix VIII Hazardous Constituents]

3. Marine Pollutants. [Appendix B to §172.101 – <http://www.roadsidehazmat.com/shipping-papers-articles/65-marine-pollutant-list>]
3. Chemicals identified as carcinogens by the U.S. EPA's Carcinogen Assessment Group [EPA document / 45080104 – 1980, also short list of 21 chemicals listed in 1989 Part 503,] http://deadlydeceit.com/1989_503_cancer_list.html
4. Chemicals with high acute toxicity, as identified by the National Institute for Occupational Safety and Health's Registry of Toxic Effects of Chemical Substances list. http://www.ms.ornl.gov/RSG/pdf/OSHA_Haz_List_.pdf

We have to go back 30 years to find out why EPA doesn't want to include disease-causing organisms in the hazardous and solid waste regulation. EPA's 1982 Draft Manual for Infectious Waste Management (SW-957) states the terminology that has been used for this type of waste is imprecise, e.g., "Infectious or infective is defined as "capable of producing infection; pertaining to or characterized by the presence of pathogens" (4) . A pathogen is "any disease-producing microorganism or material" (4). Etiologic agent is defined as "a viable microorganism or its toxin which causes, or may cause, human disease" (5). The related term "biohazard" — which is defined as an "infectious agent presenting a risk or potential risk to the well-being of man, either directly through his infection or indirectly through disruption of his environment" (6) — is commonly used, and the biological hazard symbol (see Figure 3-1) is used universally to denote the presence of etiologic agents – Pathogenic microorganisms include bacteria, fungi, viruses, viroids, rickettsiae, and protozoa. They cause a variety of diseases in many hosts in the animal and plant worlds. In addition to the natural strains of pathogens, there are now strains that are characterized by resistance to antibiotics; such resistant strains are often found in hospitals and other health-care facilities. – no generalizations can be made about the type of environmental conditions that are necessary for pathogen survival. Some pathogens are obligate aerobes or anaerobes (i.e., they require aerobic or anaerobic conditions, respectively, for survival) whereas others are facultative aerobes or anaerobes (i.e., they flourish under one set of conditions but they are able to survive under the other). Because of the great natural diversity in environmental conditions, pathogens are ubiquitous in the environment. – It is impossible to quantify infective dose — i.e., "that amount of pathogenic microorganisms that will cause infection in susceptible subjects" (4) — because the number of pathogens that are required in order to induce a disease varies greatly. – Testing of wastes for the presence of pathogens is certainly not advocated. The results of such culturing of the wastes would not be meaningful for identifying infectious waste. Negative cultures do not necessarily confirm that no pathogens are present because many microorganisms require very specific conditions for growth and there are some pathogens (e.g., those causing hepatitis) that cannot be cultured. The expense of providing all possible culture conditions and specific tests for every batch of waste, or even for some batches, is not warranted." <http://thewatchers.us/index/infectious-waste.html>

One thing is certain, sewage treatment plants create and amplify antibiotic resistant strains of bacteria as they travel through the treatment process, into the sludge, and into the community environment. In the 1982 study "Effect of UV light disinfection on antibiotic-resistant coliforms in wastewater effluents" EPA microbiologist Mark Meeke noted a higher percentage of multidrug resistant in coliform bacteria that survived UV treatment than prior to treatment. He states, "Multiple drug resistance patterns of 300 total coliform isolates revealed that 82% were resistant to two or more antibiotics. Furthermore, 46% of these isolates were capable of transferring antibiotic resistance to a sensitive strain of Escherichia coli." <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC241834/>

Coliform are active non-heat resistant disease causing gram negative bacteria, including E. coli,

Salmonella, Shigella, Kelbsiella and the rest of the Enterobacteriaceae family. Believe it or not, that information was hard to come by, even in this enlightened age. This was important information since we found extremely high levels of E. coli and Salmonella and low levels of fecal coliform on 80 acres of cropland as a result of runoff from a Kansas City, Missouri sludge farm. It took several years to verify that fecal coliform was the simply heat resistant forms of E. coli, Salmonella and other members of the Enterobacteriaceae. No sludge expert would admit to knowing exactly what a fecal coliform was. It actually took nine years to get anyone at EPA to admit to the truth. Mark Meckes was the only one at EPA willing to acknowledge the facts in 2007.

<http://thewatchers.us/pathogens/test-comparison.html>

http://thewatchers.us/Fecal_coliform.html

http://thewatchers.us/FC_Meckes.html

It became clear that dilution was not the solution to pathogen contaminated sludge and EPA sludge regulators were not about to admit it had been conning the public for the past 30 years. I think we can now understand why EPA has never included infectious characteristics and a list of disease causing (Etiologic) agents in the hazardous waste regulations. The first solid waste regulation (Part 257) addressing limited land application of sludge referenced the RCRA intent that nonhazardous **“waste do not present risks to human health and the environment”** from landfills and land application of sludge. The Hazardous Waste Regulation (Part 261.10(a) identifies solid waste as hazardous if it may:

(i) Cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or

(ii) Pose a substantial present or potential hazard to human health or the environment when it is improperly treated, stored, transported, disposed of or otherwise managed; and

(2) The characteristic can be

(i) Measured by an available standardized test method which is reasonably within the capability of generators of solid waste or private sector laboratories that are available to serve generators of solid waste; or.

