



COMMERCIAL CHEMICAL PRODUCT LISTINGS UNDER RCRA

JUNE 30, 2020 (REVISED 7-31-2020)

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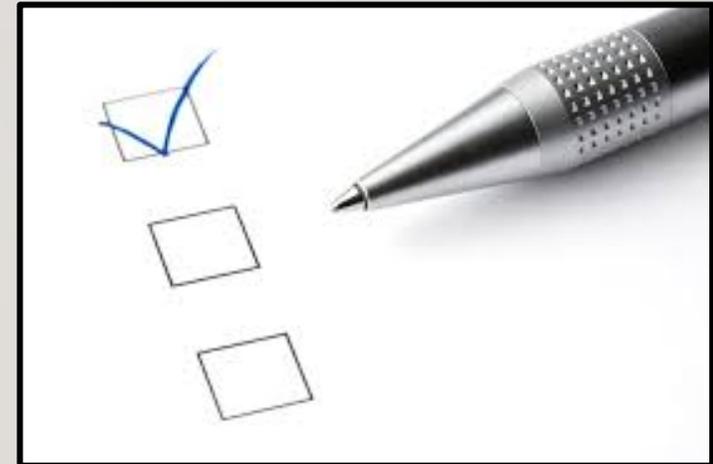
WHY ARE WE TALKING ABOUT COMMERCIAL CHEMICAL PRODUCTS (CCPs)?

- CCPs are different from other hazardous wastes:
 - Not generated from a manufacturing process.
 - Not always easily recognizable as wastes.
 - Often generated by non-traditional types of generators (e.g., virgin product suppliers and haulers, warehouses, institutions, offices, etc. ~ manufacturing facilities).
- Present unique challenges:
 - The scope of the U and P listings is confusing/complicated.
 - Hazardous waste determinations can be tricky.
 - Point of generation can be difficult to determine.
 - Present practical issues with identification and proper management.



TOPICS WE WILL COVER

- How CCPs fit in to the definition of solid and hazardous waste.
 - When are they regulated?
 - When are they exempt?
- What materials are and are not CCPs.
- Important policy interpretations regarding CCPs.
- Note: this presentation reflects the federal rules. State rules may be different in some respects.



Definition of Solid Waste

A material is a solid waste* if it is discarded.
[40 CFR 261.2(a)(1)]

A material is discarded if it is abandoned, recycled, inherently waste-like, or a military munition.
[40 CFR 261.1(a)(2)]

A material is abandoned if it is:

- Disposed of;
- Burned or incinerated;
- “Accumulated, Stored or Treated ... before or in Lieu of Being ... Disposed of, burned or incinerated;” or,
- Sham Recycled.

[40 CFR 261.2(b)]

A material is recycled if it is used, reused, or reclaimed.
[40 CFR 261.1(c)(7)]

Status of particular types of recycling varies for different types of secondary materials:

- Use Constituting Disposal.
- Burning for Energy Recovery.
- Reclamation. [40 CFR 161.1(c)(4)]
- Speculative Accumulation. [40 CFR 261.1(c)(8)]

[40 CFR 261.2(c) and Table 1]

Inherently Waste-like

A Military Munition

A solid waste is a hazardous waste if: (1) It is not excluded under §261.4; and (2) It exhibits any of the characteristics of hazardous waste or is listed in §§261.31 – 261.33. [40 CFR 261.3(a)]

*Solid waste only for the purposes of determining if a material is a hazardous waste. Has no bearing on applicability of state or federal solid waste regulations.

	Use constituting disposal (§261.2(c)(1))	Energy recovery/fuel (§261.2(c)(2))	Reclamation (§261.2(c)(3)), except as provided in §§261.4(a)(17), 261.4(a)(23), 261.4(a)(24) or 261.4(a)(27)	Speculative accumulation (§261.2(c)(4))
	1	2	3	4
Spent Materials	(*)	(*)	(*)	(*)
Sludges (listed in 40 CFR Part 261.31 or 261.32)	(*)	(*)	(*)	(*)
Sludges exhibiting a characteristic of hazardous waste	(*)	(*)	-	(*)
By-products (listed in 40 CFR 261.31 or 261.32)	(*)	(*)	(*)	(*)
By-products exhibiting a characteristic of hazardous waste	(*)	(*)	-	(*)
Commercial chemical products listed in 40 CFR 261.33	(*)	(*)	-	-
Scrap metal that is not excluded under 40 CFR 261.4(a)(13)	(*)	(*)	(*)	(*)

NOTE: The terms "spent materials," "sludges," "by-products," and "scrap metal" and "processed scrap metal" are defined in §261.1.

