

<u>SUBJECT</u>		<u>DATE</u>
1448. Definitions of Inactive Portion, Active Portion and Closed Portion of a RCRA TSDF		AUG 12, 2021
1449. Dangerous Waste Designations and Dangerous Waste Code Determinations		AUG 19, 2021
1450. Method Detection Limits and Hazardous Waste Determinations	ENCORE	AUG 26, 2021
1451. Method Detection Limits and Hazardous Waste Determinations II	ENCORE	SEP 2, 2021
1452. Totals Analysis vs. TCLP and Dividing by 20	ENCORE	SEP 9, 2021
1453. Decharacterized RCRA Waste - Manifesting and LDR Reporting	ENCORE	SEP 16, 2021
1454. Decharacterized Hazardous Waste Listed Solely for Non-Toxic Characteristics	ENCORE	SEP 23, 2021
1455. Decharacterized Wastes and the LDR Dilution Prohibition	ENCORE	SEP 30, 2021
1456. The "Derived from Rule", the "Mixtures Rule", and the "Contained-In Policy"		OCT 7, 2021

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TWO MINUTE TRAINING

TO: CENTRAL PLATEAU CLEANUP COMPANY

FROM: PAUL W. MARTIN, RCRA Subject Matter Expert
CPCCo Environmental Protection, Hanford, WA

SUBJECT: THE "DERIVED FROM RULE", THE "MIXTURES RULE", AND THE "CONTAINED-IN POLICY"

DATE: OCTOBER 7, 2021

<u>CPCCo Projects</u>	<u>CPCCo Functionals</u>	<u>HMIS</u>	<u>Hanford Laboratories</u>	<u>Other Hanford Contractors</u>	<u>Other Hanford Contractors</u>
Richard Austin Tania Bates Bob Cathel Rene Catlow Richard Clinton Randal Fox Bailey Hardy Stuart Hildreth Sarah Horn Sasa Kosjerina Richard Lipinski Carlie Michaelis Stuart Mortensen Dave Richards Deborah Singleton Sean Sexton Dave Shea Phil Sheely Kat Thompson Jeff Westcott	Jeff Bramson Bob Bullock Frank Carleo Danielle Collins Jennifer Copeland Jeanne Elkins Ryan Fisher Jonathan Fullmer Leah Hare Steve Heninger John Hultman Julie Johanson Barry Lawrence Diane Leist Mitch Marrott Stewart McMahand Brian Mitcheltree Anthony Nagel Chris Plager Linda Petersen Brent Porter Dale Snyder Kat Thompson Wayne Toebe Daniel Turlington Britt Wilkins	Brett Barnes Michael Carlson Mike Demiter Kip George Jerry Cammann Garin Erickson Panfilo Gonzalez Jr. Dashia Huff Mark Kamberg Jon McKibben Saul Martinez Matt Mills Carly Nelson Michelle Oates Eric Pennala Jon Perry Christina Robison Christian Seavoy David Shaw John Skoglie Lana Strickling Greg Sullivan	(TBD) <u>DOE RL, ORP, WIPP</u> Duane Carter Al Farabee Tony McKarns	Bill Bachmann Dean Baker Scott Baker Paul Crane Tina Crane Ron Del Mar John Dorian Mark Ellefson Darrin Faulk Rob Gregory James Hamilton Andy Hobbs Stephanie Johansen Ryan Johnson Megan Lerchen Mike Lowery Michael Madison Terri Mars Cary Martin Grant McCalmant Steve Metzger Tony Miskho Tom Moon Chuck Mulkey Kirk Peterson	Dan Saueressig Joelle Moss Glen Triner Greg Varljen Robin Varljen Julie Waddoups Jay Warwick Ted Wooley

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TWO MINUTE TRAINING

SUBJECT: The “Derived from Rule”, the “Mixtures Rule”, and the “Contained-In Policy”

Q: What are the differences of the “Derived from Rule”, the “Mixtures Rule”, and the “Contained-in Policy”?

A: Per [40 CFR 261.3\(c\)\(2\)\(i\)](#), [[WAC 173-303-070\(2\)\(a\)](#)] the “Derived from Rule” states that any solid wastes generated from the treatment, storage, or disposal of a hazardous waste, including any sludge, spill residue, ash, emission control dust, or leachate is a hazardous waste. Like the “mixtures rule”, if the waste is derived from a characteristic waste and continues to exhibit any characteristics, the waste is a characteristic hazardous waste. If no characteristics are exhibited the waste is not a hazardous waste, however, LDR continues to apply. If the waste is derived from a listed hazardous waste, the waste is a listed hazardous waste unless delisted or exempted.