After 30 years, EPA's solid waste Cell is still waiting to establish a list of infectious treatment methods and disease causing organisms (Etiologic Agents) under Appendixes V & VI of the Hazardous Waste regulation.

Except for the drinking water standard's contaminant list, hazardous waste levels for chemicals and metals have no relationship to human health effects. As an example, the hazardous waste regulatory levels of leachable : Arsenic (5 ppm); Cadmium (1 ppm); Chromium (5 ppm); Lead (5 ppm); Mercury (0.2 ppm); Selenium (1 ppm); and Silver (5 ppm) are the potential levels that could leach out of a mismanaged landfill contaminating ground water above the drinking water standards. For this reason much of the hazardous landfill leachate is sent to wastewater treatment plants through the municipal sewage system where it is excluded from regulation under the Domestic Sewage Exclusion.. An example of this was the clean up of the Lowry Landfill Superfund Site in Denver. Had the radioactive toxic material been trucked to the treatment plants it would have required an RCRA hazardous waste permit. Under the state and federal agreement the hazardous waste from Lowry was sent to the sewage treatment plant as domestic sewage and disposed of as a safe sludge/biosolids fertilizer and soil amendment.

http://deadlydeceit.com/503_arsenic.html

http://deadlydeceit.com/503_cadmium.html

http://deadlydeceit.com/503_Chromium.html

http://deadlydeceit.com/503_lead.html

http://deadlydeceit.com/503_mercury.html

http://deadlydeceit.com/503_selenium.html

<http://denverdirect.blogspot.com/2010/07/objections-to-lowry-landfill-proposed.html>

Compare that with EPA's sludge regulation which allow total: Arsenic (75 ppm); Cadmium (85 ppm); Chromium (100,000 ppm – removal credit for land application); Lead (840 ppm); Mercury (57 ppm); Selenium (100 ppm); and Silver (unlimited). (40 CFR 503.13) If the sludge is total solids, as indicated in the regulation, then total metals may be divided by 20 to determine the regulated hazardous level.

<http://deadlydeceit.com/1999-Chromium-100000.html>

http://www.epa.gov/osw/hazard/testmethods/faq/faq_tclp.htm#Total

In 1991, EPA created the municipal co-disposal solid waste landfill regulation (Part 258) under RCRA and CWA Section 405 to “ensure the protection of human health and the environment” from mismanaged landfills. Appendix I to Part 258 lists 62 Constituents for Detection Monitoring at a co-disposal landfill. More important, Appendix II to Part 258 list 220 Hazardous Inorganic and Organic Constituents of concern. While Appendix I lists 15 metals, Appendix II include 18 toxic heavy metals.

It gets worse, EPA Office of Water claims sludge is a non-hazardous waste because the Office of Solid Waste has not designated it as such. However, the Office of Water's definition of a pollutant in 503.9(t) confirms that it is a hazardous waste for not only the nine listed inorganic pollutants, but also unknown numbers of organic chemicals allowed for land application and pathogens. See 503.9(t)

Pollutant is an organic substance, an inorganic substance, a combination of organic and inorganic substances, or a pathogenic organism that, after discharge and upon exposure, ingestion, inhalation, or assimilation into an organism either directly from the environment or indirectly by ingestion through the food chain, could, on the basis of information available to the Administrator of EPA, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunction in reproduction), or physical deformations in either organisms (humans) or offspring (children) of the organisms.

For these reasons EPA misused the domestic sewage exclusion in the RCRA in converting its 1981 policy into the 1993 sludge regulation. But first it had to get the National Association of Conservation Districts on board its sales program in 1982, who gave a second reason for sludge use in the EPA document “Sludge and the Land: The Role of Soil and Water Conservation Districts in Land Application of Sewage Sludge. EPA/ 430/9-82-007 (1982), "A key advantage of land application is that it usually takes place on privately owned land. Thus, the municipality can avoid the high costs of acquiring land for disposal sites, or of constructing expensive sludge processing facilities. Private land owners who accept the sludge not only help to solve the municipal problem, but also MAY improve the condition of the soil, reduce fertilizer cost and increase crop yields."

It is pretty simple, if sludge is disposed of on private land, it is beneficial land application. If it is placed on municipal land it, is disposal which requires a permit. The *Domestic Sewage exclusion* was explained in a “letter dated Feb. 7, 1986, to the Honorable Thomas P. O'Neil, Jr., Speaker. U.S. House of Representatives, by (EPA) Administrator: "The purpose of the Domestic Sewage Study was to evaluate the impacts of waste discharged to public owned treatment works (POTW's) as a result of the Domestic Sewage Exclusion. The Domestic Sewage Exclusion, (specified in Section 1004(27) of RCRA) provides that a hazardous waste, when mixed with domestic sewage is no longer considered hazardous. Therefore, POTW's receiving hazardous waste in this manner are not subject to the RCRA

treatment, storage and disposal facility requirements. The premise behind the Domestic Sewage Exclusion is that RCRA management of wastes within a POTW is unnecessary and redundant since these wastes are regulated under the Clean Water Act's regulatory programs." (NSA Public Facts # 100) <http://deadlydeceit.com/nsa100.html>

