BEFORE THE ADMINISTRATOR,
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Public Employees for Environmental Responsibility (PEER) *and* Cate Jenkins, Ph. D. *Petitioners* *Filed With* Lisa P. Jackson In her official capacity as Administrator, Environmental Protection Agency	PETITION FOR RULEMAKING DOCKET NO:

SUBMITTED BY:

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INTRODUCTION

Pursuant to provisions in the Resource Conservation and Recovery Act ("RCRA") section 7004(a), 42 U.S.C. § 6974(a) and its implementing regulations at 40 C.F.R. § 260.20, the petitioners request that the Environmental Protection Agency (EPA) first reconsider and repeal the Corrosivity Characteristic regulations pursuant to RCRA at 42 U.S.C. § 6921(a) as currently promulgated in Title 40 of the Code of Federal Regulations (C.F.R.), Part 261.22 as Hazardous Waste Number D002 for alkaline corrosive hazardous wastes, and second, re-promulgate this regulation as specified below so as to adequately protect human health and the environment.

The Corrosivity Characteristic is a regulation pursuant to the Resource Conservation and Recovery Act (RCRA)[1] republished every year in the C.F.R. since 1980. As we explain below, in the original 1980 regulation, EPA knowingly falsified the pH level.[2] known to cause irreversible corrosive damage to human tissues (chemical burns) for alkaline (caustic) corrosive materials. This safety level was falsely claimed by EPA in its supporting documentation for the original rule[3] to be the same as the United Nations (UN) World Health Organization's (WHO) safety level. EPA claimed the UN WHO corrosive level that they were incorporating into EPA's Corrosivity Characteristic for alkaline, caustic materials was a pH greater than 12.5. In fact, the WHO threshold for alkaline corrosivity was a pH level greater than 11.5. Thus, the fraudulent pH level in EPA's Corrosivity Characteristic (a pH of 12.5) is 10 times less protective than what it should be, namely a pH of 11.5. This UN WHO safety level has remained unchanged, and the UN WHO pH 11.5 and above presumptive corrosivity level was incorporated in 1998 as part of the UN Basel Convention Treaty containing the Globally Harmonized System (GHS) for identifying hazardous materials.

EPA has reviewed and reassessed this falsified pH level over the years, perpetuating the fraud, and continues to this day to maintain the Corrosivity Characteristic regulation regulations which incorporate this unsafe pH level. The Office of Resource Conservation and Recovery (ORCR) is the EPA program office responsible for the initial 1980 promulgation of this rule pursuant to RCRA, and has continued to be responsible for its re-evaluation and republication

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[1] Solid Waste Disposal Act (42 U.S.C. Chapter 82, Solid Waste Disposal, Subchapter III-Hazardous Waste Management, §6921. Identification and listing of hazardous waste, (a) Criteria for identification or listing.

[2] The pH of a material is determined by a simple laboratory test. Materials with a pH less than 7 are considered acidic, while those with a pH greater than seven are considered basic (alkaline). The pH scale is logarithmic, which means that each change of one unit on the pH scale means a change in 10 times the acidity or alkalinity. Wikipedia. pH. http://en.wikipedia.org/wiki/PH

[3] EPA, Office of Solid Waste, OSWER (May 2,1980) Background Document, Resource Conservation and Recovery Act Subtitle C -Hazardous Waste Management, Section 3001 - Identification and Listing of Hazardous Waste. 5261.22 -Characteristic of Corrosivity. NTIS Order Number: PB81-184 319. Available from the National Technical Information Service (www.NTIS.gov) TELEPHONE ONLY (800/553-6847) - document is before 1990.

every year in the C.F.R. The division within ORCR with specific responsibility for this regulation is the Materials Recovery and Waste Management Division (MRWMD).

Recently, the then director of MRWMD admitted that the safety level for alkaline corrosives incorporated into the regulations did in fact misrepresent the UN WHO safety level.[4] He provided the excuse that perhaps those responsible for the original 1980 regulation thought the WHO pH level only applied to the eyes and/or that the individuals responsible for the original 1980 regulation had failed to examine the supporting materials for UN ILO pH determination.[5] This same official also testified under oath that EPA had erred by excluding non-aqueous materials in the definition of materials regulated by the Corrosivity Characteristic.[6]

The impact of EPA's falsified Corrosivity Characteristic regulation is to allow citizens to be exposed to dangerous corrosive materials. This is true for exposures to materials that are classified as waste materials generated by facilities that are subject to the regulations under RCRA. This is also true for exposures to releases from emergency response sites such as after the collapse of the WTC on 9/11 as well as exposures to materials transported on highways, railways and by air subject to Department of Transportation (DOT) regulations. This is because the National Contingency Plan (NCP) regulations as well as DOT regulations incorporate by reference the RCRA Corrosivity Characteristic regulation as part of their criteria for corrosive substances. OSHA regulations also reference the same NCP regulations in their guidance documents, and consider corrosive atmospheres to be immediately dangerous to life and health (IDLH).

Alkaline corrosive materials can cause chemical burns, particularly of the respiratory tissues after inhalation. Further, alkaline corrosive materials defeat the natural respiratory protective mechanisms that prevent larger dust particles from reaching the lungs, by killing or immobilizing the ciliary cells that line the throat and upper respiratory tract. This results in the facilitated transport of other toxic materials directly into the lungs.

The corrosivity of WTC dust has been attributed by medical researchers as a major causative factor in the respiratory symptoms suffered by First Responders and others after 9/11. See more detailed documentation later in this Petition for Rulemaking.

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[4] See the attached written notations of Robert W. Dellinger, former Director, Materials Recovery and Waste Management Division (MRWMD), ORCR, EPA, retired as of July 2011 on Dr. Jenkins' 10/25/06 complaint to the FBI over the falsification of the Corrosivity Characteristic regulation.

[5] *Id.*

[6] April 22, 2011 deposition of Robert W. Dellinger, former Director, Materials Recovery and Waste Management Division, EPA, pp. 175-176.

ACTION REQUESTED

Petitioners request the Administrator, U.S. Environmental Protection Agency (EPA), revise the pH level associated with alkaline corrosivity that is specified in 40 C.F.R. § 261.22, the Corrosivity Characteristic, EPA Hazardous Waste Number D002 from a value of 12.5 to 11.5, as well as delete the specification that only wastes that are "aqueous" are subject to regulation under 40 C.F.R. § 261.22.

Current regulatory language

EPA's current regulation under RCRA states that a waste exhibits the Corrosivity Characteristic contains the following provisions:

> Title 40: Protection of Environment
> PART 261—IDENTIFICATION AND LISTING OF HAZARDOUS WASTE
> Subpart C—Characteristics of Hazardous Waste
> § 261.22 Characteristic of corrosivity. ...
> (a) A solid waste exhibits the characteristic of corrosivity if a representative sample of the waste has either of the following properties:
> (1) **It is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5**, as determined by a pH meter using Method 9040C in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW–846, as incorporated by reference in §260.11 of this chapter.
> (2) It is a liquid and corrodes steel (SAE 1020) at a rate greater than 6.35 mm (0.250 inch) per year at a test temperature of 55 °C (130 °F)
> (b) A solid waste that exhibits the characteristic of corrosivity has the EPA Hazardous Waste Number of D002.

Requested revision to regulatory language

The requested action subject to this petition would revise 40 C.F.R. § 261.22 to read as follows:

> Title 40: Protection of Environment
> PART 261—IDENTIFICATION AND LISTING OF HAZARDOUS WASTE
> Subpart C—Characteristics of Hazardous Waste
> § 261.22 Characteristic of corrosivity. ...
> (a) A solid waste exhibits the characteristic of corrosivity if a representative sample of the waste has either of the following properties:
> **(1) It has a pH less than or equal to 2 or greater than or equal to 11.5,** as determined by a pH meter using Method 9040C in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW–846, as incorporated by reference in §260.11 of this chapter.
> (2) It is a liquid and corrodes steel (SAE 1020) at a rate greater than 6.35 mm (0.250 inch) per year at a test temperature of 55 °C (130 °F)
> (b) A solid waste that exhibits the characteristic of corrosivity has the EPA Hazardous Waste Number of D002.

No changes to the List of Hazardous Substances under CERCLA is required, because this list incorporates by reference a citation to EPA's Corrosivity Characteristic at 40 C.F.R. §

261.22. The trigger level for protecting First Responders at hazardous materials release sites will change automatically when the RCRA Corrosivity Characteristic is changed.[7]

II. THE PETITIONERS' INTEREST

Public Employees for Environmental Responsibility (PEER) serves the professional needs of local, State, and federal employees—the professionals charged with the protection of America's citizens from health hazards from the release of natural and man-made materials into the environment, including corrosive substances. PEER members have both personal and professional interests in preventing chemical burns and respiratory consequences from exposures to alkaline corrosive materials.

The co-petitioner, Cate Jenkins, Ph.D., has a personal and professional interest in those (including herself) adversely impacted by unsafe exposures due to EPA's falsified Corrosivity Characteristic pH safety level for alkaline corrosives. She has, in either her official capacity as a Senior Scientist employed by the EPA or in her private capacity, advised and assisted those exposed to corrosive materials, particularly after the collapse of the World Trade Center (WTC).

III. History of EPA's Corrosivity Characteristic promulgation and revisitations

The Corrosivity Characteristic is a current regulation published every year in the Code of Federal Regulations (C.F.R.). It is based on a falsified safety level benchmark for alkaline, caustic corrosivity to human tissues. This safety level was falsely claimed by EPA to be the same as the United Nations (UN) World Health Organization's (WHO) safety level. EPA claimed the UN WHO safety level incorporated into the Corrosivity Characteristic for alkaline, caustic materials corresponded to a pH level over 12.5. In fact, the WHO safety level was determined by the WHO to be materials with a pH greater than 11.5.

The pH of a material is determined by a simple laboratory test. Materials with a pH less than 7 are considered acidic, while those with a pH greater than seven are considered basic (alkaline).[8] The pH scale is logarithmic, which means that each change of one unit on the pH scale means a change in 10 times the acidity or alkalinity. Thus, the pH level in EPA's Corrosivity Characteristic (a pH of 12.5) is 10 times less protective than what it should be, namely a pH of 11.5. Corrosivity to human tissue means irreversible chemical burns.

A pH level of 12.5 has no correlation to any human health endpoint. However, it does correlate almost exactly to the pH level that exempts the portland cement manufacturing industry

[7] No changes to the Department of Transportation (DOT) regulations or any OSHA guidance documents would be required since they also incorporate by reference the Corrosivity Characteristic regulation.

[8] Wikipedia. pH. http://en.wikipedia.org/wiki/PH

and demolition industries from responsibility for uncontrolled releases (usually airborne). This is because calcium hydroxide is present even in aged, weathered concrete at concentrations capable of producing up to pH 12.5 leachates for extended periods of time.

Summary of interlocking U.S. regulations that incorporate the Corrosivity Characteristic

The Corrosivity Characteristic regulation is used directly to classify wastes generated from manufacturing and other commercial facilities to determine whether they should be classified as "hazardous wastes" or not. If classified as a "hazardous waste" under RCRA, the waste would be required to be managed under the cradle-to-grave RCRA regulations requiring proper handling, transport and disposal to prevent exposures to the public.

The Corrosivity Characteristic pH level of 12.5 is also incorporated into the Hazardous Substances list under the National Contingency Plan (NCP) and its amending statue, the Comprehensive Emergency Response and Liability Act (CERCLA, or Superfund).[9] The Hazardous Substances list contains safety benchmarks to evaluate risks to First Responders and the public from any hazardous release site. This includes releases such as from the collapse of the World Trade Towers and the demolition of large buildings by explosives ("implosion demolitions").

In 1993, the falsified Corrosivity Characteristic pH level of 12.5 was cited and used to evaluate risks to the public living around cement manufacturing plants (cement kilns) for possible regulation under RCRA. The Corrosivity Characteristic pH level of 12.5 was referenced and used as a basis for not regulating cement kiln dust (CKD) based on any of its corrosive effects on the surrounding population.