Per 40 CFR 261.3(a)(2)(iv) and (g), [[WAC 173-303-070\(2\)\(c\)](#)], the “Mixtures Rule” states that mixtures of solid waste and characteristic or listed hazardous wastes are hazardous wastes per specified criteria. If a characteristic hazardous waste is mixed with a solid waste and the resulting mixture exhibits any characteristics, the mixture is a characteristic hazardous waste. If the resulting mixture no longer exhibits any characteristics, the mixture is no longer a hazardous waste; however, land disposal restrictions (LDR) continue to apply. If a listed hazardous waste is mixed with a solid waste, the resulting mixture is a listed hazardous waste, except for certain Clean Water Act wastewater discharges, or if the mixture is delisted or exempted.

NOTE: In Washington State, the equivalent language to the Federal mixtures rule is scattered at WAC 173-303-070(2) [Designations], [-081\(3\)](#) [U and P listed wastes] and [-082\(3\)](#) [F and K listed wastes]. The WA regulations do not include relief for mixtures of dangerous waste with solid wastes that do not exhibit a characteristic. This means that even if the mixture does not exhibit a characteristic, the mixture remains a WA State dangerous waste, e.g., WA State-Only F003.

Then, per USEPA’s “Contained-in Policy”, promulgated in the November 30, 1998, Federal Register ([63 FR 65877](#)), environmental media, i.e., soils and ground or surface waters, contaminated with hazardous wastes are hazardous waste until the media no longer “contains” a hazardous waste. As with the “mixtures rule” and “derived from rule”, if characteristic wastes have contaminated environmental media and the media continues to exhibit any characteristics, the soils or waters are regulated as characteristic hazardous waste. If no characteristics are exhibited, the soils or waters may no longer be hazardous waste, however LDR continues to apply. If listed wastes have contaminated environmental media, the soil or waters are regulated as listed hazardous waste until it is determined that the media no longer contains a listed hazardous waste, or it is delisted or exempted. Note that the mixtures and derived from rules do not apply to environmental media since soils and waters are not solid waste, e.g., materials that have been used and due to contamination can no longer be used for their intended purpose.

SUMMARY:

The basic differences are:

- The “Derived from Rule” addresses hazardous wastes derived from treatment, storage, or disposal..
- The “Mixtures Rule” addresses mixtures of solid and hazardous wastes.
- The “Contained in Policy” addresses environmental media contaminated by hazardous wastes.

Pertinent WAC 173-303 and 40 CFR 261.3 regulations and an EPA memo ([RO 11434](#)) are attached to the e-mail. If you have any questions, please contact me at [Paul W Martin@rl.gov](mailto:Paul_W_Martin@rl.gov) or at (509) 376-6620.

FROM: Paul W. Martin

DATE: 10/7/2021

FILE: 2MT\2021\100721.rtf

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TWO MINUTE TRAINING – ATTACHMENT

SUBJECT: The “Derived from Rule”, the “Mixtures Rule”, and the “Contained-In Policy”

40 CFR 261.3 Definition of hazardous waste.

(c) Unless and until it meets the criteria of paragraph (d) of this section:

(1) A hazardous waste will remain a hazardous waste.

(2)

(i) Except as otherwise provided in paragraph (c)(2)(ii), (g) or (h) of this section, any solid waste generated from the treatment, storage, or disposal of a hazardous waste, including any sludge, spill residue, ash emission control dust, or leachate (but not including precipitation run-off) is a hazardous waste. (However, materials that are reclaimed from solid wastes and that are used beneficially are not solid wastes and hence are not hazardous wastes under this provision unless the reclaimed material is burned for energy recovery or used in a manner constituting disposal.)

(g)

(1) A hazardous waste that is listed in subpart D of this part solely because it exhibits one or more characteristics of ignitability as defined under §261.21, corrosivity as defined under §261.22, or reactivity as defined under §261.23 is not a hazardous waste, if the waste no longer exhibits any characteristic of hazardous waste identified in subpart C of this part.