Martha Prothro expanded on the domestic sewage exclusion in a 1986 letter:

"FROM: Martha G. Prothro, Director, Permits Division (EN-336)" September 11, 1986

Applicability of RCRA to POTWs Receiving RCRA Hazardous Waste,

"Generally, sewer line influents to POTWs will fall under the domestic sewage exclusion of 40 CFR 261.4(a) (1) and therefore are not considered to be "hazardous waste" under RCRA. However, waste received at a POTW by truck, rail or by a dedicated pipe (i.e., where the waste does not mix with domestic waste in the pipe before entering the POTW) is not covered by the domestic sewage exemption. If that waste is a listed hazardous waste or exhibits a hazardous waste characteristic, the POTW is required to obtain a RCRA permit for the treatment, storage and disposal of such waste. For example, wastewater treatment sludge from the chemical conversion coating of aluminum is a listed hazardous waste in the RCRA regulations. If this waste is sent to a POTW via a sewer where the waste mixes with domestic sewage prior to reaching the POTW's treatment plant, then the waste would be covered by the domestic sewage exemption, and therefore would not subject the POTW to a RCRA permit. If, however, the same waste is trucked directly to the POTW, then the waste would still be considered "hazardous waste" and the POTW would be required to have a RCRA permit to accept such waste."

http://www.epa.gov/npdes/pubs/55_9-86.txt

www.deadlydeceit.com/EPA-hazmat.html

If They Can't Dazzle Us With Their Brilliants, They Try To Baffle Us With Bullshit

Ryan and Chaney could not get their story or terminology straight in the revised sludge guidelines based on the 1993 Preamble to the Part 503 sludge rule. The end result is confusion among the facts that: 1) domestic sewage does not include any industrial waste; 2) the regulation does not address industrial wastewater mixed with domestic sewage treated at an industrial treatment plant; 3) it does address domestic sewage alone when it is not mixed with an industrial waste at an industrial treatment plant; and 4) it does address domestic sewage mixed with industrial waste treated at a municipal treatment plant. Currently, it is all called biosolids.

This creates confusion about sludge from treatment works treating domestic sewage, industrial treatments plants treating domestic sewage and municipal treatment plants treating domestic sewage which could include farms and home gardens. It just proves that when people get confused they tend to pass over the information without questioning it.

EPA states, "Generally, permit applications are not required for land application sites because they are not automatically considered treatment works treating domestic sewage. In a May 2, 1989 notice, EPA stated that "under the Federal program, permits will not be required for owners or operators of land where sludge is beneficially reused such as farm lands and home gardens" (FR, 54, p. 18726)).

However, the Agency went on to say that Part 122 contains a second part to the definition of treatment works treating ,domestic sewage that allows the Regional Administrator to designate a facility a treatment works treating domestic sewage "where necessary to protect public health and the environment from poor sludge quality, use, handling, or disposal practices, or to ensure compliance

with 40 CFR part 503” (FR 54, p. 18726))” (FR 58, p. 9332)

“Treatment works treating domestic sewage also include owners or operators of disposal facilities such as sewage sludge incinerators, monofills, and surface disposal sites. These facilities must also apply for a permit. Monofills and surface disposal sites are “lands dedicated to the disposal of sewage sludge” (FR 54, p. 18726).” (FR 58, p.9406)

“Under the Federal program, the definition of treatment works treating domestic sewage does not extend automatically to land where sewage sludge is beneficially used, such as farm land and home gardens (FR 54, p. 18726).” (FR 58, p.9406)

“When a generating treatment works sends its sludge out of state to a user or disposer not defined or designated as a treatment works treating domestic sewage, the receiving State or local jurisdiction, may, but need not, issue a permit. (Some States under their own laws and programs require sludge exporters to obtain any necessary approvals from importing States, although this currently is not required by Federal regulation).” (FR 58, p.9366)

“The final part 503 regulation defines sewage sludge as solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to, domestic septage; scum and solids removed in primary, secondary, or advanced wastewater treatment processes: and a material derived from sewage sludge.” (FR 58, p.9327)

EPA is quite clear that “Standards apply to publicly and privately owned treatment works that generate or treat domestic sewage sludge, as well as to any person who uses or disposes of sewage sludge from such treatment works.” (FR 58, p.9248) EPA describes domestic sewage as, “Domestic wastewater contains material flushed into household drains through toilets, sinks, and tubs. Components of domestic sewage include soaps, shampoos, human excrement and tissue, food stuffs, detergents, pesticides, household hazardous waste, and oil and grease.” (FR 58, p.9255)

Then EPA states, “Municipal wastewater contains materials discharged into household drains through toilets, sinks, and tubs. These materials are domestic sewage. Components of domestic sewage include soaps, shampoos, human excrement and tissue, food stuffs, detergents, pesticides, household hazardous waste, and oil and grease.” (FR 58, p.9367)