40 CFR 261.2 Table I:

- CCPs are SW (*) when recycled by being used in a manner constituting disposal, and when being burned for energy recovery or fuel blended.
- CCPs are not SW (-) when recycled by being reclaimed or speculatively accumulated.
- Table refers only to CCPs "listed in 40 CFR 261.33." However, characteristically hazardous CCPs are regulated the same way ([ROL 11713](#), [50 FR 14219](#)).
- The term "commercial chemical product" is not defined in §261.1, but in §261.33.

SOOO... WHICH CCPs ARE SOLID AND HAZARDOUS WASTES?

- CCPs are solid waste when they are:
 - Abandoned.
 - Disposed of.
 - Burned or incinerated.
 - Accumulated, stored, or treated before or in lieu of being disposed of, burned or incinerated.
 - Recycled (use constituting disposal and burning for energy recovery only).
 - Sham recycled.
- Not solid waste when they are:
 - Recycled via reclamation or speculative accumulation.
 - Used or reused.
- If a CCP is a solid waste and characteristic or listed – hazardous waste.

40 CFR 261.33 – THE U AND P LISTS

- [40 CFR 261.33](#) – title of section: “Commercial chemical products, off-specification species, container residues, and spill residues thereof.”
- Intro paragraph: clarifies that CCPs are HW when they are:
 - Discarded or intended to be discarded as described in §261.2(a)(2)(i);
 - Mixed with waste oil or used oil or other material and applied to the land for dust suppression or road treatment;
 - Otherwise applied to the land in lieu of their original intended use;
 - Contained in products that are applied to the land in lieu of their original intended use; or,
 - Are produced for use as (or as a component of) a fuel, distributed for use as a fuel, or burned as a fuel.
- Compare the above vs. what 40 CFR 261.2 said. This is more specific.



40 CFR 261.33 – CCPs AND OFF-SPEC CCPs

- 40 CFR 261.33(a): listed CCPs includes any “commercial chemical product, or manufacturing chemical intermediate having the generic name listed in paragraph (e) or (f).”
 - Paragraph (e) is for acute CCPs (P-listed). ~ 200 P listings.
 - Acute wastes are more highly regulated than non-acute wastes.
 - Generator category calculation, satellite accumulation limit, empty container management, etc. (ROL [14827](#), [14875](#)).
 - Paragraph (f) is for non-acute CCPs (U-listed). ~ 400 U listings.
- 40 CFR 261.33(b): listed CCPs also include any “off-specification commercial chemical product or manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in paragraph (e) or (f) of this section.”





40 CFR 261.33 – CONTAINER RESIDUES

- 40 CFR 261.33(c): listed CCPs also include any “residue remaining in a container or in an inner liner removed from a container that has held any commercial chemical product or manufacturing chemical intermediate having the generic name listed in paragraphs (e) or (f) of this section, unless the container is empty as defined in §261.7(b) or §266.507 of this chapter.”
- 40 CFR 261.33(c) - Comment: “Unless the residue is being beneficially used or reused, or legitimately recycled or reclaimed; or being accumulated, stored, transported or treated prior to such use, re-use, recycling or reclamation, EPA considers the residue to be intended for discard, and thus, a hazardous waste.”

40 CFR 261.33 – SPILL RESIDUES



- 40 CFR 261.33(d): listed CCPS also include “any residue or contaminated soil, water or other debris resulting from the cleanup of a spill into or on any land or water of any commercial chemical product or manufacturing chemical intermediate having the generic name listed in paragraph (e) or (f) of this section, or any residue or contaminated soil, water or other debris resulting from the cleanup of a spill, into or on any land or water, of any off-specification chemical product and manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in paragraph (e) or (f) of this section.”

40 CFR 261.33 – IMPORTANT CLARIFICATION ABOUT THE SCOPE OF CCPs



- 40 CFR 261.33(d) - Comment: “The phrase ‘commercial chemical product or manufacturing chemical intermediate having the generic name listed in ...’ refers to a chemical substance which is manufactured or formulated for commercial or manufacturing use which consists of the commercially pure grade of the chemical, any technical grades of the chemical that are produced or marketed, and all formulations in which the chemical is the sole active ingredient. It does not refer to a material, such as a manufacturing process waste, that contains any of the substances listed in paragraph (e) or (f). Where a manufacturing process waste is deemed to be a hazardous waste because it contains a substance listed in paragraph (e) or (f), such waste will be listed in either §261.31 or §261.32 or will be identified as a hazardous waste by the characteristics set forth in subpart C of this part.”