The Corrosivity Characteristic pH level of 12.5 is also incorporated by reference into the Department of Transportation (DOT) regulations for the transport of hazardous materials as a presumptive level of corrosive hazard for alkaline materials.[10]

At the same time that EPA's Corrosivity Characteristic is applied to wastes regulated by RCRA, the CERCLA Hazardous Substances List, and DOT regulations, other authorities have adopted the correct safe pH level of 11.5 and below for alkaline corrosives. Even another part of EPA utilizes the internationally correct pH level of 11.5 for presumptive corrosivity (chemical burns),[11] which has diverted international attention away from the falsified pH level of 12.5 used

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[9] The Corrosivity Characteristic regulation under RCRA is defined to be confined to solid materials. However, the benchmark safety level pH from this regulation is generally applied to both solids and liquids when used for the purposes of identifying "Hazardous Substances"

[10] See October 13, 2008 complaint to FBI from Cate Jenkins, Ph.D., "*Supplemental Evidence: Fraud in the Conduct and Dissemination of Human Tissue Corrosivity Data (pH tests) in the Aftermath of the World Trade Center Disaster"* at pp. 22-25. http://www.scribd.com/doc/45180410/Jenkins-101308-FBI-New-WTC-pH-Lies-2nd-Complaint

[11] See May 6, 2007 complaint to the FBI and Congress from Cate Jenkins, Ph.D.: "*Complaint and Additional Evidence of Ph Fraud by: USGS, OSHA, ATSDR, NYC, EPA, and EPA-funded scientists; (1) Falsification of*

by other parts of EPA under RCRA and CERCLA. The European Union and many other countries have adopted the safe pH level of 11.5 established by the United Nations (UN) as early as 1971, and subject to the UN Basel Convention Treaty Globally Harmonized System (GHS), which the U.S. has refused to sign.[12]

The following table is a summary of regulations and standards incorporating the EPA Corrosivity Characteristic pH level of 12.5, or in the alternative, adopting the correct pH level of 11.5, for corrosive irreversible chemical burns to tissues

<table>
<tr><th>pH LEVELS vs. PRESUMPTIONS OF HAZARDS
Includes federal U.S. regulations which conflict or falsify UN standards</th><th>ACIDIC CORROSIVE pH range</th><th colspan="2"></th><th>CAUSTIC/ALKALINE CORROSIVE pH range</th></tr>
<tr><td>EPA RCRA Corrosivity Characteristic 40 CFR §261.22 using falsified UN pH levels
EPA CERCLA (Superfund) Hazardous Substances at 40 CFR §302.4(b) incorporating 40 CFR §261.22
DOT Appendix A to 49 CFR§172.101 incorporating CERCLA 40 CFR §302.4(b) (above) with falsified UN pH levels</td><td>0 — 2</td><td colspan="2">2 — 12.5
safe pH range</td><td>12.5 - 14</td></tr>
<tr><td>EPA Toxics/Pesticide office, 40 CFR §158, pH ≥ 11.5 presumed corrosive no further testing
UN Globally Harmonized System (GHS), OECD 404, pH ≥ 11.5 set as corrosive no further testing in 1992 version
UN Basel Convention treaty, in effect but US has not signed, UN GHS levels, lists some lime wastes as hazardous
NYC Fire Code – uses DOT 49 CFR §173.136 - 137 incorporating 1992 OECD 404 - mandatory pH ≥ 11.5 corrosive
Canada Workplace Hazardous Materials Information System (WHMIS), – references UN GHS
Health Canada consumer products– OECD 404 and mandatory pH ≥ 11.5 plus alkali reserve capacity criteria- tests
Canadian transportation regulations, requiring placarding for corrosive materials for cement trucks
European Commission – corrosive for pH ≥ 11.5 plus alkali reserve may result in lower corrosive pH level</td><td>0 — 2</td><td>2 – 11.5
safe pH range</td><td colspan="2">11.5 — 14</td></tr>
</table>

1980: Original promulgation of Corrosivity Characteristic regulation under RCRA

EPA first promulgated this falsified regulation on May 19, 1980 through publication of the final rule in the *Federal Register*.[13] In the supporting documentation for this rule, EPA's hazardous waste program falsified the pH levels (changed the numbers) that the UN World Health Organization (WHO) International Labour Organization (ILO) determined would invariably result in corrosive permanent tissue damage (chemical burns). The ILO said the level was pH 11.5 for alkaline substances for both skin and eyes. But EPA claimed the ILO said this level was 12.5, falsifying what was in the 1971 edition of the ILO encyclopedia. In December 1980, this falsified pH 12.5 level was incorporated into the National Contingency Plan (NCP, Superfund) criteria for Hazardous Substances.

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corrosive pH data for WTC dust; (2) Historical fraud by EPA of hazardous pH levels since 1980" at p. 44. http://www.scribd.com/doc/45180048/Jenkins-050607-FBI-WTC-pH-LIES-1st-Complaint

[12] *Id.* at pp. 41-43.

[13] EPA (May 19, 1980) Final Rule, 40 C.F.R. § 261.22 Characteristic of corrosivity. *Federal Register*, Vol. 45, No. 98, p. 33122.

EPA's reason for setting the pH level of 12.5 as the threshold for when materials became corrosive to human tissues was explained in the Listing Background Document that supported the 1980 RCRA Corrosivity Characteristic:[14]

> Studies indicate that pH extremes above 11.5 and below 2.5 generally are not tolerated by human corneal (eye) tissue [Reference] (3). ... These limits were chosen in an attempt to balance the following considerations: sensitive human tissue may be damaged when contacted with substances exhibiting pH levels below 2.5 or above 11.5:
> ...
> Upon consideration of these comments and after further deliberation, the Agency has decided to extend the range of acceptable pH levels by decreasing the lower limit from pH 3.0 to 2.0 and increasing the upper limit from pH 12.0 to 12.5. With respect to the upper limit, the Agency agrees with the commenters that otherwise non-hazardous lime stabilized sludges and wastes should not be designated as hazardous. Accordingly, the Agency has adjusted the upper limit to pH 12.5 to exclude such wastes from the system.
> ...
> Although eye tissue is damaged when the pH is above 11.5, normal skin tissue is clearly less sensitive than eye tissue. Consequently, increasing the upper pH limit to 12.5 should not significantly increase the likelihood of damage to skin.
> ...
> [Reference] 3. Encyclopedia of Occupational Health and Safety. Volume 1. Geneva, International Labor Office, 1971-72. pp. 220-221. ...

Notice from the above that EPA claimed that the pH level of 11.5 was only corrosive to the eyes, and not to the skin, citing the United Nation's International Labour Office (ILO) 1971-72 edition of the Encyclopaedia of Occupational Health and Safety[15] as its scientific basis for making this claim.

However, EPA falsified the information from the ILO encyclopedia. The ILO encyclopedia clearly stated both irreversible dermal (skin) as well as corneal damage occurs at pH levels above 11.5, not 12.5. The ILO never mentioned any pH level of 12.5 in any context, nor did any of the references cited by the ILO even mention a pH level of 12.5 in any context.[16] See below a scanned version of this 1971/1972 encyclopedia:[17]

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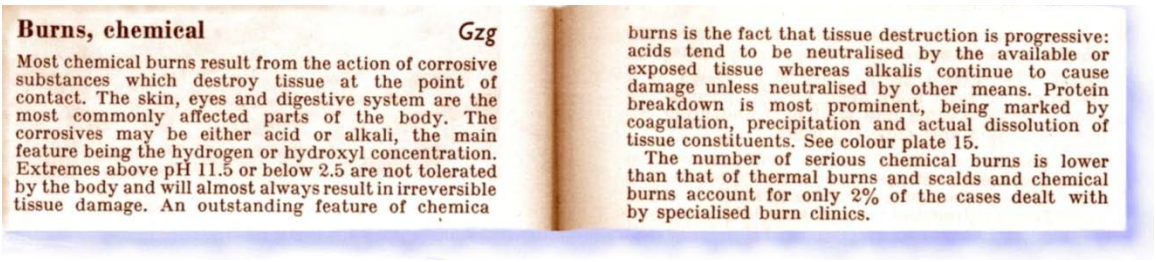
[14] EPA, Office of Solid Waste, OSWER (May 2,1980) Background Document, Resource Conservation and Recovery Act Subtitle C -Hazardous Waste Management, Section 3001 - Identification and Listing of Hazardous Waste. 5261.22 -Characteristic of Corrosivity. NTIS Order Number: PB81-184 319. Available from the National Technical Information Service (www.NTIS.gov) by telephone order only (800/553-6847)

[15] International Labour Office (1971, 1972) Chemical Burns. In: Encyclopaedia of Occupational Health and Safety, Volume I – A – K, pages 220 - 221 International Labour Office, CH 1211 Geneva 22, Switzerland, 1971. Special McGraw-Hill Edition, 1972, Library of Congress Card Number: 74-39329, International Standard Book Number: 07-079555-X

[16] EPA cited no other medical studies or any other scientific reference to support its false claim that pH levels up to 12.5 were safe for alkaline corrosive effects on tissues.

[17] See October 13, 2008 complaint to FBI from Cate Jenkins, Ph.D., *op. cit.* at 19-20 for more extensive discussions on this issue, and quotations from the medical studies cited by the ILO encyclopedia.



Burns, chemical *Gzg*

Most chemical burns result from the action of corrosive substances which destroy tissue at the point of contact. The skin, eyes and digestive system are the most commonly affected parts of the body. The corrosives may be either acid or alkali, the main feature being the hydrogen or hydroxyl concentration. Extremes above pH 11.5 or below 2.5 are not tolerated by the body and will almost always result in irreversible tissue damage. An outstanding feature of chemica

burns is the fact that tissue destruction is progressive: acids tend to be neutralised by the available or exposed tissue whereas alkalis continue to cause damage unless neutralised by other means. Protein breakdown is most prominent, being marked by coagulation, precipitation and actual dissolution of tissue constituents. See colour plate 15.

The number of serious chemical burns is lower than that of thermal burns and scalds and chemical burns account for only 2% of the cases dealt with by specialised burn clinics.

How did EPA devise the falsified level of 12.5 as being protective of corrosive action on tissues? This is 10 times more corrosive than a pH level of 11.5, the correct safety threshold. It is probably that EPA wished to exempt materials related to concrete and cement from being classified as corrosive under the Corrosivity Characteristic regulation. The pH level of 12.5 is just high enough to exempt almost all wastes from the portland cement manufacturing industry (cement kiln dust, CKD) as well as concrete demolition dusts and leachates.[18] These cement-related wastes usually have a pH level right below 12.5 at the highest. Thus, they have been exempted from regulation and deemed safe by the falsified pH 12.5 threshold level in the Corrosivity Characteristic for alkaline corrosive materials. EPA even stated their intent to exempt these concrete-related wastes in the background documentation for the original promulgation of 1980 Corrosivity Characteristic regulation.

The 1980 Background Document for the Corrosivity Characteristic justifies the pH 12.5 level so as to exempt "waste lime."[19] Undoubtedly, the term "waste lime" as used in the Background Document refers to cement kiln dust (CKD), the captured stack emissions from portland cement manufacture. Although cement kiln dust can used in agriculture or industry for the neutralization of acids, it can also cause substantial damage by direct contact to humans, other living organisms, and the environment. But "Waste lime" (or cement kiln dust) would never be regulated as a hazardous waste in the first place if it is recycled and used beneficially. It would never cross the RCRA regulatory threshold, because it would be exempt from the definition of a waste and instead classified as a raw material. Thus, there is absolutely no need to set the pH level at 12.5 in the Corrosivity Characteristic to allow its continued use for other purposes, since it is never a ”waste” in the first place when so used, a prerequisite for coming under the regulatory purview of RCRA.

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[18] See May 6, 2007 complaint to the FBI and Congress from Cate Jenkins, Ph.D. *op. cit.*, at p. 59 for a table of the pH levels of concrete and lime-related materials in comparison to household bleach and other common materials.

[19] EPA (May 19, 1980) Listing Background Document: RCRA Subtitle C - Hazardous Waste Management, Section 3001 - Identification and Listing of Hazardous Waste, 261.22 - CHARACTERISTIC OF CORROSIVITY. Available from the National Technical Information Service, Product Code PB81184319. www.NTIS.gov

> A number of commenters argued that the proposed upper pH limit of 12.0 would include waste lime [*"waste lime" is actually an oblique reference to cement kiln dust wastes*] and many lime treated wastes and sludges which generally have a pH between 12.0 and 12.5 and which can be put to agricultural and other beneficial uses. Many of these commenters suggested raising the upper pH limit to 12.5 while others suggested raising the limit to 13.0.

For OSW to exempt waste lime (cement kiln dust) for the false reason that it has the potential to be used beneficially, without any consideration of the harmful consequences of improper disposal, is egregious. Cement kiln dust is a dangerous corrosive material. One Material Safety Data Sheets (MSDS) from major cement manufacturer[20] warns that cement kiln dust is a corrosive material, with a pH ranging from 10-13. The manufacturer states that alternate names include "cement lime" and its own trade name for its by-product waste is "New Lime™."

1980: Concurrent incorporation of Corrosivity Characteristic into the List of Hazardous Substances used by First Responders

EPA's Corrosivity Characteristic regulation was, within a few months of its original promulgation under RCRA in 1980, incorporated into the List of Hazardous Substances under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) on December 11, 1980.[21, 22] Corrosive "Hazardous Substances" were defined by reference to any substances meeting the RCRA Corrosivity Characteristic under 40 C.F.R. § 261.22:

The safety levels in the List of Hazardous Substance under CERCLA are used as the benchmarks for First Responders and the public at all hazardous release sites. There is no effective distinction between whether a contaminant is in a liquid or solid form when it is specified as a Hazardous Substance under CERCLA.[23] There is only one set of pH levels for alkaline as well as acid corrosive materials, the Corrosivity Characteristic pH levels. When First Responders see the Corrosivity Characteristic pH level of 12.5, they assume it is applicable to solids as well as liquids, because no alternative pH level for solids is given. In addition, internationally, no distinction is made between the pH levels for corrosivity for solids *vs.* liquids.

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[20] LaFarge North America, MSDS for Cement Kiln Dust, http://www.lafarge-na.com/MSDS_North_America_English_-_Cement_Kiln_Dust.pdf

[21] Comprehensive Environmental Response, Compensation, and Liability Act (December 11, 1980) U.S. Code, Title 42--The Public Health and Welfare. Chapter 103--.Subchapter I--Hazardous Substances Releases, Liability, Compensation.