“The final part 503 regulation does not establish requirements for the use or disposal of sludge generated at an industrial facility during the treatment of industrial wastewater because those sludges are not sewage sludge. Sewage sludge is generated during the treatment of domestic sewage in a treatment works.” (FR 58, p.9324)

EPA makes a point to divert attention away from the fact that sludge from a waste treatment plant is always a solid waste under RCRA when it discusses the domestic sewage exclusion in the Preamble to Part 503. According to EPA, “This is a key definition, because the standards in the part 503 regulation apply to sewage sludge generated during the treatment of domestic sewage in a treatment works. When domestic sewage is in the influent to a treatment works, even if the influent also contains industrial wastewater, sewage sludge is generated during the treatment of the domestic sewage.” (FR. 58, p. 9326)

Not quite the case, hence the confusion. Ryan and Chaney make the case that domestic sewage sludge is quite different from the sludge generated from a public owned municipal treatment works (POTW)

According to EPA, “The Water Quality Act of 1987 expanded the applicability of section 405(d) of the CWA to industrial manufacturing and private processing facilities that treat domestic sewage combined

with industrial wastewater. Although the legislative history of the 1987 Water Quality Act indicates that the Agency should impose requirements on any treatment works that treats domestic sewage, sufficient time was not available to develop standards for the use or disposal of sewage sludge generated at industrial facilities during the treatment of industrial wastewater combined with domestic sewage. EPA does not have sufficient information at this time on the number of industrial facilities that generate sewage sludge, the amount of sewage sludge generated at those facilities, and the practices through which the sewage sludge is used or disposed to evaluate the impact of part 503 numerical limits for the sewage sludge. In addition, the Agency questions whether the models and data used to develop the numerical limits in the final part 503 regulation are appropriate for industrial sludge with a domestic sewage sludge component. For these reasons, the part 503 regulation does not establish requirements for the use or disposal of sewage sludge generated at an industrial facility during the treatment of industrial wastewater combined with domestic sewage (i.e., either domestic sewage generated at the industrial facility or domestic sewage generated off-site and transported to the industrial facility for treatment).” (FR 58, p.9324

However, “The part 503 regulation does apply to sewage sludge generated at an industrial facility during the treatment of only domestic sewage. When domestic sewage generated at an industrial facility is treated at the industrial facility without combining the domestic sewage with industrial wastewater, sewage sludge generated during the treatment of the domestic sewage is subject to the part 503 requirements. Part 503 also applies to sewage sludge generated when domestic sewage generated off-site is treated only with the domestic sewage generated at the industrial facility or is treated at the industrial facility by itself. It is important to note that all industrial wastewater treatment facilities that treat domestic sewage whether the domestic sewage is generated on-site or off-site-are considered treatment works treating domestic sewage and may be required to apply for a permit under 40 CFR 122.21.” (FR 58, p.9325)

The Sludge Regulation (Part 503) is actually labeled Part II of the expanded series of the Solid Waste Regulation Part 257. The original Part 257 is now reserved for the regulation of industrial wastewater containing domestic sewage. EPA puts it this way, “The final part 503 regulation contains requirements for sewage sludge applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator. There is one case, however, that the part 503 requirements do not apply to sewage sludge used or disposed through those practices. Part 503 does not apply to the use or disposal of sewage sludge generated at an industrial facility during the treatment of industrial wastewater combined with domestic sewage generated at the industrial facility. That sewage sludge has to meet the part 257 requirements if it is disposed on the land. Because the part 257 requirements continue to apply to certain sewage sludges, today’s amendment does not delete section 405(d) from the Part 257 authority.” (FR 58, p.9381)

The above descriptions indicate that domestic sludge (biosolids) is quite different from regular municipal sewage treatment plant sludge (solid waste). EPA separates the two in the following statement, “Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge, that are located within the confines of the facility, with a design flow of 1.0 MGD or more, are required to have an approved pretreatment program under 40 CFR part 403. Not included are farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and which are not physically located in the confines of the facility, or areas that are in compliance with section 405 of the CWA. (40 CFR

122.26(b)(14)(ix))” (FR 58, p.9323)

“The Agency chose only to require Class I sludge management facilities, POTWs with a design flow rate equal to or greater than one million gallons per day, and POTWs that serve 10,000 people or more to report information to the permitting authority. This was done because Class I sludge management facilities are either a publicly owned treatment works (POTW] required to have a pretreatment program or a treatment works treating domestic sewage (TWTDS) that has the potential to affect public health and the environment adversely because of the TWTDS’s sewage sludge use or disposal practice.”