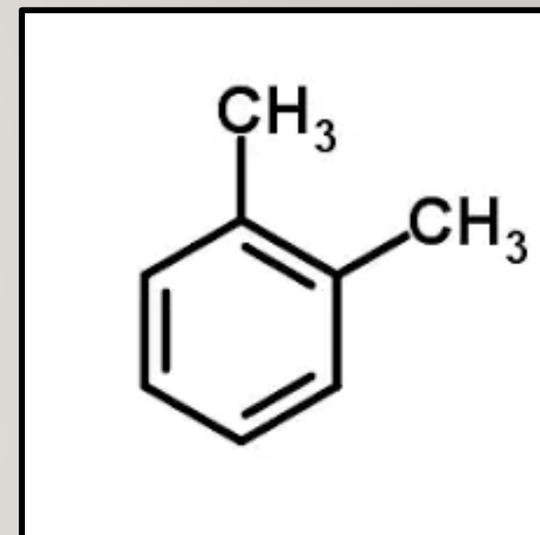
SOLE ACTIVE INGREDIENT TEST



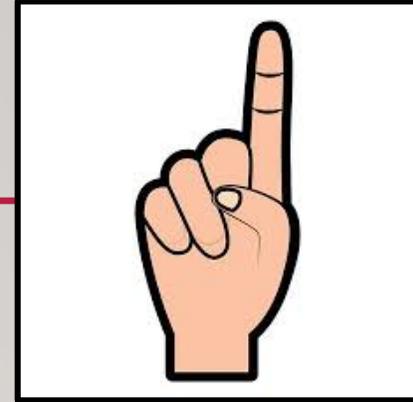
- Product with > 1 active ingredient is not a U- or P-listed CCP waste (ROL [13530](#)).
- Still “sole active ingredient” if the product is diluted for use, e.g., lab standards, pesticides (ROL [11021](#), [11523](#)).
- “Sole active ingredient” does not include ingredients that do not contribute to the overall functioning of the product, such as propellants, diluents, preservatives, etc. (ROL, [11405](#)).
- Paint wastes containing U-listed solvents are not U waste (ROL [11180](#), [11349](#), [11513](#)).
- Fertilizer product that includes a U- or P-listed pesticide or herbicide is not a CCP HW because the fertilizer is also an active ingredient (ROL [14820](#)).

ABOUT CAS NUMBERS

- Chemical Abstracts Service (CAS) Numbers are very important:
 - All but a few of the U- and P-listed compounds have one.
 - CAS number makes searching for the EPA waste code easier. Hint: search the U and P lists [online](#).
 - Things to remember about CAS Numbers and the U and P listings:
 - Some chemical compounds have more than one CAS number.
 - Some chemical are sold under trade names ~ chemical name.
 - MSDS or technical data sheets can help identify ingredients and CAS number(s).
 - EPA has said that the generic chemical names in the U and P lists determine applicability of the listings, not the CAS numbers (ROL [11687](#), [14175](#)).



BUT WAIT – THERE’S ONE MORE TYPE OF CCP!



- Usually F- and K-listed wastes do not include unused products, but there’s one exception.
- F027: Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. (This listing does not include formulations containing Hexachlorophene synthesized from prepurified 2,4,5-trichlorophenol as the sole component.)
- Primarily applies to unused pesticides.
- Not likely to come up often, as these pesticides have largely been banned in the USA for decades.
- Old stocks of it might be hanging around.

WHAT MATERIALS ARE NOT CCP HAZARDOUS WASTES?



- Any material that has been used.
 - Spent materials (solvents, etc.).
 - Materials that have been used in their normal manner – applied pesticides (ROL [11182](#), [12238](#), [11535](#)), biological specimens containing formaldehyde preservative (ROL [11076](#))
- Process wastes that contain U- and P-listed compounds (ROL [12024](#)).
 - Could be characteristic HW or F/K-listed, however.
- Products that contain more than one active ingredient (fails sole active ingredient test).
- Discarded products that contain more than one U- or P-listed constituent.
 - Note: mixtures of different U- and P- listed CCP HWs remain HW, and carry all applicable U and P waste codes.