> Sec. 9601. Definitions. For purpose of this subchapter-. . . (14) The term ``hazardous substance'' means . . . (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) . . . if it exhibits any of the characteristics identified in 40 CFR 261.20 through 261.24.

[22] CERCLA was an amending statute to the original authority, the National Contingency Plan (NCP). CERCLA is also loosely known as "Superfund."

[23] See May 6, 2007 complaint to the FBI and Congress from Cate Jenkins, Ph.D. *op. cit.*, at pp. 37-38.

Department of Transportation incorporates the falsified Corrosivity Characteristic into hazardous materials transport regulations

The falsified the pH level for its Corrosivity Characteristic is also contained in the U.S. Department of Transportation (DOT). DOT incorporates by reference all substances on this same Superfund/CERCLA List of Hazardous Substances into the DOT List of Hazardous Substances and Reportable Quantities under 49 C.F.R. § 172.101 Appendix A. As explained above, this CERCLA Hazardous Substances list incorporates the falsified RCRA Corrosivity Characteristic A. Although DOT has animal testing criteria for corrosive materials, it allows the use pre-existing data from an old test procedure that allowed the application of dry materials like dry cement to the skin of animals that do not sweat.[24] Thus, trucks transporting wet concrete and similar corrosives are not required to display the DOT warning placards.

This has resulted in exposures without warning to First Responders and the public attempting to assist persons embedded in wet concrete after highway accidents, not an infrequent occurrence.[25] There was no warning to First Responders or bystanders who attempted to rescue the occupants. Adequate placarding of these trucks warning they contain corrosive materials might result not only in the taking of better precautions, but also the better control over and training of the drivers to avert the numerous accidents involving cement trucks.

Canada, on the other hand, does require placarding of ready-mix cement trucks with corrosive hazard warning,[26] because Canada has not falsified the pH level relating to alkaline corrosive materials.

1993: EPA reevaluates safe pH level for alkaline corrosives, expands the falsification in context of Cement Kiln Dust risk evaluation

In 1993, under the RCRA authority, EPA again utilized the falsified pH 12.5 safety level to justify not addressing the corrosive inhalation exposures to surrounding communities exposed to cement kiln dust (CKD) emitted by cement manufacturers. Furthermore, EPA expanded upon the fraudulent pH levels associated with human health effects in its 1993 Report to Congress on Cement Kiln Dust (CKD). In this 1993 report, EPA claimed that a pH level of 12.5 was not only safe for the skin, but to all human tissues (including the eyes and lung).[27] This was at the same

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[24] See October 13, 2008 complaint to FBI from Cate Jenkins, Ph.D., *op. cit.*, at pp. 22-25.

[25] See May 6, 2007 complaint to the FBI and Congress from Cate Jenkins, Ph.D.: *op. cit.*, at pp. 60-63.

[26] Health Canada, Environmental and Workplace Health. Concrete; classification with respect to corrosive properties. "*The Worker's Compensation Boards across Canada annually receive numerous claims relating to skin burns resulting from exposure to concrete and related products. . . . Concrete is not exempt from the WHMIS supplier label and MSDS requirements of the HPA / CPR.*" http://www.hc-sc.gc.ca/ewh-semt/occup-travail/whmis-simdut/_substance/concrete-beton-eng.php

[27] EPA, Office of Solid Waste, OSWER (December 31, 1993) Report to Congress – Cement Kiln Dust Waste. Chapter 6, Potential Danger to Human Health and the Environment, p. 6-4. http://www.epa.gov/osw/nonhaz/industrial/special/ckd/cement2.htm

time that EPA acknowledged in this same report that CKD leachates had pH levels from 11 to 13, and that ground water had been and could be contaminated at these levels.

After EPA's 1993 Report to Congress asserting that only pH levels over 12.5 were hazardous, EPA's 1997 risk assessment for CKD never even mentioned any corrosive inhalation or skin contact hazards.[28] This risk assessment only addressed exposures to inert particulates (dust), heavy metals, and dioxins.

1996: Reevaluation and reiteration of the falsified pH Corrosivity Characteristic

In 1996, EPA published a Hazardous Waste Characteristics Scoping Study.[29] The purpose of this "study" was to re-evaluate the Corrosivity Characteristic regulation which had been published and maintained by EPA since 1980 without any changes, and to determine whether changes were needed. EPA decided that the Corrosivity Characteristic regulation did not need any changes, repeating and reinforcing the original 1980 false claim that a pH level of up to 12.5 would protect from corrosive burns from alkaline corrosives.

For the first time, this 1996 Scoping study admitted that the 1971/1972 edition of the WHO ILO encyclopedia stated that pH levels of 11.5 and above were related to chemical burns. However, the 1996 Scoping study made the new false claim that this pH level of 11.5 was required only to protect eyes from corrosive burns. This claim is an entirely new falsification for the benefit of the 1996 Scoping Study. There was absolutely nothing in the 1971/1972 edition of the ILO encyclopedia, any of its cited references, or any other source that states that a pH level of 11.5 is only required to protect the eyes, not the skin. See the earlier photographic scan of the section from the ILO encyclopedia, and the following excerpts from the 1996 Scoping study. [30]

> Major results and conclusions from the evaluation of potential danger to human health and the environment from the management of CKD are presented below. ... The pH of CKD leachate measured in laboratory tests typically ranged from 11 to 13. High pH levels in ground water and surface water may result in a variety of adverse effects, including the mobilization of certain metals and other constituents that could pose toxicological problems, human tissue burns (at pH levels above 12.5 or more), corrosion in pipes, and objectionable taste in drinking water. In addition, high pH levels could cause a wide variety of adverse ecological effects.

[28] EPA, Office of Solid Waste, OSWER (1997)Technical Background Document: Population Risks from Indirect Exposure Pathways, and Population Effects from Exposure to Airborne Particles from Cement Kiln Dust Waste. http://www.epa.gov/osw/nonhaz/industrial/special/ckd/cement4.htm

[29] EPA Office of Solid Waste (November 15, 1996) Hazardous Waste Characteristics Scoping Study. http://www.epa.gov/osw/hazard/wastetypes/wasteid/char/scopingp.pdf

EPA Office of Solid Waste (November 15, 1996) Notice of Data Availability on the Hazardous Waste Characteristics Scoping Study. *Federal Register*, 61: 58549. http://www.gpoaccess.gov/fr/index.html

[30] EPA Office of Solid Waste (November 15, 1996) Hazardous Waste Characteristics Scoping Study. http://www.epa.gov/osw/hazard/wastetypes/wasteid/char/scopingp.pdf

EPA Office of Solid Waste (November 15, 1996) Notice of Data Availability on the Hazardous Waste Characteristics Scoping Study. Federal Register, 61: 58549. http://www.gpoaccess.gov/fr/index.html

> EPA originally proposed pH limits of 12.0 or greater and 3.0 or less, and a majority of commenters argued that these limits were too stringent. ... EPA agreed with these commenters and promulgated pH limits of 12.5 or greater and 2.0 or less in the 1980 final rule.
>
> The more stringent proposed pH limits were based on studies of eye tissue damage. These studies indicated that pH extremes above 11.5 and below 2.5 generally are not tolerated by human corneal tissue.[8] EPA decided that basing pH limits on eye tissue damage was unnecessarily conservative. Thus, eye damage is a hazard not fully addressed by the corrosivity characteristic.
> ...
> [Reference 8] U.S. Environmental Protection Agency, Office of Solid Waste, Background Document: Resource Conservation and Recovery Act, Subtitle C-Identification and Listing of Hazardous Wastes, Section 261.22-Characteristic of Corrosivity, May 2, 1980, p. 5.

The 1996 Scoping Study even admitted to knowledge of the testing methods for skin corrosion in the U.N. Basel Convention Treaty ("*full thickness destruction of human skin*").

> The ability of some substances to damage human tissue, however, may not be adequately indicated by a pH measurement. Other regulatory and advisory bodies (e.g., DOT, OSHA, Basel Convention) use criteria based on full thickness destruction of human skin.

This Scoping Study did not admit to any knowledge that the U.N. Basel Convention pH threshold for alkaline corrosivity was 11.5. Staff at EPA responsible for the Scoping Study[31] had an even greater knowledge of the effects of different pH levels on the skin than they did in 1980. The same staff were participating as representatives on United Nations (UN) Basel Convention negotiations and the Organization for Economic Cooperation and Development (OECD) workgroups and meetings. The UN and OECD efforts resulted in international consensus guidelines in 1981 and treaties in 1992 which stated that a pH of 11.5 was the presumptive level for corrosive effects on both skin as well as eyes.[32]

The 1996 Scoping Study also repeated and compounded the false claim in the 1980 Background Document that the pH level needed to be set at 12.5 to enable the continued agricultural use of lime-stabilized sewage sludges. However, by 1996 there were 2 new events to establish this as a false pretext. The first was the promulgation of a new regulations in 1985 that exempted all sludges that were reclaimed from the RCRA Characteristic Listings (which includes any Corrosivity Characteristic sludges).[33, 34]

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[31] EPA's division responsible for the 1980 Corrosivity Characteristic regulation and 1996 Scoping Study was formerly called the Hazardous Waste Identification Division (HWID) under the Office of Solid Waste (OSW). The names of the division and office was changed to the Materials Recovery and Waste Management Division (MRWMD) under the Office of Resource Conservation and Recovery (ORCR). The staff person in MRWMD with primary responsibility for the 1996 Scoping Study and Corrosivity Characteristic regulation, who also represented EPA at the Basel Convention consensus development is Greg Helms. The division director for MRWMD from 2001 to 2011 was Robert W. Dellinger.

[32] See May 6, 2007 complaint to the FBI and Congress from Cate Jenkins, Ph.D., *op. cit.*, at pp. 35-36.

[33] EPA Office of Solid Waste (January 4, 1985) Hazardous Waste Management System; Definition of Solid Waste, Final Rule. *Federal Register*, Vol. 50(3) 613-668, at pp, 663 – 664, 651.

There was a second event that would have already exempted lime stabilized sewage sludges from the RCRA Corrosivity Characteristic by the time EPA's OSW drafted its 1996 Scoping Study. The 5/19/80 preamble to the *Federal Register* notice which finalized the Corrosivity Characteristic regulation stated that as soon as comprehensive standards were in place under the Clean Water Act (CWA) for the disposal, reclamation and use of sewage sludge as an agricultural amendment, it would transfer authority from RCRA to CWA.[35] Such comprehensive regulations did in fact come into effect in 1993 under 40 C.F.R. § 503 of the CWA.[36] The 1996 Scoping Study should have taken this into account, stating there was no longer any reason to have the pH level at 12.5 to accommodate the agricultural use lime-stabilized sewage sludges, since now RCRA would defer regulation to the CWA.[37, 38]

2001: Withholding of critical corrosive WTC dust pH data while First Responders and public exposed

Because of its historical falsification of the presumptive pH level that would cause irreversible tissue damage, EPA and other responsible officials were in a tenuous position after the collapse to the World Trade Towers on September 11, 2001. EPA had never before issued any warning to the public because of the alkaline, corrosive properties of dust from implosion demolitions of large buildings, and there is no evidence that EPA tested the dust for its pH after these demolitions, even when sophisticated testing of other pollutants had been performed.[39, 40] In addition, EPA had issued its 1993 report on cement kiln dusts (CKD) from the manufacture of portland cement (used for concrete), wherein EPA definitely claimed that pH levels up to 12.5 were safe for the respiratory system.[41] EPA's Corrosivity Characteristic falsified pH safe level

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[34] As of 1985, lime-stabilized/treated sewage sludges were exempted from RCRA hazardous regulations by the newly promulgated "Definition of a Solid Waste." These regulations exempted all types of sludges from RCRA regulations if they were reclaimed and only hazardous because they were a "characteristic" waste. "Reclaimed" was defined in 1985 as a subset of the broader category "recycled." "Recycled" includes use, reuse, as well as reclamation. "Use" is not the same as "reclaimed." Thus the "use constituting disposal" provisions do not apply to sewage sludges that are processed with value added and sold as soil amendments/liming agents.

[35] EPA Office of Solid Waste (May 19, 1980) Part III. Hazardous Waste Management System: Identification and Listing of Hazardous Waste. Action: Revisions to final rule and interim final rule and request for comments. Federal Register, 45(98) 33084 – 33133, at pp. 33101 – 33102.

[36] EPA, Office of Water (Feb. 19, 1993) *Federal Register*, Vol. 58, p. 9387.

[37] Precedents were already set for such deferrals from RCRA to the CWA, because in 1990 there was a major deferral of the § 261 Corrosivity Characteristic under RCRA to the CWA for sewage wastewater under the § 268 RCRA Land Disposal Restriction. In 1990, OSW deferred regulating wastewaters that met the RCRA Corrosivity Characteristic under the RCRA Land Disposal Restrictions to the CWA and Safe Drinking Water Act authorities.

[38] See May 6, 2007 complaint to the FBI and Congress from Cate Jenkins, Ph.D., *op. cit.*, at p. 36.