Municipal sewage treatment works generating sludge are, “POTWs [Public Owned Treatment Works that] receive wastewater from industrial facilities, domestic wastes from private residences, and run-off from various sources that must be treated prior to discharge. Treatment results in an effluent that may be discharged and a residual material, sewage sludge. The sewage sludge, usually more than 90 percent water, also contains solids and dissolved substances. The chemical composition and biological constituents of the sludge depend upon the composition of the wastewater entering the treatment facilities and the subsequent treatment processes. Typically these constituents may include volatile organics, organic solids, nutrients, disease-causing pathogenic organisms (e.g., bacteria, viruses, and others), heavy metals and inorganic ions, and toxic organic chemicals from industrial wastes, household chemicals, and pesticides. --- Proper management of ever-growing amounts of sewage sludge is becoming increasingly important as efforts to remove pollutants from wastewater have become more effective. (FR 58, p.9249)

The description given for POTW sludge indicates it is an RCRA hazardous waste. In fact, the modified definition of a CWA Toxic Pollutant in **503.9(t)** confirms it, “**Pollutant is an organic substance, an inorganic substance, a combination of organic and inorganic substances, or a pathogenic organism that, after discharge and upon exposure, ingestion, inhalation, or assimilation into an organism either directly from the environment or indirectly by ingestion through the food chain, could, on the basis of information available to the Administrator of EPA, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunction in reproduction), or physical deformations in either organisms or offspring of the organisms.**” (FR 58, p.9327 & 9389)

EPA makes the point that “Many of the definitions in this subpart are definitions taken either directly from section 502 of the CWA or other Agency regulations.” (FR 58, p.9326) However, we can see that is not the case since, “**Section 502(6) The term “pollutant” means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat,**” Of course under “**Section 502(19) The term “pollution” means the man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water.**”

Many of us thought we understood EPA's intention that all states were required to have an EPA approved sludge program before they could issue permits. However, we failed to recognize the subterfuge, “The determination of the manner of disposal or use of sludge is a local determination except that it shall be unlawful for any person to dispose of sludge from a publicly owned treatment works or any other treatment works treating domestic sewage for any use for which regulations have been established pursuant to [section 405(d)], except in accordance with such regulations.” (FR 58, p.9358)

Yet, EPA writes, “Section 405(f) of the CWA provides that each permit issued under section 402 of the

CWA to a publicly owned treatment works or to any treatment works treating domestic sewage shall include conditions to implement the part 503 regulation, unless included in permits issued under other enumerated Federal or approved State programs. In addition, the statute authorizes EPA to issue permits to treatment works treating domestic sewage solely to impose conditions to implement the regulation where none of the listed permit programs apply. Thus, the part 503 requirements may be implemented through a CWA permit, a subtitle C Solid Waste Disposal Act permit, a part C Safe Drinking Water Act permit, a Marine Protection, Research, and Sanctuaries Act permit, a Clean Air Act permit, a permit under an approved State program, or an EPA-issued “sludge only” permit. However, the requirements in part 503 must be met even in the absence of a permit for the use or disposal of sewage sludge (i.e., part 503 is self-implementing).” (FR 58, p.9323)

Under Part 503, EPA deleted Section 405(d) from the Part 257 authority. As an example, under Part I of the expanded Part 257 series (Part 258.3 Consideration of other Federal laws.), “The owner or operator of a municipal solid waste landfill unit must comply with any other applicable Federal rules, laws, regulations, or other requirements.” Part II of the expanded Part 257 series (503.4 Relationship to other regulations) does not require anyone to comply with any law or regulation unless the sludge is going to a municipal co-disposal landfill – “Disposal of sewage sludge in a municipal solid waste landfill unit, as defined in 40 CFR 258.2, that complies with the requirements in 40 CFR part 258 constitutes compliance with section 405(d) of the CWA.”

<http://deadlydeceit.com/258-2.html>

<http://deadlydeceit.com/503-4.html>

Folks that are harmed by toxic sludge dumped as a fertilizer on agricultural land or sold to them as an unlabeled soil amendment for their lawn and garden do not want to hear that sludge disposed of in a Part 258 co-disposal landfill constitutes compliance with CWA Section 405(d). What they want to know is why compliance with Part 503 does not constitute compliance with CWA Section 405(d) or any other law.

Superfund Act Exclusion for Normal Application of Fertilizer Used for Sludge Guideline

While part of the reasoning that puts public health at risk goes back to the EPA policy of recycling hazardous waste as a fertilizer under the simple term "recyclable material", and the claim that the domestic sewage exclusion produce domestic sludge rather than solid waste, another part of the reasoning can be found in the law to clean up hazardous waste Superfund sites where a “normal application of fertilizer” is excluded from the law. Common sense indicates that solid waste contaminated with hazardous substances and disease causing organisms can not be considered a normal application of fertilizer on a Superfund site, agricultural land or your lawn and garden by any sane person.

The CERCLA, Public Law 96-510, (Superfund/SARA) was primarily designed to close the loopholes in the Resource Conservation and Recovery Act to protect the public and environment from a release of hazardous substances from inactive hazardous waste sites. (House Report 96-1016, May 16, 1980)

<http://deadlydeceit.com/nsa100.html>

Can we consider the following hazardous substances to be normal constituents of fertilizer?