[Note: The above wording does not include mixing with a solid waste. This listed waste exhibits no characteristics due to reasons other than mixing with a solid waste, e.g., natural absorption of moisture. PWMartin comment]

(2) The exclusion described in paragraph (g)(1) of this section also pertains to:

(i) Any **mixture** of a solid waste and a hazardous waste listed in subpart D of this part solely because it exhibits the characteristics of ignitability, corrosivity, or reactivity as regulated under paragraph (a)(2)(iv) of this section; and

[Note: The highlighted wording is not in the WA dangerous waste regulations. WA generators cannot mix solid waste with listed hazardous waste solely listed for ignitability, corrosivity or reactivity and then manage as nonregulated wastes. PWMartin comment]

(ii) Any solid waste generated from treating, storing, or disposing of a hazardous waste listed in subpart D of this part solely because it exhibits the characteristics of ignitability, corrosivity, or reactivity as regulated under paragraph (c)(2)(i) of this section.

(3) Wastes excluded under this section are subject to part 268 (LDR) of this chapter (as applicable), even if they no longer exhibit a characteristic at the point of land disposal.

TWO MINUTE TRAINING – ATTACHMENT

SUBJECT: The “Derived from Rule”, the “Mixtures Rule”, and the “Contained-In Policy”

WAC 173-303-070 Designation of dangerous waste.

- (2)
- (a) Except as provided at WAC 173-303-070(2)(c), once a material has been determined to be a dangerous waste, then any solid waste generated from the recycling, treatment, storage, or disposal of that dangerous waste is a dangerous waste unless and until:
- (c)
- (i) A dangerous waste that is listed in WAC 173-303-081(1) or 173-303-082(1) solely because it exhibits one or more characteristics of ignitability as defined under WAC 173-303-090(5), corrosivity as defined under WAC 173-303-090(6), or reactivity as defined under WAC 173-303-090(7) is not a dangerous waste, if the waste no longer exhibits any characteristic of dangerous waste identified in WAC 173-303-090 or any criteria identified in WAC 173-303-100.

[Note: The above wording does not include mixing with a solid waste. This listed waste exhibits no characteristics due to reasons other than mixing with a solid waste, e.g., extraterrestrial influences. PWMartin comment]

(ii) The exclusion described in (c)(i) of this subsection also pertains to:

- (A) Any solid waste generated from treating, storing, or disposing of a dangerous waste listed in WAC 173-303-081(1) or 173-303-082(1) solely because it exhibits the characteristics of ignitability, corrosivity, or reactivity as regulated under (a) and (b) of this section.
- (B) Wastes excluded under this section are subject to 40 CFR Part 268, which is incorporated by reference at WAC 173-303-140 (2)(a) (as applicable), even if they no longer exhibit a characteristic at the point of land disposal.

WAC 173-303-081 Discarded chemical products. [P and U listed dangerous wastes]

(3) Dangerous waste numbers and mixtures. A waste that has been designated as a discarded chemical product dangerous waste must be assigned the dangerous waste number or numbers listed in WAC 173-303-9903 next to the generic chemical or chemicals that caused the waste to be designated. A mixture of a solid waste with a waste that would be designated as a discarded chemical product under this section must be designated. The mixture designation is the same as the designation for the discarded chemical product that was mixed with the solid waste unless it has been excluded under WAC 173-303-070 (2)(c). For example, a mixture containing 2.2 lbs. (1 kg) of Aldrin (dangerous waste number P004, DW designation, QEL of 2.2 lbs.) and 22 lbs. (10 kg) of a solid waste, would be designated DW, and identified as acute hazardous waste. The mixture would have the dangerous waste number P004.

WAC 173-303-082 Dangerous waste sources. [F and K listed dangerous waste]

(3) Care should be taken in the proper designation of these wastes and of mixtures of these wastes and solid wastes. A mixture of a solid waste with a waste that would be designated as a dangerous waste source under this section must be designated as a dangerous waste source unless it has been excluded under WAC 173-303-070(2)(c). The mixture has the same designation (DW), and the same dangerous waste number as the dangerous waste source which was mixed with the solid waste.

TWO MINUTE TRAINING – ATTACHMENT

SUBJECT: The "Derived from Rule", the "Mixtures Rule", and the "Contained-In Policy"

9441.1989(30)

United States Environmental Protection Agency
Washington, D.C. 20460
Office of Solid Waste and Emergency Response

June 19, 1989

Mr. Thomas C. Jorling
Commissioner
Department of Environmental
Conservation
State of New York
Albany, New York 12233-1010

Dear Mr. Jorling:

I am writing in response to your letter of May 5, 1989, in which you ask numerous questions concerning the regulatory status, under the Resource Conservation and Recovery Act (RCRA), of environmental media (ground water, soil, and sediment) contaminated with RCRA-listed hazardous waste.