[39] See May 6, 2007 complaint to the FBI and Congress from Cate Jenkins, Ph.D., *op. cit.*, at pp. 45-52. http://www.scribd.com/doc/45180048/Jenkins-050607-FBI-WTC-pH-LIES-1st-Complaint

[40] See October 13, 2008 complaint to FBI from Cate Jenkins, Ph.D., *op. cit.*, at pp. 26-27, 32, 57-60.

[41] See earlier discussions of EPA's 1993 report to Congress on cement kiln dust.

of 12.5, incorporated into the Hazardous Substances List under CERCLA, had been used as a referent safe level after other hazardous release sites, long before the collapse of the World Trade Center (WTC).[42] Thus, EPA was essentially locked in to perpetuating its false claim that pH levels up to 12.5 were safe, and that there would be no corrosive burns until the pH level exceeded. 12.5 when the WTC collapsed on 9/11.

It would have broken all precedents for EPA to have claimed that WTC dusts were hazardous because of the high pH levels, undoubtedly above 11.5, but lower than the falsified 12.5 pH threshold in the Corrosivity Characteristic. Most importantly, if EPA did reveal to the public any pH testing results for the WTC, and these pH levels were 11.5 and higher, the international community would know that the claim that the levels were not hazardous was a false statement.[43] Even those in other parts of EPA would quickly recognize that EPA was falsely claiming WTC dust was not corrosive if there were any pH levels above 11.5, because beginning in 1984 EPA's Office of Prevention, Pesticides and Toxic Substances (OPPTS) issued regulatory guidelines setting the pH level at 11.5 for presumed corrosivity for both skin and eyes. In 1998, OPPTS issued new test guidelines for skin and eye corrosivity, again stating that for alkaline chemicals, a pH level of 11.5 is presumed to be corrosive.[44]

After 9/11, it is quite probable that EPA and OSHA did have immediate field data for the pH of WTC dust, and pH levels were higher than 11.5, but not higher than 12.5. The OSHA and EPA regulations require immediate field testing for pH by all On Scene Coordinators (OSC's) (federal, state, city). Regulations and protocol also require that these personnel be trained to test for pH levels (both corrosive acids and alkaline material), as well as have the necessary equipment for pH tests pre-packed long before any hazardous material release site such as the collapse of the WTC.[45]

The OSHA, EPA, and NYC On Scene Coordinators would have compared the pH levels they were finding to the criteria in the list of Hazardous Substances under CERCLA. Any field test results of pH would have been compared to the falsified safe level of a pH of 12.5, not the true safe level of 11.5. Thus, there would have been no imperative or regulatory requirement to assess the dust for corrosive properties.

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[42] See above discussions where the Corrosivity Characteristic was incorporated into the Hazardous Substances List for First Responders in 1980.

[43] See earlier discussions of the United Nations Basel Convention Treaty that incorporated the OECD consensus standard affirming that it was presumed that alkaline materials with pH levels of 11.5 were corrosive, causing irreversible tissue destruction.

[44] See May 6, 2007 complaint to the FBI and Congress from Cate Jenkins, Ph.D., *op. cit.*, at p. 44.

[45] *Id.* at p. 25 for documentation of the requirements and training for pH testing at hazardous release site.

On September 13, 2001, EPA Administrator Christie Todd Whitman claimed all the monitoring data from EPA testing showed hazardous substances "***below background levels***."[46] "Background level" is an unambiguous term, meaning that there is first, adequate testing of all hazards, and second that levels are the same as without the polluting event.[47, 48] But EPA in none of its press releases or public statements in the days, weeks and months after 9/11 ever mentioned the corrosive, high pH levels in WTC dust.

Later, pH test results taken by the U.S. Geological Service (USGS) were released to the public on February 10, 2002 through a widely syndicated press article. In this article, EPA's Bonnie Bellows denied any early field testing of pH of WTC dusts in this press story, claiming "*We have no specific data on pH levels.*"[49] Dr. Jenkins, co-petitioner, who was quoted in this same press story, can attest for the fact that no pH data was included by EPA in any of the monitoring data made available to the public (including the daily hard copy releases only available by visiting the EPA NYC reading room) in the aftermath of 9/11, because she assisted citizen groups in interpreting this data.

A day after this press story reporting that USGS had found pH levels over 12 in WTC dust, the issue of the high pH levels of WTC dust was addressed at a Senate field hearing.[50] At this same hearing, Dr. George Thurston, an EPA-funded researcher at New York University (NYU) announced that he had tested the smallest particles, those most dangerous particles which could reach deep within the lungs. He claimed that these particles were neutral, neither alkaline

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[46] EPA Administrator Whitman told a local TV station on September 13, 2001: "We've had concern, we're going to continue to monitor. But right now, as I will tell you, everything we're getting back from the sampling that we're doing, is below background levels." Note that EPA was working closely with OSHA at this time, and Whitman made no differentiation in her 9/13/11 statement between Ground Zero and more outlying areas of Manhattan.

See New York Daily News, June 25, 2007, "Damning questions Whitman must be made to answer" at: http://www.nydailynews.com/news/2007/06/25/2007-06-25_damning_questions_whitman_must_be_made_t.html

See archival footage in *Dust to Dust: The Health Effects of 9/11*. Sundance Channel and CBS News Productions at: http://www.sundancechannel.com/films/500013415/

[47] EPA RCRA Glossary of Terms. http://www.epa.gov/region8/land_waste/rcra/rcraglossary.html

> Background - The concentration of a substance in an environmental media (air, water, or soil) that occurs naturally or is not the result of human activities. In exposure assessments, the concentration of a substance in a defined control area, during a fixed period of time before, during, or after a data-gathering operation.

[48] This statement by Ms. Whitman went far beyond the ambiguous misleading statements in EPA's press releases that were edited by the White House. Ms. Whitman was not referring specifically to zones outside of Ground Zero, and she was also claiming by making the statement that all pollutants of concern had been tested and were below background levels.

[49] Andrew Schneider (February 10, 2002) "*Part 1: Public was Never Told That Dust From Ruins is Caustic. Part 2: Roiling Dust Cloud Filled USGS Scientists with a Sense of Urgency*" St. Louis Post-Dispatch. http://www.stltoday.com/help/archives/

http://www.stuypa.org/environment/resources.htm (follow link on page to Word version of press article)

[50] United States Senate, Committee on Environment and Public Works (February 11, 2001) Field Hearing Before the Subcommittee on Clean Air, Wetlands, and Climate Change. http://ftp.resource.org/gpo.gov/hearings/107s/80397.txt

or acidic, stating that they had different chemical properties and a different pH compared to the bulk of the aggregate dust tested by USGS.[51] Dr. Jenkins initiated an extensive email interchange with Dr. Thurston and Dr. Chen at NYU from February 13 to February 21, 2002, wherein she question the validity of these claims about the smallest particles being neutral.[52] Dr. Jenkins requested telephonically that Dr. Thurston provide her the analytical test methods he used to determine the pH of the smallest WTC particles, but he declined. Later, when Dr. Thurston and Dr. Chen published their result in the December 2002 *Lancet* medical journal,[53] they also did not provide their analytical test methods, and have not to this day. Their *Lancet* publication directly attempted to justify EPA's false warnings that the air was safe, because they claimed (without any supporting laboratory documentation) the smallest dust particles were not caustic and corrosive with a high pH level:

> One property of the dust that probably contributes to its irritancy is its caustic nature. The pH of most of the suspensions of the bulk World Trade Center settled dust was greater than 10, which is irritating to mucous membranes. However, the dust's alkalinity decreased with decreasing particle size, with particles less than 2.5 μm at about neutral pH. The caustic, alkaline large particles and large fibreglass fibres that were caught in the eyes, nose, and throat were probably responsible for the chronic cough of the residents and workers near Ground Zero. Thus, although the caustic large dust particles caused temporary nose, throat, and upper airway symptoms, they were effectively caught by the body's defenses. Conversely, the fine dust that did reach the deep lung was lower in concentration and much less caustic. Therefore, although the public had severe acute symptoms, the overall dust exposures probably did not have many cumulative health implications for the general population in lower Manhattan
>
> . . .
>
> However, most symptoms in the general population were apparently related to the larger, unregulated, alkaline dust particles. These large particles did not penetrate deep in the lung to ultimately have severe or long-term health implications, but were very alkaline and irritating, causing obvious respiratory symptoms. The differences in the characteristics of small and large particles could explain why the government declared the outside air "safe" even though the public had eye, nose, and upper airway symptoms.

When EPA itself later tested the smallest WTC particles for their pH, they diluted the dust samples almost 600 times with water.[54] This nearly 600:1 dilution is an extraordinary high

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[51] Thurston, G. D. (2/11/02) Statement of Dr. George D. Thurston, Sc. D. to the Committee on Environment and Public Works of the United States Senate Re: the Air Pollution Effects of The World Trade Center Disaster. http://www.senate.gov/~epw/107th/Thurston_021102.htm

[52] See May 6, 2007 complaint to the FBI and Congress from Cate Jenkins, Ph.D., *op. cit.*, at pp. 14-16, as well as the endnotes that contain the full text this email interchange, involving USGS scientists as well.
See also October 13, 2008 complaint to FBI from Cate Jenkins, Ph.D., *op. cit.*, at pp. 28-30, 35-38.

[53] Lung Chi Chen, George Thurston (December 2002) World Trade Center cough. THE LANCET Supplement, Vol. 360, s37 – s38. www.thelancet.com

http://www.impact-kenniscentrum.nl/doc/kennisbank/1000010669-1.pdf

[54] EPA (December 2002) Toxicological Effects of Fine Particulate Matter Derived from the Destruction of the World Trade Center. National Health and Environmental Effects Research Laboratory Office of Research and Development U.S. Environmental Protection Agency Research Triangle Park, North Carolina 27711. http://www.epa.gov/nheerl/wtc/WTC_report_7b3i.pdf

ratio of water to solids. This testing was also performed in November 2001, almost 2 months after 9/11, with the samples unprotected from the atmosphere. The official SW 846 EPA method for determining the pH of solids requires a 1:1 ratio of solids to water. In other words, the laboratory was using extreme dilution to guarantee that they did not find a high pH. This is extremely dishonest. This is fraud that can be easily understood by the public.[55]

2007 – 2011: EPA officials admit falsification of Corrosivity Characteristic pH level and need to include all materials, but fail to act

EPA officials have admitted that the pH level of 12.5 in the Corrosivity Characteristic regulation was at least "misrepresented" from the ILO encyclopedia, but deny that it was intentionally falsified. EPA began a preliminary effort to draft an issue/options document to address Dr. Jenkins' concerns over the falsified, unsafe pH benchmark, but dropped the effort due to "other priorities." An EPA official also stated that the limiting language in the Corrosivity Characteristic regulation to "aqueous" materials was an error.

At some point after receiving a copy of Dr. Jenkins' May 6, 2007 complaint to Congress and the FBI over the falsified pH level in the Corrosivity Characteristic regulation,[56] Mr. Dellinger made handwritten comments on this document, underlining many of Jenkins' assertions about falsifications and misrepresentations. (See attached.) These handwritten comments indicate his acknowledgement and admission that the U.N. World Health Organization ILO encyclopedia had been misrepresented by EPA in 1980, but did not admit to any deliberate falsification.

On page 5 of Dr. Jenkins' May 6 Congress/FBI complaint, Mr. Dellinger circled the pH levels of 12.3, 12.4 and 12.04 found by the USGS in 3 respective WTC dust samples. On page 10, Mr. Dellinger wrote in the margin "*11.5 seems to be international std.*"

On page 13, Jenkins asserted several times that EPA had falsified the UN ILO encyclopedia by claiming it stated a pH level of 12.5 was safe, when in fact the ILO encyclopedia stated clearly that any pH level of 15.5 and above was corrosive to human tissues. Mr. Dellinger wrote in the margins "*strong term*" and "*again, very strong words*."

On page 32, Jenkins wrote "However, EPA falsified the information in the ILO encyclopedia. A photographic scanned version is provided on the next page from the 1971-1972

J. K. McGee, L. C. Chen, M. D. Cohen, G. R. Chee, C. M. Prophete, N. Haykal-Coates, S. J. Wasson, T. L. Conner, D. L. Costa, and S. H. Gavett (2003) Chemical Analysis of World Trade Center Fine Particulate Matter for Use in Toxicological Assessment. Environmental Health Perspectives, 11(7): 972. http://www.ehponline.org/members/2003/5930/5930.pdf

[55] See October 13, 2008 complaint to FBI from Cate Jenkins, Ph.D., *op. cit.*, p. 29, 37-39.

[56] Dr. Jenkins contemporaneously sent Mr. Dellinger a copy of her May 6, 2007 "*Complaint and Additional Evidence of Ph Fraud by: USGS, OSHA, ATSDR, NYC, EPA, and EPA-funded scientists; (1) Falsification of corrosive pH data for WTC dust; (2) Historical fraud by EPA of hazardous pH levels since 1980*" http://www.scribd.com/doc/45180048/Jenkins-050607-FBI-WTC-pH-LIES-1st-Complaint

edition of the ILO encyclopedia." In the margin, Dellinger wrote "*is it possible someone simply made a mistake?*" This is a direct admission by Mr. Dellinger that the ILO encyclopedia was misrepresented, albeit his excuse that it might have been a mistake. It is not credible that this was a mistake by EPA in 1980, since EPA repeated the error/falsification in both 1993 and 1996, as documented earlier, even expanding upon the error/falsification.