Under CERCLA/SARA a hazardous substance is:

- A) any substance designated pursuant to section 311(b)(2)(A) of the Federal Water Pollution Control Act [33 U.S. C. 1321 (b)(2)(A)], [Oil and Hazardous Substances listed in Part

116.4]

- (B) any element, compound, mixture, solution, or substance designated pursuant to section 9602 of this title, [29 CFR 1910, Subpart Z; OSHA List of Hazardous Chemicals that require MSDS Sheets – http://www.aps.anl.gov/Safety_and_Training/User_Safety/oshatoxicchem.html]
- (C) any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act [42 U.S.C. 6921]
- (D) any toxic pollutant listed under section 307(a) of the Federal Water Pollution Control Act [33 U.S.C. 1317 (a)], [40 CFR 401.15 -- 65 Toxic pollutants expanded to list of 129 Priority Pollutants in 40 CFR 423, Appendix A and NPDES hazardous substances under 40 CFR 117.3], <http://water.epa.gov/scitech/methods/cwa/pollutants-background.cfm>
- (E) any hazardous air pollutant listed under section 112 of the Clean Air Act [42 U.S.C. 7412], and, ---- [40 CFR 61.01(a) – asbestos, benzene, beryllium, coke oven emissions, inorganic arsenic, mercury, radionuclides, and vinyl chloride] <http://www.epa.gov/ttnatw01/187polls.html> http://www.law.cornell.edu/uscode/42/usc_sec_42_00007412----000-.html]
- (F) any imminently hazardous chemical substance or mixture with respect to which the Administrator has taken action pursuant to section 7 of the Toxic Substances Control Act [15 U.S.C. 2606]. [40 CFR 302.4 Designation of hazardous substances +- Appendix A to Part 355—The List of Extremely Hazardous Substances and Their Threshold Planning Quantities - +- Appendix B to Part 355—The List of Extremely Hazardous Substances and Their Threshold Planning Quantities

EPA would have us consider all of the above chemicals as allowable in sludge/biosolids under the CERCLA exclusion for the “Normal Application of Fertilizer”.

<http://deadlydeceit.com/CERCLA.html>

This exclusion in the CERCLA was carried over in the 1993 sludge regulation Part 503. The laws and regulations indicate all sludge may be a hazardous waste. Yet, as I wrote in the 1997 National Sludge Alliance Fact Sheet #100, “The ultimate insult to Congress and the American public was given in a letter to Congressman Condit, dated October 1, 1993, by Martha G. Prothro, (EPA) Acting Assistant Administrator. She states that, "If the placement of sludge on land were considered to be "the normal application of fertilizer"--it--"would not give rise to CERCLA liability for the municipality generating the sewage sludge, the land applier, the land user or the land owner.””

<http://deadlydeceit.com/nsa100.html>

<http://deadlydeceit.com/exclusions.html>

The 1993 Preamble to the 503 Sludge regulation makes the same point, plus, while toxic it is a federally authorized self-permitting regulation, a federal or state permitted release of hazardous substances in sludge under Section 405(D) of the CWA would not give rise to CERCLA liability. (FR 58, p.9262) A permit here is actually a CWA permit authorizing non-point source releases of pollutants and toxic pollutants to waters of the United States off agricultural land. According to Section 301, “(k) (2) The effluent limitations established under a permit issued under paragraph (1) shall be sufficient to implement the applicable State water quality standards, to assure the protection of public water supplies and protection and propagation of a balanced, indigenous population of shellfish, fish, fauna, wildlife, and other aquatic organisms, and to allow recreational activities in and on the water.”

Promoting the use of toxic pollutant contaminated sludge exacerbates the damage to our nations waters. The EPA Journal of April, 1984 reported that "National studies suggest that agricultural nonpoint source pollution adversely affects portions of over two-thirds of the nation's river basins."

According to the article:

About 63 percent of non-federal land in the United States is used for agricultural purposes, including crop and livestock production. It is not surprising, therefore, that agricultural activities constitute the most pervasive cause of water quality problems from nonpoint sources. Indeed, it is considered the most serious cause in most EPA regions." (p. 28)

By 1996, EPA's partner in crime and retirement home, WEF was placing all the blame on the agricultural use of animal manure in an effort to gain more money to expand EPA's power and regulatory authority. In a February 18, 1996 letter to Congress WEF stated, "Water Quality 2000 found that "polluted runoff from agricultural activities...is a major cause of impairment of the nation's waters. Congress must make a clear statement that agricultural derived water pollution problems is a nation priority. ---- Preventing pollution is easier and cheaper than implementing new pollution control requirements. Congress should encourage prevention-oriented actions at the watershed level in which farmers, ranchers, local residents, and other stakeholder are all partners in the search for solution."

Congress provides a major part of the WEF's funding, who promotes the dumping of toxic and pathogen polluted sludge on agricultural land, where they know the pollutants will runoff as a non-point source of pollution into the nation's waters. The disclaimer is that if all laws and regulations are followed it is a safe fertilizer. However, if it was safe, there would be no need for the EPA disclaimer.