As you point out in your letter, it is correct that the Agency's "contained-in" interpretation is that contaminated environmental media must be managed as if they were hazardous wastes until they no longer contain the listed waste, or are delisted. This leads to the critical question of when an environmental medium contaminated by listed hazardous waste ceases to be a listed hazardous waste. In your letter, you discuss three possible answers (based on previous EPA positions and documents) which you believe address this question, and request the Agency to clarify its interpretation. Each of these is discussed below.

The first possible answer you cite would be that the contaminated media would be a hazardous waste unless and until it is delisted, based on the "mixture" and "derived-from" rules. As you correctly state in your letter, a waste that meets a listing description due to the application of either of these rules remains a listed hazardous waste until it is delisted. However, these two rules do not pertain to contaminated environmental media. Under our regulations, contaminated media are not considered solid wastes in the sense of being abandoned, recycled, or inherently waste-like as those terms are defined in the regulations. Therefore, contaminated environmental media cannot be considered a hazardous waste via the "mixture" rule (i.e., to have a hazardous waste mixture, a hazardous waste must be mixed with a solid waste per 40 CFR 261.3(a)(2)(iv)). Similarly, the "derived-from" rule does not apply to contaminated media. Our basis for stating that contaminated environmental media must be managed as hazardous wastes is that they "contain" listed hazardous waste. These environmental media must be managed as hazardous waste because, and only as long as, they "contain" a listed hazardous waste, (i.e., until decontaminated).

The second possibility you mention is that environmental media contaminated with a RCRA listed waste no longer have to be managed as a hazardous waste if the hazardous constituents are completely removed by treatment. This is consistent with the Agency's "contained-in" interpretation and represents the Agency's current policy.

FROM: Paul W. Martin

DATE: 10/7/2021

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The third possibility you discuss comes from Sylvia Lowrance's January 24, 1989, memorandum that you cited in your letter. This memorandum indicates that OSW has not issued any definitive guidance as to when, or at what levels, environmental media contaminated with listed hazardous waste are no longer considered to contain that hazardous waste. It also states that until such definitive guidance is issued, the Regions may determine these levels on a case-specific basis. Where this determination involves an authorized State, such as New York, our policy is that the State may also make such a determination.

Related to such a determination, you ask whether a risk assessment approach that addressed the public health and environmental impacts of hazardous constituents remaining in treatment residuals would be acceptable. This approach would be acceptable for contaminated media, but would not be acceptable for "derived-from" wastes under our current rules. Additionally, consistent with the statute, you could substitute more stringent standards or criteria for contaminated environmental media than those recommended by the Federal EPA if you determined it to be appropriate.

The Agency is currently involved in a rulemaking effort directed at setting de minimis levels for hazardous constituents below which eligible listed wastes, treatment residuals from those wastes, and environmental media contaminated with those listed wastes would no longer have to be managed as hazardous wastes. The approach being contemplated in the De Minimis program would be similar to that used in the proposed RCRA Clean Closure Guidance in terms of the exposure scenario (direct ingestion), the management scenario (not in a waste management unit), and the levels (primarily health-based).

Your final question related to whether the "remove and decontaminate" procedure set forth in the March 19, 1987 Federal Register preamble to the conforming regulations on closing surface impoundments applies when making complete removal determinations for soil. These procedures do apply when one chooses to clean close a hazardous waste surface impoundment by removing the waste. The preamble language states that the Agency interprets the term "remove" and "decontaminate" to mean removal of all wastes, liners, and/or leachate (including ground water) that pose a substantial present or potential threat to human health or the environment (52 FR 8796). Further discussion of these requirements is provided in a clarification notice published on March 28, 1988, (53 FR 1144) and in OSWER Policy Directive # 9476.00-18 on demonstrating equivalence of Part 265 clean closure with Part 264 requirements (copy enclosed).

I hope that this response will be helpful to you in establishing and implementing New York's hazardous waste policies on related issues. Should you have additional questions, please contact Bob Dellinger, Chief of the Waste Characterization Branch at (202) 475-8551.

Sincerely yours,

Jonathan Z. Cannon
Acting Assistant Administrator

RO 11434

FROM: Paul W. Martin

DATE: 10/7/2021

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