On page 33, Mr. Dellinger points to the photographic scan of the WHO ILO encyclopedia from 1971/1972 and writes in the margin "*Someone could easily have misinterpreted this language, assuming eyes were more sensitive than skin and did not refer to the sources of info cited below [the references used by the ILO]*" This is a false excuse by Mr. Dellinger for the misrepresentation by EPA. There is absolutely no mention whatsoever of "eyes" in the ILO encyclopedia. One of the 2 references cited by the ILO was clearly restricted to skin testing. Further, as explained in the next paragraph on page 33 of Jenkins' Congress/FBI complaint, right where Dellinger could see it, the eyes are not more sensitive than the skin to corrosives, and animals were not tested historically by the eyes, only by the skin. Mr. Dellinger continues his excusatory tone in his next comment in the margins, saying "*a lot of speculation going on*"

On page 34, Mr. Dellinger shows that he needs to check on what Dr. Jenkins is saying, writing "*is this true*" and "c*heck with Charlotte [Mooney]. Would CKD equate to a 'characteristic by-product' or 'sludge?' "* Importantly, Dellinger writes on the same page "*It seems that agency made a policy call to exempt these wastes by raising the pH level of the corrosivity characteristic. This was done in public manner, no law suit was filed, no petitions have been received asking us to change pH to 11.5.*" It is not the public's responsibility, or even ability, to detect such falsifications by EPA in the first place, nor should they have to submit petitions or bring law suits to force EPA to perform its duty to act honestly in the protection of the public and environment from man-made hazards.

On page 35, Jenkins documents that current EPA staff responsible for the Corrosivity Characteristic were fully aware of the pH 11.5 international standard before 1996, so they knowingly perpetuated the fraudulent pH 12.5 level through the 1996 Scoping study. Dellinger writes "*how does Cate know this – they maybe had a better <u>opportunity</u> to know this, but not necessary actually <u>had</u> the knowledge.*"

On page 38, Dr. Jenkins stated that because of the falsified Corrosivity Characteristic, First Responders after 9/11 would have compared their pH test levels of WTC dust with the 12.5 pH level in the List of Hazardous Substances under CERCLA and found no exceedances. Mr. Dellinger wrote "*my recollection is that they required all responders to wear protective equipment. This entire analysis is specious!*" and "*This accusation is outrageous.*"

On page 39, Mr. Dellinger defended the CKD regulations which ignored the corrosive high pH levels. He stated that since CKD wastes were regulated to a very limited extent for metal contamination, they did not need to be regulated for their corrosive effects. Dellinger says the regulations require that CKD be managed "*better.*" Dr. Jenkins asserts that this is nonsense

on the part of Mr. Dellinger, since health effects from the corrosivity of CKD are different from health effects of metals in CKD. Reducing metal exposures to CKD may be inadequate to sufficiently reduce acute or long term chronic corrosive exposures. The corrosive aspect of the CKD goes entirely unregulated.

See the attached copy of Mr. Dellinger's handwritten notes for his other accusatory and excusatory comments on Dr. Jenkins' May 6, 2007 complaint to Congress/FBI. To top it off, beside the very last paragraph in Dr. Jenkins' FBI/Congressional complaint, Mr. Dellinger claimed it was the responsibility of the health practitioners to know themselves that WTC dust was corrosive, writing in the margin "*Why weren't the health workers familiar with these studies [cited and discussed in Jenkins' FBI complaint]*" so as to know how to effectively treat First Responders medically. This amounts to assigning blame to the victims of a fraud by saying they should have detected the fraud themselves in the first place and thus prevented the health injuries.

Mr. Dellinger also spoke with his key staff on the allegations brought by Dr. Jenkins. On July 26, 2001, Gregory Helms prepared a declaration under penalty of perjury.[57] He stated that although he had no role in the original promulgation of the Corrosivity Characteristic regulation in 1980, he was "*the Agency's resident expert on the RCRA corrosivity characteristic regulation*" and that Dr. Jenkins had "*solicited his opinion*" because of that role. He testified regarding "*receiving from Dr. Jenkins early in 2007 a document that she identified in conversation as raising a concern about the corrosivity characteristic regulation . . . and later in 2007, a document in which she was questioning the validity of the corrosivity characteristic and suggesting that this regulation's initial promulgation may have been tainted*." He stated that he started investigating the matter "*on his own initiative*," started preparing an issue paper, and had a "*couple*" of conversations with Mr. Dellinger about the issue, but dropped the effort because of other priorities. See attached.

On August 16, 2010, Mr. Dellinger testified[58] as follows regarding the impact of the falsified safe pH level in the Corrosivity Characteristic.

> Second, irrespective of whatever pH standard EPA might have developed, the dust generated by the collapse of the WTC would have been the same, i.e., the concrete of which such dust was principally composed would have been no different. Furthermore, EPA consistently advised first responders to wear respiratory protection, because it was obvious that, irrespective of the prevailing pH standard and whether or not the concrete dust was considered a hazardous waste, inhaling such dust posed a substantial health risk.
>
> Finally, I have examined what I understand were Dr. Jenkins' disclosures of EPA wrongdoing to the FBI, and I have found such disclosures logically and factually flawed, and, to the extent they purportedly represent evidence of Agency wrongdoing, of no meaning whatsoever.

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[57] Declaration of Gregory Helms (July 29, 2011).

[58] August 16, 2010 Declaration of Robert W. Dellinger under penalty of perjury, former Director, Materials Recovery and Waste Management Division.

Mr. Dellinger later admitted to the false statement in his August 16, 2010 declaration under penalty of perjury, saying that it was not EPA, but claiming instead it was local officials who told First Responders to wear respirators.[59]

Q: So you can tell me when EPA advised over time the first responders to wear respiratory protection? Can you?
A: Oh, I probably shouldn't have said "EPA consistently advised." It would have been their -- should have been their -- you know, their practices, standard practice.
Q: You're saying it would have been whose standard practice?
A: Anybody that would be going into those buildings.
Q: So you're not saying someone -- at the moment you're not saying someone would have advised them of the danger, you're saying they would have known from their own experience and practice?
A: That would be my expectation.
Q: Okay. So would you like to retract your statement that "EPA consistently advised the first responders to wear respiratory protection"?
A: I wouldn't say "EPA."
Q: Okay.
A: Yeah, I probably would change the sentence.
Q: Okay. And if you were to word it to be consistent with your own knowledge, what would you say?
A: Well, the -- I don't know what you would call the supervisory people, you know, that were there, but the -- when there's heavy dust like that, they have -- the fire fighters and police have access to equipment that would have provided them protection from this dust.
Q: Are you aware that the U.S. EPA did issue a public statement that basically downplayed the air-inhalation health risk from the dust?
A: Well, I know from watching television that when people were coming out of the hole their supervisors were telling them to keep those respirators on.
Q: You want to answer the question I asked you?
A: Can you ask it again?
Q: Are you aware that EPA issued a public statement that downplayed the risk, health risk of inhaling the dust?
A: No, I'm not aware of it.
Q: Okay. Do you recall a controversy arising about the White House Office of Environmental Policy Editing EPA's public warning statement to take out the meat of the warning?
A: No, I do not. I don't remember that.
Q: Okay. Now, on the last page of your declaration, page 6 at paragraph 29 you say, or someone says over your signature: "Finally, I have examined what I understand were Dr. Jenkins' disclosures of EPA wrongdoing to the FBI, and I have found such disclosures logically and factually flawed, and to the extent they purportedly represented evidence of Agency wrongdoing, have no meaning whatsoever." Do you see that?
A: Yes.
Q: Are you the author of that exact language?
A: Not the author of the exact language. But from my standpoint, the fact that our pH range of 2 to 12.5 is what it is, it wouldn't have changed anything. The concrete dust is still concrete dust.
Q: I guess I don't follow your logic. If the science showed that a pH of 12.5 or more was extremely harmful, perhaps immediately dangerous to life and health as they say, to humans, and the EPA standard didn't reflect that fact, are you saying the fact that concrete dust is concrete dust means no harm would come from that air?

[59] April 22, 2011 deposition of Robert W. Dellinger, former Director, Materials Recovery and Waste Management Division, EPA, 169-173.

A: No, I'm not saying that at all. What I'm saying is that the concrete dust is going to be at whatever pH it is at. And whether we said that the pH should be no greater than 12 or no less than 2.5 or whatever, it wouldn't have made a difference to the concrete dust.
Q: Well, I think we're concerned about making a difference to the first responders --
A: Well --
Q: -- and whether they would take more protective measures.
A: -- as long as they had respirators on, they'd be doing fine. It's not like somebody was out there saying, oh, shoot, the pH of this stuff is not quite 12 -- over 12.5, so they don't need respirators.
Q: How do you know what people were saying to the first responders?
A: Because I heard it on television. I heard the supervisors of those people saying that, "Keep your respirators on when you're dealing in the" -- you know, when they were down in the hole.
Q: When you say "down in the hole," you mean sort of the, what shall we call it, where the building collapsed?
A: Yes.
Q: So have you read the testimonies of the first responders?
A: No, I have not.
Q: Okay. Have you read the allegations of the first responders in their lawsuits?
A: No, I haven't.
Q: Okay. How many times do you think you heard someone talking about respiratory protection on the television?
A: Pretty much every time somebody came out there without having a respirator on.
Q: Are you saying you were watching the television day in and day out for this purpose?
A: No, I'm not saying that.
Q: Okay. So how many times did you observe this?
A: Several.

This deposition testimony raises an interesting question. Was there any national broadcast coverage wherein local officials told First Responders in "*the hole*" to wear respirators or "*that when people were coming out of the hole their supervisors were telling them to keep those respirators on*"?

Regardless of whether EPA or other officials told First Responders to wear respirators, they were unlikely to be highly motivated to do so, since the caustic, corrosive pH of WTC dust was never mentioned to First Responders. The other pollutants at Ground Zero rarely exceeded OSHA Permissible Exposure Limits, and if they did, they were related to long-term, cumulative expose types of health risks. OSHA defines corrosive atmospheres (which include airborne corrosive particulates) as being "immediately dangerous to life or health" (IDLH).[60] If First Responders had in fact been told to wear respirators, they would have been more motivated to do so if they had been informed of the corrosive, high pH of WTC dust, and the fact that alkaline corrosive atmospheres do not necessary give the physical sensations (burning sensation) of being corrosive.[61]

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[60] OSHA (May 5, 1995) Standard Interpretations - Response to IDLH or Potential IDLH atmospheres. http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=21788

[61] See later discussion in the justification section of this petition for documentation that corrosive alkaline atmospheres may not provide physical warning signals, such as a burning sensation.

Further, Mr. Dellinger never addressed the problem that others, like citizens working in lower Manhattan, residents and laborers, in addition to First Responders, were also exposed to WTC dust for long periods. There was no official entity, EPA or otherwise, who instructed them to wear respirators, much less train them in the use of same or supply them with the proper respiratory protection. In fact the opposite was true. Workers and residents in lower Manhattan were explicitly told they did not even need to wear dust masks, much less approved respirators.[62]

IV. Justification of the Need for the Proposed Action

The falsified Corrosivity Characteristic pH level of 12.5 does not protect from irreversible tissue destruction (chemical burns)

The falsified RCRA Corrosivity Characteristic pH level of 12.5 results in unregulated hazardous exposures to the public and First Responders corrosive alkaline materials, which result in irreversible tissue damage (chemical burns).

A pH level of 11.5 and higher is the recognized presumptive safe level for alkaline corrosive materials

A pH level of 11.5 and over has been established by the international community beginning in 1971 under the UN World Health Organization (WHO).[63] The WHO stated both irreversible dermal (skin) as well as corneal damage occurs at pH levels above 11.5. This pH 11.5 and higher presumptive level has been re-iterated in many subsequent international consensus standards. The UN Basel Convention treaty was amended in 1998 to include a presumptive trigger level for alkaline corrosivity at a pH level of 11.5.[64] In 2002, the UN ratified the OECD Globally Harmonized System of Classification and Labeling of Chemicals (GHS). The GHS states in many places that a pH level of 11.5 and higher is classified as corrosive to tissues.[65]

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[62] Jenkins, C. (July 4, 2003) "*Comments on the EPA Office of Inspector General's 1/27/03 interim report titled: 'EPA's Response to the World Trade Center Towers Collapse' A DOCUMENTARY BASIS FOR LITIGATION*" http://www.877wtchero.com/pdf11.pdf

http://www.scribd.com/doc/45169489/Jenkins-070403-Documentary-Basis-Litigation

[63] International Labour Office (1971, 1972) Chemical Burns. In: Encyclopaedia of Occupational Health and Safety, Volume I – A – K, pages 220 - 221 International Labour Office, CH 1211 Geneva 22, Switzerland, 1971. Special McGraw-Hill Edition, 1972, Library of Congress Card Number: 74-39329, International Standard Book Number: 07-079555-X

[64] United Nations Environment Programme (February 5, 1992) Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, Annex IX, List B, Waste B2120. http://www.basel.int/text/17Jun2010-conv-e.pdf

[65] United Nations Economic Commission, Globally Harmonized System of Classification and Labeling of Chemicals (GHS). http://live.unece.org/trans/danger/publi/ghs/ghs_rev01/01files_e.html

The pH scale is logarithmic, like the Richter Scale for earthquakes. A change of one unit on the pH scale represents a tenfold increase in alkalinity or acidity. Thus, a difference in a pH safety level of 12.5 *vs.* 11.5 is highly significant.