The EPA's disclaimer to farmers and home owners is, "Under CERCLA, protection from liability is also provided when there is a release of a CERCLA hazardous substance and the release occurs pursuant to Federal authorization, Thus under CERCLA, in defined circumstances, the application of sewage sludge to land in compliance with a permit required by section 405 of the Clean Water Act is a Federally permitted release as defined in CERCLA. Recovery for response costs or damages under section 107 of CERCLA is not authorized for Federally permitted releases." (FR 58, p.9262)

William Sanjour noted in the document 1978-79 Sludge Wars at EPA, "More than two years ago, the General Accounting Office requested that EPA provide "immediate" guidance on sludge distributed to the general public because of "potential health hazards." This guidance has not yet been provided. Highly contaminated back-yard soils have now been found In Chicago, where sludge was used as a mulch. Thousands of Chicago-area back yards have been contaminated in a program that continued for one year following GAO 's warning to EPA. Many similar programs are still ongoing nationwide--without restriction." <http://deadlydeceit.com/1978-sludge-wars-epa.html>

More recently, in 2007, Milwaukee Metropolitan Sewage District (MMSD) has turned five public parks and about 25 school yards into hazardous waste open dumps with PCB contaminated Milorganite sludge fertilizer. Milwaukee was a partner with the Leather Industries of America in suing EPA to get chromium removed from the regulation. <http://deadlydeceit.com/Milwaukee-story.html>

Currently, there is a Class Action Lawsuit in Alabama due to high levels of PFOA and PFOS contamination of municipal sewage sludge or biosolids dumped on 5,000 acres of grazing land as a fertilizer. <http://caselaw.findlaw.com/al-supreme-court/1507007.html>

What we need to know is what would the landowner be able to do with a superfund site, if no one can be held liable for the damages and the contamination must be disclosed to a potential buyer?

What we must remember is that the stated purpose of Section 405(a) of the CWA is that where moving "sewage sludge from one location and its deposit at another location) would result in any pollutant from such sewage sludge entering the navigable waters, such disposal is prohibited, except in accordance with a permit issued by the Administrator under section 402 of this Act." While Section 405 has been amended several time, the main purpose is to back up the solid waste rules and to prevent toxic chemical pollutants and biological pollutants from entering the waters of the United States from sewage disposal sites.

Putting The Myth To Rest

As I mentioned earlier, the pollutant levels in sludge were based on 98 percent of the sewage treatment plants being able to meet the standards rather than any scientific justification. This was brought out in an engineered federal lawsuit by EPA's partner shareholders, "Leather Industries of America, et al. v EPA". (United States Court of Appeals, District of Columbia Circuit, Nos. 93-1187, 93-1376, 93-1404 and 93-1555) The primary purpose of the lawsuit was to remove the 3,000 ppm chromium level from the regulation. Leather Industries of America, Inc., claimed EPA did not consider any treatment plants accepting sewerage from the leather industry in its National Sewage Sludge Survey (NSSS) of 479 treatment plants out of 11,407 nationally. According to the ruling, EPA claimed to have performed sampling and analysis at 208 of the 479 treatment plants -or- was the number 180? Both numbers were given by the EPA, so the Court was not sure which was correct. The maximum chromium noted in the NSSS was 3750 mg/kg whereas, tanneries generate chromium concentrations in excess of 30,000 mg/kg. The United States Court of Appeals, District of Columbia, ruled: "(1) regulatory safe harbor for land application of sewage sludge based on the 99th percentile levels of chromium and selenium indicated in national survey violated Clean Water Act;"--Plus-- "(4) EPA abused its discretion in establishing phytotoxicity limit on soil concentration of chromium in sewage sludge applied to land." It was also the Courts opinion, that because of: "(4) the lack of data to support the risk-based cap on chromium, we remand those parts of the regulation to EPA for modification or additional adjustment."

This left EPA and its partners a major problem, under the Surface Disposal section of 503.23, only three pollutants, Arsenic, Chromium and Nickel, are eligible for removal credits, while the beneficial use section of 503 allows removal credits for all the pollutants. (Appendix G to part 403 - FR. 58, p. 9386) EPA responded to the Courts opinion by removing the chromium from the beneficial use section of part 503 because it could not be disposed of under a permit a Part 503 Surface disposal. Site. Under the part 503 landfill disposal section, sewage sludge with chromium levels in excess of 200 mg/kg (ppm) can not be placed within 75 feet (25 meters) of the land disposal site boundary and the main site itself is restricted to sewage sludge with chromium levels below 600 ppm. (see Tables in 503.23) <http://deadlydeceit.com/503-23.html>

In 1995 EPA removed Chromium from the beneficial use section of Part 503 without notice or public comment because "notice and public comment procedure are impracticable, unnecessary or contrary to the public interest." EPA states, "The D.C. Circuit concluded that the statute requires risk-based regulation and that the Agency lacked the data to support risk-based regulation of chromium to prevent plant injury. EPA has reviewed the record in the sewage sludge rulemaking in light of the D.C. Circuit decision. The Agency's second look at the data does not reveal additional information, not previously

considered by EPA, that would support regulation of chromium in sewage sludge to prevent plant injury. As a result, the chromium land application pollutant limits must be withdrawn.” (FR 60, pp. 54763-70)

The Court did not order EPA to drop chromium from the regulation as John Walker claimed in the 1995 Guide to the Part 503 Risk Assessment. Walker lied when he wrote: “The court stated that EPA should drop chromium from the Part 503 rule because the biosolids risk assessment did not identify any chromium level associated with risk to public health or the environment. EPA agrees and plans to delete all chromium limits for land-applied biosolids from the Part 503 rule. (p. 56) Yet, on page 110, EPA admits it did not do a health risk assessment for any chemical and did not consider any toxic metal could cause cancer. Another lie, since five, Arsenic, Cadmium, Chromium, were listed in the 1989 proposed Part 503 they are carcinogenic by inhalation.