The first readily available documentation of the "rule of thumb" that it should be presumed that an alkaline pH level of 11.5 causes corrosive chemical burns to both the skin and eyes comes from the United Nations' (UN) World Health Organization (WHO) International Labour Organization (ILO) in its 1971 edition of the *Encyclopaedia of Occupational Health and Safety*.[66] A scanned photographic version appeared earlier in the section on EPA's 1980 falsification of this reference. The relevant language from the ILO encyclopedia is again given below:

> Burns, chemical
> Most chemical burns result from the action of corrosive substances which destroy tissue at the point of contact. The skin, eyes and digestive system are the most commonly affected parts of the body. The corrosives may be either acid or alkali, the main feature being the hydrogen or hydroxyl concentration. **Extremes above pH 11.5 or below 2.5 are not tolerated by the body and will almost always result in irreversible tissue damage.** An outstanding feature of chemica [sic] burns is the fact that tissue destruction is progressive: acids tend to be neutralised by the available or exposed tissue whereas alkalis continue to cause damage unless neutralised by other means.

Health effects from exposures to alkaline materials with corrosive high pH levels

Corrosive alkaline materials cause irreversible tissue destruction, which is the same thing as what is commonly called "chemical burns." Corrosive airborne dusts and mists act directly to cause tissue destruction and scarring in the upper respiratory system, and deep within the lungs if particles are small enough to penetrate deep within the airways. The following are the United Nation's (U.N.) Environment Programme (UNEP) descriptions of the effects of corrosive substances on the respiratory track, skin and eyes:[67]

> Corrosion of the respiratory tract is defined by destruction of the respiratory tract tissue after a single, limited period of exposure analogous to skin corrosion; this includes destruction of the mucosa.
> ...
> Skin Corrosion is the production of irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis ... Corrosive reactions are typified by ulcers, bleeding, bloody scabs, and, by the end of the observation at 14 days, by discolouration due to blanching of the skin, complete areas of alopecia, and scars.
> ...

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[66] International Labour Office (1971, 1972) Chemical Burns. *op. cit.*

[67] United Nations Economic Commission for Europe (2005) Globally Harmonized System of Classification and Labeling of Chemicals (GHS), First Revised Edition. 3.1.2.6 Specific considerations for inhalation toxicity at p. 112; Chapter 3.2 Skin Corrosion/Irritation, Chapter 3.3 Serious Eye Damage /Eye Irritation at p. 137; 3.2.1 Definitions at p. 123. http://www.unece.org/trans/danger/publi/ghs/ghs_rev01/01files_e.html

> Serious eye damage is the production of tissue damage in the eye, or serious physical decay of vision, following application of a test substance to the anterior surface of the eye, which is not fully reversible ...

OSHA defines corrosive atmospheres (which include airborne corrosive particulates) as being "immediately dangerous to life or health" (IDLH). This is true even if the physical manifestations of the corrosive effects are delayed.[68] A person inhaling corrosive alkaline particles or mists will not necessarily detect (with their senses) any chemical burning sensation of their respiratory tract and lungs.[69] This is because corrosive substances will deaden the senses. OSHA states that prolonged airborne exposures to irritants or corrosives may produce little or no symptoms of irritation.[70] Thus, the person will not know they are in a dangerous situation and take steps to prevent the exposure.

Alkaline corrosive substances will inactivate and/or kill the ciliary cells that line the respiratory tract. Cilia are tiny hair-like structures that move mucus up and out of the respiratory passages (mucociliary escalator). These ciliary cells are the first line defense for the clearance of toxic substances from the throat, bronchial tubes and lungs.[71, 72] The killing or deadening of the ciliary cells that line the upper respiratory track and move particles up to the esophagus, preventing them from reaching the lungs, results in not only larger particle exposures deeper to the lungs of the corrosive materials themselves, but also to any other toxic materials that are present in the air. This increases the toxic properties of other pollutants by facilitating their entry into the body through the respiratory system.

An alkaline pH as low as 9.76 has been shown to inactivate ciliary cells, and a pH of 10.15 has been shown to destroy the ciliary cells in respiratory tissues.[73, 74] In one study on

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[68] OSHA (May 5, 1995) Standard Interpretations - Response to IDLH or Potential IDLH atmospheres. http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=21788

[69] Bos, Peter M.J. MSc; Busschers, Marloes MSc; Arts, Josje H.E. PhD (2002) Evaluation of the Sensory Irritation Test (Alarie test) for the Assessment of Respiratory Tract Irritation. Journal of Occupational & Environmental Medicine. 44(10):968-976. http://www.joem.org/pt/re/joem/abstract.00043764-200210000-00017.htm;jsessionid=F7TMsbLQnvY1gy1Lgg1J8WnplCy1Q5YjkGmnLcyGv0GX9jFp1Vyx!-1119014599!-949856145!8091!-1

[70] OSHA. CONFINED SPACE HAZARDS. http://web.archive.org/web/20070528170531/http://www.osha.gov/SLTC/smallbusiness/sec12.html

> Irritant (Corrosive) Atmospheres ... Prolonged exposure at irritant or corrosive concentrations in a confined space may produce little or no evidence of irritation. This may result in a general weakening of the defense reflexes from changes in sensitivity. The danger in this situation is that the worker is usually not aware of any increase in his/her exposure to toxic substances.

[71] McMahon JT, Aslam R, Schell SE. (2011) Unusual ciliary abnormalities in three 9/11 response workers. Ann Otol Rhinol Laryngol. 120(1):40-8.

[72] OSHA. Occupational Exposure to Cadmium, Section: 6, Title: Section 6 - VI. Quantitative Risk Assessment. http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_id=820&p_table=PREAMBLES

[73] Holma B, Lindegren M, Andersen JM. (1977) pH effects on ciliomotility and morphology of respiratory mucosa. Arch Environ Health. 1977 Sep-Oct, 32(5):216-26.

human lung tissues, a pH of 10.5 inactivated ciliary cells, and a pH of 11 killed them.[75] Compare these pH levels to the presumptive pH level of 11.5 for corrosivity to skin and eyes. A pH level of 10.5 is ten times less alkaline than a pH level of 11.5. In other words, a pH level of 11.5 is not a protective level for the destruction and/or immobilization of ciliary cells in the respiratory tract.

Corrosive components of concrete have been known to maim, kill and cause burns from the beginning of time, and have been used to torture humans from ancient Egypt to the present day

Regardless of the definitive scientific research and international standards establishing that pH levels of 11.5 and above are corrosive to human flesh, this fact has been known throughout human history, and is part of the basis of current maiming laws in the U.S., derived from common law and a British 1837 statute. An alkaline "corrosive" substance is also called a "caustic" substance. The U.S. statute specifies any "throwing or pouring" of a "caustic substance" on another as a Title 18 Section 114 maiming assault.[76]

The corrosive effects of calcium hydroxide (lime, present in concrete dust) and calcium oxide (quick lime, present in the concrete dust from the WTC because of the high temperature fires) have resulted in its use to torture and maim since at least ancient Egypt, where men were punished by being forced to drink a water slurry of lime. Saint George, the Dragon slayer in the year 303 Common Era, was fabled to be tortured by being drenched with lime. During the Middle Ages, dissident Christians were tortured by the Catholic Church with quick lime (calcium oxide). Quick lime was the first chemical warfare agent in the Middle Ages when it was catapulted into cities under siege, or thrown onto other ships in sea battles. In World War 2, the Germans used quicklime to torture Jews. In 2007, quicklime was used to torture a physician, and in 2006 Christians were tortured in Uzbekistan with quicklime.[77]

Even brief, non-intense contact with lime (calcium hydroxide) in the dry form has cause burns to the skin. Adolescents whose only exposure to lime was a relatively brief contact with lime used to mark a goal line in a football field resulted in "caustic ulcers" of the sensitive skin of the scrotum has been reported in the medical literature.[78]

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[74] Andrew P. Worth and Mark T.D. Cronin (2001) The use of pH measurements to predict the potential of chemicals to cause acute dermal and ocular toxicity. Toxicology 169: 119–131.

[75] C. Clary-Meinesz, J. Mouroux, J. Cosson, P. Huitorel, B. Blaive (1998) Influence of external pH on ciliary beat frequency in human bronchi and bronchioles. Eur Respir J. 11: 330–333. http://erj.ersjournals.com/cgi/reprint/11/2/330

[76] See October 13, 2008 complaint to FBI from Cate Jenkins, Ph.D., *op. cit.*, at pp. 2-4 for more extensive discussions, and citations to current state law as well.

[77] *Id.* at pp. 10-15.

[78] Gelmetti C & Cecca E. (1992) Caustic ulcers caused by calcium hydroxide in 2 adolescent football players. Contact Dermatitis 1992: 27: 265–266. Synergy, Medline, ISI, Chemport, CSA, www.blackwell-synergy.com

Impact of the falsified Corrosivity Characteristic on First Responders and public after 9/11

EPA's falsified Corrosivity Characteristic had a dramatic impact on the evaluation of the safety of dust from the collapse of the World Trade Center after September 11, 2001. After 9/11/01, EPA addressed the health consequences of the WTC collapse under the National Contingency Plan (NCP) authority, which encompasses the Comprehensive Emergency Response and Liability Act (CERCLA, or Superfund) authorities. The CERCLA List of Hazardous Substances which incorporates the falsified Corrosivity Characteristic safety level for alkaline corrosives (pH 12.5 and higher) would have been the referent standard.

After 9/11, it is quite probable that EPA and OSHA did have immediate field data for the pH of WTC dust, and pH levels were higher than 11.5, but not higher than 12.5, because regulations and protocol require that these personnel be trained to test for pH levels as well as have the necessary equipment for pH tests pre-packed long before any hazardous material release site such as the collapse of the WTC.[79] The OSHA, EPA, and NYC On Scene Coordinators would then have compared the pH levels with the list of Hazardous Substances under CERCLA, which incorporates the falsified Corrosivity Characteristic pH level of 12.5, not the true safe level of 11.5. There would have been no imperative or regulatory requirement to assess the dust for corrosive properties.

On September 13, 2001, EPA Administrator Christie Todd Whitman claimed all the monitoring data from EPA testing showed hazardous substances "***below background levels***."[80] "Background level" is an unambiguous term, meaning that there is first, adequate testing of all hazards, and second that levels are the same as without the polluting event.[81, 82] But EPA in

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> Chemical burns from calcium hydroxide have commonly been reported. though almost always in adulthood (1-10) and frequently, though not always (11, 12), occupationally. ... An 11-year-old boy presented with roundish erosive lesions, tending to coalesce, with polycystic well-defined uninfIamed borders, on the upper 1/3 of both thighs, especially the left (Fig. I). Symptoms were limited at presentation to a mild burning sensation. The history revealed that erythematous lesions had first appeared quite suddenly a few hours after a soccer match and that they had quickly become erosive and burning. History also revealed that during the football match, the boy had fallen on the white marked-out touchline {the line that marks the boundaries of the field of play). In this way, he had come into contact with powder containing calcium oxide, subsequently hydrated by sweat.

[79] See May 6, 2007 complaint to the FBI and Congress from Cate Jenkins, Ph.D., *op. cit.*, at p. 25 for documentation of the requirements and training for pH testing at hazardous release site.

[80] EPA Administrator Whitman told a local TV station on September 13, 2001: "We've had concern, we're going to continue to monitor. But right now, as I will tell you, everything we're getting back from the sampling that we're doing, is below background levels." Note that EPA was working closely with OSHA at this time, and Whitman made no differentiation in her 9/13/11 statement between Ground Zero and more outlying areas of Manhattan.

See New York Daily News, June 25, 2007, "Damning questions Whitman must be made to answer" at: http://www.nydailynews.com/news/2007/06/25/2007-06-25_damning_questions_whitman_must_be_made_t.html

See archival footage in *Dust to Dust: The Health Effects of 9/11*. Sundance Channel and CBS News Productions at: http://www.sundancechannel.com/films/500013415/

[81] EPA RCRA Glossary of Terms. http://www.epa.gov/region8/land_waste/rcra/rcraglossary.html

none of its press releases or public statements in the days, weeks and months after 9/11 ever mentioned the corrosive, high pH levels in WTC dust.

Regardless of whether EPA or other officials told First Responders to wear respirators, they were unlikely to be highly motivated to do so, since the caustic, corrosive pH of WTC dust was never mentioned to First Responders. The other pollutants at Ground Zero rarely exceeded OSHA Permissible Exposure Limits, and if they did, they were related to long-term, cumulative expose types of health risks. OSHA defines corrosive atmospheres (which include airborne corrosive particulates) as being "immediately dangerous to life or health" (IDLH).[83] If First Responders had in fact been told to wear respirators, they would have been more motivated to do so if they had been informed of the corrosive, high pH of WTC dust, and the fact that alkaline corrosive atmospheres do not necessary give the physical sensations (burning sensation) of being corrosive.[84]

Further, citizens working in lower Manhattan, residents and laborers, in addition to First Responders, were also exposed to WTC dust for long periods. There was no official entity, EPA or otherwise, who instructed them to wear respirators, or anyone to train them in the use of same or supply them with the proper respiratory protection. In fact the opposite was true. Workers and residents in lower Manhattan were explicitly told they did not even need to wear dust masks, much less approved respirators.[85]

Zadroga Act established U.S. recognition that First Responders and the public suffered deadly and life threatening injuries from WTC dust

The Zadroga 9/11 Health and Compensation Act of 2010[86] establishes that the U.S. recognizes that both citizens living and working in lower Manhattan have suffered deadly and life threatening injuries from WTC dust. On August 26, 2011, the final regulations were issues

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Background - The concentration of a substance in an environmental media (air, water, or soil) that occurs naturally or is not the result of human activities. In exposure assessments, the concentration of a substance in a defined control area, during a fixed period of time before, during, or after a data-gathering operation.

[82] This statement by Ms. Whitman went far beyond the ambiguous misleading statements in EPA's press releases that were edited by the White House. Ms. Whitman was not referring specifically to zones outside of Ground Zero, and she was also claiming by making the statement that all pollutants of concern had been tested and were below background levels.

[83] OSHA (May 5, 1995) Standard Interpretations - Response to IDLH or Potential IDLH atmospheres. http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=21788

[84] See later discussion in the justification section of this petition for documentation that corrosive alkaline atmospheres may not provide physical warning signals, such as a burning sensation.

[85] Cate Jenkins (July 4, 2003) "*Comments on the EPA Office of Inspector General's 1/27/03 interim report titled: 'EPA's Response to the World Trade Center Towers Collapse' A DOCUMENTARY BASIS FOR LITIGATION*" http://www.scribd.com/doc/45169489/Jenkins-070403-Documentary-Basis-Litigation

[86] James Zadroga 9/11 Health and Compensation Act of 2010, P.L. 111-347. http://www.gpo.gov/fdsys/pkg/BILLS-111hr847enr/pdf/BILLS-111hr847enr.pdf

implementing the Zadroga Act.[87] The boundaries in Manhattan wherein residents and workers are eligible for compensation for health injuries after 9/11 extend from about a mile or more from the center of Ground Zero.

Research finds corrosivity of WTC dust one of the most important health impacts

The following excerpts are from medical research publications that directly cite the caustic, high pH of WTC dust as a major causative agent in the injuries to First Responders exposed to WTC dust. Many other studies document the respiratory effects of WTC dust without explicit attribution to its corrosivity.

> Pollution studies demonstrate a significant epidemiologic link between the exposure to airborne particulates and adverse health effects. The WTC collapse produced a massive exposure to respirable particulates, with the larger-size dust fractions having a pH ranging from 9 to 11, leading to an alkaline "burn" of mucosal surfaces.[88, 89]

> Responders to the 2001 World Trade Center (WTC) terrorist attacks, who were exposed to caustic dust and toxic pollutants following the 9/11 disaster, suffer from asthma at a rate more than twice that of the general US population, according to new research presented at CHEST 2009, the 75th annual international scientific assembly of the American College of Chest Physicians (ACCP)[90]

> The cloud contained pulverized glass and cement, insulation fibers, asbestos and numerous toxic chemicals. "It caused acute inflammation of the airways and the lungs," Dr. Prezant said. "That inflammatory impact has been persistent." An expert not involved with the study, Dr. Byron Thomashow, medical director of the Center for Chest Disease and Respiratory Failure at New York-Presbyterian/Columbia hospital, said: "The drop-off in lung function initially is really quite significant and doesn't get better. That's not what we've generally come to expect in people with fire and smoke exposure. They usually recover."[91]

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[87] Department of Justice (August 26, 2011) James Zadroga 9/11 Health and Compensation Act of 2010, Final Rule, 28 CFR Part 104, Docket No. CIV 151, RIN 1105-AB39. http://www.justice.gov/civil/docs_forms/911%20VCF%20Final%20Rule%20to%20OLP-%2008%2026.pdf

[88] Michael D. Weiden, Natalia Ferrier, Anna Nolan, William N. Rom, Ashley Comfort, Jackson Gustave, Rachel Zeig-Owens, Shugi Zheng, Roberta M. Goldring, Kenneth I. Berger, Kaitlyn Cosenza, Roy Lee, Mayris P. Webber, Kerry J. Kelly, Thomas K. Aldrich and David J. Prezant (October 9, 2010) Obstructive Airways Disease With Air Trapping Among Firefighters Exposed to World Trade Center Dust Chest, 137: 566-574. http://chestjournal.chestpubs.org/content/137/3/566.full.html

[89] Thomas K. Aldrich, Jackson Gustave, Charles B. Hall, Hillel W. Cohen, Mayris P. Webber, Rachel Zeig-Owens, Kaitlyn Cosenza, Vasilios Christodoulou, Lara Glass, Fairouz Al-Othman, Michael D. Weiden, Kerry J. Kelly and David J. Prezant, (April 8, 2010) Lung Function in Rescue Workers at the World Trade Center after 7 Years. New England Journal of Medicine, Vol. 362 No. 14, p. 1263. http://content.nejm.org/cgi/content/full/362/14/1263

[90] American College of Chest Physicians (November 3, 2009) World Trade Center Responders Plagued with Asthma, Reported Asthma in 9/11 Responders 2X Greater Than General Population. http://www.chestnet.org/accp/article/world-trade-center-responders-plagued-asthma

http://www.medicalnewstoday.com/articles/169768.php

[91] Denise Grady (April 7, 2010) Lung Function of 9/11 Rescuers Fell, Study Finds. New York Times. http://www.nytimes.com/2010/04/08/nyregion/08lung.html

> Upper respiratory symptoms (cough, nasal/sinus congestion/drip, sore/hoarse throat) have all followed a similar evolution during the four years following 9/11/01. On Day 1, more than half of our work force experienced all of the above symptoms. One year later, more than half of our rescue workers were still reporting upper respiratory symptoms and 2 – 4 years later, about 25% were still struggling with daily or frequent symptoms. Particulate matter analysis has shown a highly alkaline pH of WTC dust (like lye), which is extremely irritating to upper and lower airways.[92]

> However, there are a number of reasons to expect lower airways also to be at risk from the dust cloud. First, it has been shown that alkaline dust impairs nasal clearance mechanisms, and most WTC dust samples had a pH greater than 10 (very alkaline). Second, the nasal filtration system is optimally functional during restful breathing. However, WTC rescue/recovery workers, as a consequence of their work activities (moderate to high level physical exertion), were breathing at high minute ventilations where mouth breathing predominates. Third, although only five percent of the WTC dust was smaller than 10 microns in diameter, the extraordinary volume of dust in the air meant that the respirable fraction (particles less than 10 microns) represented a significant amount of exposure. Finally, although only a small percentage of particles larger than 10 microns tend to impact in lower airways, the huge magnitude of the WTC dust cloud meant that a small percentage of particles that penetrated deep into the lung may have added up to a significant exposure. In fact, in a study of 39 firefighters from the Fire Department of the City of New York (FDNY) 10 months after exposure, it was demonstrated the WTC dust did make it down into the lower airways, as particulate matter (>10 microns) consistent with WTC dust, with associated increases in inflammatory cells and cytokines in induced sputum.[93]

> Measurements of settled dust documented that these particles were highly alkaline (pH 11),12 and this property alone has been shown to be associated with respiratory effects. Occupational exposure to inhaled alkaline material induces chronic cough, phlegm, and dyspnea as well as upper respiratory tract symptoms. Exposure to alkaline dusts in a residential population has been described to produce similar symptoms.[94]

Dr John Howard,[95] Director of the National Institute for Occupational Safety and Health told the BBC on September 1, 2011 that lung tissue had been scarred by exposures to the caustic WTC dust.[96]

> Dr John Howard, Director of the National Institute for Occupational Safety and Health, told BBC News it was "plausible" that people would die of exposure to the dust. He singled out damage to the lungs - interstitial fibrosis - as one of the most serious effects. "You lose capacity to exchange oxygen and carbon dioxide, and essentially your lung is forming a scar inside so you have less ability to breathe." . . . Researchers found a high proportion of highly alkaline particles

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[92] Fire Department, City of New York, Bureau of Health Services, WTC Medical Monitoring and Treatment Program (September 2007) A Six-Year Assessment: September 2001 – September 2007. http://www.nyc.gov/html/om/pdf/2007/wtc_health_impacts_on_fdny_rescue_workers_sept_2007.pdf

[93] Dr. David Prezant of the World Trade Center Medical Monitoring and Treatment Program and the Albert Einstein College of Medicine and Chief Medical Officer, FDNY (September 8, 2008) Respiratory Health Consequences Resulting from the Collapse of the World Trade Center. NIOSH Science Blog, CDC. http://www.cdc.gov/niosh/blog/nsb090808_wtc_guest.html

[94] Joan Reibman, MD, et al. (May 2009) Characteristics of a Residential and Working Community With Diverse Exposure to World Trade Center Dust, Gas, and Fumes. J Occup Environ Med., 51(5):534-41. http://www.ncbi.nlm.nih.gov/pubmed/19365288?dopt=AbstractPlus

[95] Dr. Howard was appointed by President. Bush to be a special coordinator to handle the medical issues afflicting 9/11 rescue workers, and introduced the World Trade Center (WTC) Medical Monitoring and Treatment Program, which offered medical help and screening to emergency workers.

[96] David Shukman (September 1, 2011) Toxic dust legacy of 9/11 plagues thousands of people. BBC News. http://by156w.bay156.mail.live.com/default.aspx?rru=inbox#fid=1&fav=1&n=1046200702&rru=inbox&mid=8413f3f1-d4a9-11e0-9f6f-002264c15478&fv=1

from the pulverised concrete, but also asbestos and heavy metals like lead and mercury from thousands of computers and lights.

A new study was published last week by consortium of researchers headed by the chief medical officer for the Fire Department on New York.[97] Although not conclusive at this time, there was a 19% increase in cancer rates in firefighters exposed to the caustic dust and smoke from the WTC collapse. This early increase in cancers may be related to caustic high pH of WTC dust, which, as explained above, would defeat the natural defense mechanisms of the respiratory system, allowing excessive amounts of WTC dust particles to enter the lungs, deadening or killing the ciliary cells that would normally transport dust particles up and out of the respiratory tract.

Both large and small WTC dust particles would have corrosive, high pH levels

There are no valid documented studies of the pH of the smallest, respirable size particles of WTC dust. There are only tests of the bulk, aggregate dust containing both small and larger particles. It is not possible at this time to conduct new laboratory tests for the pH of the smallest particles WTC dust. This is because WTC dust containing or other similar alkaline material neutralize over time. Tests must be performed promptly and the sample must have been stored properly before testing.[98]

This hypothesis is consistent with the allegations of co-petitioner Dr. Jenkins in her October 13, 2008 complaint to the FBI,[99] wherein she alleged the laboratory test results of WTC dust for its pH had to be both suppressed and falsified. When testing was performed by EPA months later, the laboratory methods were rigged and intentionally designed to give false neutral results, both by diluting the WTC dust nearly 600 times with water before testing, obviously diluting any corrosivity, and testing only after the sample had time to neutralize by atmospheric exposure.[100]

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[97] Rachel Zeig-Owens, Mayris P Webber, Charles B Hall, Theresa Schwartz, Nadia Jaber, Jessica Weakley , Thomas E Rohan, Hillel W Cohen, Olga Derman, Thomas K Aldrich, Kerry Kelly, David J Prezant (September 3, 2011) Early assessment of cancer outcomes in New York City firefighters after the 9/11 attacks: an observational cohort study. Lancet, Vol. 378: 898. http://download.thelancet.com/pdfs/journals/lancet/PIIS0140673611609896.pdf?id=4d037fefcb72946c:a5ae5d1:132313d980f:466f1315092748298

Sydney Ember (September 1, 2011) Study Suggests Higher Cancer Risk for 9/11 Firefighters, New York Times. http://www.nytimes.com/2011/09/02/health/research/02cancer.html?_r=2&ref=nyregion&pagewanted=print

[98] The calcium hydroxide and/or calcium oxide in WTC dust (components of concrete and pulverized glass particles) are neutralizes by a reaction with atmospheric moisture and carbon dioxide from the air, a chemical process called "carbonation." A WTC dust sample would need to be stored in a sealed container (preferably a sealed glass ampoule) and/or protected by a carbon dioxide absorbent (sodalime) for preservation before pH analysis.

[99] See October 13, 2008 complaint to FBI from Cate Jenkins, Ph.D., *op. cit.*,

[100] *Id.* at pp. 37-39.