Chromium is known to be a very dangerous toxic metal in the environment. According to the New Jersey Department of Health and AQUIRE Database, ERL-Duluth, U.S.EPA, chromium is a cancer causing agent and a mutagen. "It has been shown to cause lung and throat cancer." Under the New Jersey Department of Health Right to Know Program, "Chromium (III) and chromium (VI) both have high chronic toxicity to aquatic life; no data are available on the long-term effects of chromium to plants, birds, or land animals." According to the report, "Some substances increase in concentration, or bioaccumulate in living organisms as they breath contaminated air, drink contaminated water or eat contaminated food. These chemicals can become concentrated in the tissues and internal organs of animals and humans."

The report notes that, "Acute (short-term) toxic effects [which are seen two to four days after animals or plants come in contact] may include the death of animals, birds, or fish, and death or low growth rate in plants." "...chronic (long term) health effects can occur at some time after exposure to chromium and can last for months or years." "Chronic toxic effects may include shortened lifespan, reproductive problems, lower fertility and changes in appearance or behavior."

Although government regulatory agencies (e.g., OSHA, ACGIH, EPA) recognize that chromium is very dangerous in the workplace at 8 hour exposure levels, EPA claims farmers and neighbors can't be hurt when they are exposed 24 hours a day. As an example:

OSHA: The legal airborne permissible exposure limit (PEL) is 1 mg/m³ averaged over an 8 hour work shift. [That is 1 ppm per cubic meter of air]

ACGIH: The recommended airborne exposure limit is 0.5 mg/m³ averaged over an 8 hour workshift. [That is 1/2 ppm per cubic meter of air]
http://deadlydeceit.com/503_Chromium.html

Yet, according to the August 4, 1999 Federal Register, “EPA is today establishing the total chromium concentration in [part 403] Appendix G--Section II for land-applied sewage sludge at 100,000 mg/kg. The Agency concluded that, although trivalent chromium is the prevalent form of chromium in sewage sludge, it is the hexavalent form of chromium that the total chromium concentration for land-applied sewage sludge must limit. Two commenters recommended a concentration of 100,000 mg/kg as appropriate to protect ground water from total chromium in land-applied sewage sludge. This concentration is consistent with the total chromium concentration limit established for granting a

removal credit for sewage sludge placed in a lined active sewage sludge unit. Because the percentage of hexavalent chromium in total chromium is expected to be less than one percent, there is virtually no potential that the hexavalent chromium concentration in land-applied sewage sludge will exceed the allowable concentration for hexavalent chromium (i.e, 12,000 mg/kg) in the 100,000 mg/kg total chromium concentration limit. (FR 64, p.42551-73)

Can you imagine sludge regulators, or sludge contractors, telling a farmer or home owner we are running out of landfill space, so we need to dispose of this toxic, hazardous, and pathogenic contaminated solid waste on your crop land, grazing land, parks, school grounds, home lawn and garden. EPA is resisting landfill use to promote this practice.

EPA is very emphatic about protecting landfills, “---, each treatment works treating domestic sewage must ensure that the sewage sludge it sends to a MSWLF for disposal is not hazardous (Part 258.20) and does not violate the prohibition on disposal of liquids in landfills (part 258.28). Furthermore, sewage sludge that is used as cover for a MSWLF must be suitable for that purpose (part 258.21). Facilities that send their sewage sludge to MSWLFs must apply for permits in accordance with today’s final rule.” (FR 58, p.9407)

Conclusion

The environmental laws are consistent. While each law may use different terminology, they all reference toxic and hazardous chemical lists from the other laws. Congress would not have placed those lists in the laws. It was never the intent of Congress that EPA should restrict sludge disposal in the ocean, monofills and landfill in an effort to force municipalities into untenable position of finding private property that could be used as a disposal site. Nor was it the intent of Congress that EPA should use the exclusions in federal laws to create a sludge regulation that waives the protective provisions of those laws. In fact, the CWA specifically forbids that action.

Based on the laws, any regulator who issues a sludge permit for beneficial use of sludge knows he/she is creating an illegal toxic and pathogen contaminated waste open dump site on someone's farm or home property. Furthermore, he/she knows a permit does no relieve everyone of CERCLA liability. Someone still owns the contaminated property.

Sludge scientists like Chaney and Brown know leafy vegetables suck up toxic chemicals from the soil. Being soil scientists with big titles at the top of the education heap, they must have studied the health effects of more than just nine chemicals regulated by EPA. Not only that, as a USDA expert scientist Chaney has to know his own Agency found pathogenic bacteria surviving through the growing season of leafy vegetables. They know there has never been one single study proving sewage sludge is safe for use on food crops or grazing land.

It is time to tell Congress we are tired of sludge dumping “**methods that remain unregulated, or regulated less severely.**” **We** need to have our air, food, water and health protected as well as the municipal solid waste landfill sites. It is time to quit killing our children and old people with contaminated , air, food, and water, just so municipalities can have a cheap method of sludge disposal.