Extrapolation to the pH of the smallest WTC dust particles

As described in the historical perspective of the Corrosivity Characteristic and its impact on First Responders and the public after 9/11, there are no credible tests of the pH levels of the smallest WTC dust particles, those which can stay suspended long enough to reach deep within the lungs. Tests cannot be performed at this late date, because WTC dust would have neutralized by exposure to the air and moisture. Thus, in order to extrapolate the pH of the smallest WTC dust particles, all that is required is to establish whether or not there was some compositional or chemical difference between the largest and smallest particles.

The pH tests performed by the U.S. Geological Society (USGS) for bulk aggregate WTC dust found pH levels over 12 for some WTC bulk dust samples, [101] even after improper dilution of samples with a weak acid in a 20-to-1 ratio before testing.

Concrete was the presumed major contributor to the corrosive, alkaline properties of WTC dust. The concentration of concrete in the larger WTC dust particles can be compared to the concentration of concrete in the smallest WTC particles. If there is no difference in concrete concentrations between large and small particles, it can be assumed that the pH levels would also have been the same. There are 2 credible studies that determined the concentration of concrete in the smallest WTC dust particles, and the concentrations of concrete in the larger particles.[102] The concentration of concrete was the same or larger in the smallest WTC particles. The DELTA research group at the University of California at Davis, reported 21% portland cement in the smallest respirable-sized WTC dust particles (0.09 to 0.26 microns), along with 15% aggregate (sand and gravel that were mixed with the cement to form concrete). That means that the net "concrete" content of the smallest WTC particles was around 38%.[103] The larger sized

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[101] *Id.* at p. 14 for a table of the USGS pH results released in 2006 (earlier USGS reports were contradictive as explained in Jenkins' 10/13/08 complaint).

http://www.scribd.com/doc/45180410/Jenkins-101308-FBI-New-WTC-pH-Lies-2nd-Complaint5.

[102] Both the Delta Group at the University of California at Davis, and MVA Scientific Consultants, Inc. are highly prestigious groups, having received numerous EPA grants for similar studies on fine particulates. MVA was a major contract laboratory to EPA in the evaluation of WTC dust after 9/11, but performed its study of the concrete content of WTC dust independently. Dr. Millette of MVA was an expert witness on behalf of the Department of Justice and EPA suit against W.R. Grace for the Libby, MT asbestos Superfund site.

See The DELTA Group, for the Detection and Evaluation of the Long-Range Transport of Aerosols. University of California at Davis at http://everest.ucdavis.edu/people/faculty/faculty_profiles/thomas_cahill.html

http://daviswiki.org/DELTA_Group

See also MVA Scientific Consultants, Inc. at

http://www.mvainc.com/

http://www.mvainc.com/staff/jim-millette/

[103] See October 13, 2008 complaint to FBI from Cate Jenkins, Ph.D., *op. cit.*, at pp. 29, 54-55.

See also internet available version of results in Esquire Magazine (March 20, 2007), "Now We Know" and "The Bag: A Breakdown" at: http://www.esquire.com/features/Know9_11

http://www.esquire.com/features/breakdown0407

particles (2.5 to 12 microns) had a similar concrete content of 34.5% concrete (22% portland cement and 12.5 aggregate). Another independent research group, MVA Scientific Consultants, Inc., also found that the smallest WTC dust particles (0.5 to 2.5 microns) contained 26.5% cement particles in samples about ½ mile away from Ground Zero.[104]

From these studies, it can be concluded that since the concrete concentrations found in the smallest WTC dust were comparable to the concrete concentrations in the larger particles, that the pH of the smallest particles would be comparable to the bulk, aggregate pH levels of WTC dust. Newly pulverized concrete from buildings has been shown to have pH levels from 11 to over 12, which is a generally recognized fact.[105]

As stated before, First Responders at any hazardous release site such as the WTC have as their reference the Corrosivity Characteristic as incorporated into the CERCLA Hazardous Substances List. No effective distinction is made whether the release is a liquid or a solid. In fact, there is no alternate safe pH level for solids in the Hazardous Substances List, only the Corrosivity Characteristic which ambiguous states as a criteria "it is aqueous." If the genuine safe alkaline pH level of 11.5 were part of this list, First Responders would have been trained and aware before these disasters what the recognized corrosivity standard is and take action to avert exposures.

Impact of the falsified Corrosivity Characteristic after implosion demolitions of buildings

EPA and other authorities have never issued any warning to the public because of the alkaline, corrosive properties of dust from implosion demolitions of large buildings, and there is no evidence that EPA and others have tested the dust for its pH after these demolitions, even when sophisticated testing of other pollutants have been performed. In addition, there has been no testing of the dust for the pH after these implosion demolitions in published scientific studies even though sophisticated measurements of other toxic materials was performed.[106] In fact, these events are billed as spectator events, with the public becoming engulfed in the ensuing dust clouds containing fine, pulverized concrete.[107]

In November 2007, co-petitioner Cate Jenkins assisted residents before a pending demolition in Florida. Concrete from the structure to be imploded was tested for its pH by the building owners, and levels were found over 11.5, the international standard. After the implosion, citizens tested the settled dust and found pH levels over 12.[108] Immediately after the

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[104] Millette, J. R., et al. (2002) Microscopical Studies of World Trade Center Disaster Dust Particles. Microscope 50:l, 29-3.

[105] See table on p. 46, May 6, 2007 complaint to the FBI and Congress from Cate Jenkins, Ph.D., *op. cit.*

[106] See May 6, 2007 complaint to the FBI and Congress from Cate Jenkins, Ph.D., *op. cit.*, at pp. 45-52.

[107] *Id.* at p. 47 for 2 photographs of spectators becoming covered by the dust cloud after on such demolition.

[108] *Id.* at pp. 57-60.

demolition, children were stationed in the rubble from the newly collapsed building to stage a mock rescue operation by the local fire department.

If the Corrosivity Characteristic pH level was not falsified, and instead set at the correct pH level of 11.5, precautions would be taken at these demolitions to protect the public. Concrete before demolition, and the dust after demolition will almost never have a pH level higher than 12.5, the falsified Corrosivity Characteristic level. Thus, action is never taken to control exposures for the reason of corrosivity.

Impact of the falsified Corrosivity Characteristic on residents living near cement manufacturing facilities (cement kiln dust)

Similarly to the situation of concrete dust generated by implosion demolitions, the dust from cement manufacturing facilities (cement kiln dust, or CKD) will also rarely have a pH level higher than 12.5. However, this dust will have pH levels exceeding 11.5, the genuine international standard for presumed corrosivity.

One Material Safety Data Sheets (MSDS) from major cement manufacturer[109] warns that cement kiln dust is a corrosive material, with a pH ranging from 10-13. It provides the proper warning prominently on the MSDS:

LAFARGE

MSDS: Cement Kiln Dust

Material Safety Data Sheet

Section 1: PRODUCT AND COMPANY INFORMATION

Product Name(s):	Cement Kiln Dust
Product Identifiers:	New Lime™, Cement Kiln Dust (CKD), Kiln Dust, Cement Lime, Raw Mix, Kiln Feed, Baghouse Dust.

. . .

WARNING

Corrosive - Causes severe burns.
Toxic - Harmful by inhalation.
(Contains crystalline silica)

Use proper engineering controls, work practices, and personal protective equipment to prevent exposure to wet or dry product.

Read MSDS for details.

[109] LaFarge North America, MSDS for Cement Kiln Dust, http://www.lafarge-na.com/MSDS_North_America_English_-_Cement_Kiln_Dust.pdf

However, in a 1993 report to Congress on the hazards of CKD, EPA claimed that a pH level of 12.5 was not only safe for the skin, but to all human tissues (including the eyes and lung).[110] EPA's 1997 risk assessment for CKD never even mentioned any corrosive inhalation or skin contact hazards.[111] As a result, EPA only requires monitoring of certain toxic metals around cement manufacturing sites, and does not mention or regulate the dust for its caustic, corrosive inhalation hazard. If EPA adopted the genuine, internationally recognized pH level of 11.5 and higher as unsafe, CKD exposures to the public living near these cement manufacturing sites would be tested and regulated.

Impact of the ambiguous specification of "aqueous" in the Corrosivity Characteristic definition

This petition not only requests that the Corrosivity Characteristic regulation be changed to a pH threshold level of 11.5 for alkaline corrosive materials, but it also requests that the Corrosivity Characteristic regulation be changed to explicitly include all materials, not just the ambiguous specification that it be "aqueous." (40 C.F.R. § 261.22(a)(1).) In practice, when the Corrosivity Characteristic is used pursuant to the CERCLA/Superfund requirements in its List of Hazardous Substances, or under other regulations such as the Department of Transportation placarding and handling requirements, no real distinction is made between water or non-water containing materials. This is because on human contact, water-free alkaline materials quickly absorb water from body tissues, particularly the respiratory tract.

It is important to make this change in the definition of a material subject to the Corrosivity Characteristic to prevent any misunderstanding that a pH level of 11.5 and above is the internationally recognized presumptive hazard threshold for alkaline corrosivity. Robert W. Dellinger, former Director, Materials Recovery and Waste Management Division (MRWMD), Office of Resource Conservation and Recovery (ORCR), EPA, the division responsible for the original promulgation of the Corrosivity Characteristic regulation in 1980, its reassement in 1996, and its continued publication annually in the Code of Federal Regulations, testified on

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[110] EPA, Office of Solid Waste, OSWER (December 31, 1993) Report to Congress – Cement Kiln Dust Waste. Chapter 6, Potential Danger to Human Health and the Environment, p. 6-4.
http://www.epa.gov/osw/nonhaz/industrial/special/ckd/cement2.htm

> Major results and conclusions from the evaluation of potential danger to human health and the environment from the management of CKD are presented below. ... The pH of CKD leachate measured in laboratory tests typically ranged from 11 to 13. High pH levels in ground water and surface water may result in a variety of adverse effects, including the mobilization of certain metals and other constituents that could pose toxicological problems, human tissue burns (at pH levels above 12.5 or more), corrosion in pipes, and objectionable taste in drinking water. In addition, high pH levels could cause a wide variety of adverse ecological effects.

[111] EPA, Office of Solid Waste, OSWER (1997)Technical Background Document: Population Risks from Indirect Exposure Pathways, and Population Effects from Exposure to Airborne Particles from Cement Kiln Dust Waste.
http://www.epa.gov/osw/nonhaz/industrial/special/ckd/cement4.htm

April 22, 2011 that EPA had erred by restricting the regulation to materials that were "aqueous."[112]

> A: Okay. I do not feel culpable, and I don't think anybody else should feel culpable of that because there has been -- let's see, it's 2011 now. So it's 20 -- 2001; 21 years, and nobody to my knowledge has asked that that particular test be changed. And, as I mentioned earlier, the test applies only to liquids. It doesn't apply to solids. So it's irrelevant.
> Q: So you are saying now that you believe that your analysis is sufficient to say that no one employed by EPA at any time in this process from 1980 or whatever on made an error or has any liability or engaged in misconduct?
> A: The only error that would have been made was that they did not apply the corrosivity characteristic to liquids.

V. Conclusion

For the foregoing reasons, EPA should convene a proceeding for reconsideration of the Corrosivity Characteristic regulation. Should you wish to receive any supplemental materials, please let us know.

Respectfully submitted this 8th day of September, 2011

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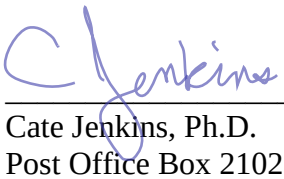

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[112] April 22, 2011 deposition of Robert W. Dellinger, former Director, Materials Recovery and Waste Management Division, EPA, p. 175.

List of Attachments

International Labour [sic] Office (1971, 1972) Chemical Burns. In: Encyclopaedia of Occupational Health and Safety, Volume I – A – K, pages 220 - 221 International Labour Office, CH 1211 Geneva 22, Switzerland, 1971. Special McGraw-Hill Edition, 1972, Library of Congress Card Number: 74-39329, International Standard Book Number: 07-079555-X.

May 6, 2007 complaint to the FBI and Congress from Cate Jenkins, Ph.D., "*Complaint and Additional Evidence of pH Fraud by: USGS, OSHA, ATSDR, NYC, EPA, and EPA-funded scientists; (1) Falsification of corrosive pH data for WTC dust; (2) Historical fraud by EPA of hazardous pH levels since 1980.*"
http://www.scribd.com/doc/45180048/Jenkins-050607-FBI-WTC-pH-LIES-1st-Complaint

October 13, 2008 complaint to FBI from Cate Jenkins, Ph.D., "*Supplemental Evidence: Fraud in the Conduct and Dissemination of Human Tissue Corrosivity Data (pH tests) in the Aftermath of the World Trade Center Disaster.*"
http://www.scribd.com/doc/45180410/Jenkins-101308-FBI-New-WTC-pH-Lies-2nd-Complaint

Robert W. Dellinger, former Director, Materials Recovery and Waste Management Division, EPA, hand-written comments on Jenkins' May 6, 2007 complaint to the FBI and Congress.

August 16, 2010 Declaration of Robert W. Dellinger (under penalty of perjury)

April 22, 2011 Deposition of Robert W. Dellinger, former Director, Materials Recovery and Waste Management Division, EPA, pp. 161-176.

July 29, 2011 Declaration of Gregory Helms (under penalty of perjury)