USE-REUSE EXEMPTION



- 40 CFR 261.2(e).
- Applies to materials that are:
 - Used or reused as ingredients in an industrial process to make a product, provided the materials are not being reclaimed; or
 - Used or reused as effective substitutes for commercial products; or
 - Returned to the original process from which they are generated, without first being reclaimed or land disposed....
- Subject to:
 - Documentation of claims (40 CFR 261.2(f)), and
 - Sham recycling and legitimacy criteria provisions of the DSW Rule.

FUEL-TO-FUEL EXEMPTION - 40 CFR 261.2(c)(2)(ii).

- Normally CCPs that are burned for energy recovery are solid wastes.
- The FTF provision exempts materials that are burned for energy recovery or contained in fuels, if they are themselves fuels.
 - Off-spec fuel (e.g., “bad” gasoline) sent for fuel blending.
 - Fuel tank bottoms sent for fuel blending.
 - Fuel/water mixtures sent for fuel blending.
 - Aerosol can propellants captured and burned for energy recovery (ROL [11717](#)).
- Must be burned for energy recovery, not incinerated (ROL [12773](#)).
- If off-spec fuel is legitimately reclaimed, it is not a solid under Table I, so don't need to invoke the FTF exemption (ROL [11615](#), [14503](#), [14883](#)).



DETERMINING THE POINT OF GENERATION

- EPA has said that CCPs become waste when a decision is made to discard them (ROL [12996](#), [13431](#)).
- CCPs are not subject to speculative accumulation.
- Does this mean all CCPs are exempt from regulation?
- Answer: No!
- Remember 40 CFR 261.2(b), which said that a waste is abandoned (discarded) if it is “accumulated, stored, or treated (but not recycled) before or in lieu of being abandoned by being disposed of, burned or incinerated.”
- Also, EPA has said if a generator claims they are going to reclaim a CCP, they must be able to demonstrate that it’s legitimately recyclable (ROL [11501](#), [13743](#)).

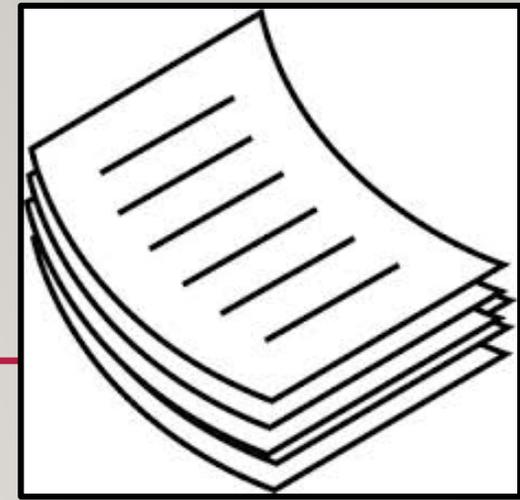


POINT OF GENERATION – CASE STUDY



- Paint locker w/ hundreds of gallons of paint found during an inspection.
- Generator claimed not HW, but virgin product.
- However:
 - Had no use for the paint (had shut down their paint line).
 - Had made no arrangements to use, reuse or recycle it.
 - Much of the product was old and unusable (some decades old).
 - DEEP determined they were “accumulating, storing, or treating in lieu of disposing” as per §261.2(b).
 - They were cited for HW violations.

DOCUMENTATION OF CLAIMS



- 40 CFR 261.2(f).
- “Respondents in actions to enforce ... RCRA” claiming that a material is not a solid waste must show there is a known market or disposition and that they meet the terms of the exclusion or exemption. In particular:
 - Provide appropriate documentation supporting their claim (e.g. , recycling contract, shipping records to recyclers, etc.).
 - O/O of recycling facility must show they have the necessary equipment to recycle it.
- CT DEEP asks for documentation during inspection. If it is inadequate, we will cite a violation of 261.2(f).

SHAM RECYCLING



- 40 CFR 261.2(g) – if sham recycling, it’s a solid waste.
- Added with the 2008 DSW Rule. Amended in 2015 and 2018. Not yet applicable in CT.
- References legitimacy criteria in 40 CFR 260.43:
 - Material must provide a useful contribution to the recycling process.
 - The recycling process must produce a valuable product or intermediate.
 - The generator and the recycler must manage the hazardous secondary material as a valuable commodity.
 - Must consider “toxics along for the ride.”
- Past guidance about the legitimacy of recycling still applies, such as the 4/26/89 [“Lowrance Memo”](#) and others.

LET'S TALK ABOUT SPILLS



- EPA policy interpretations indicate spilled CCPs are generally SW and HW as soon as the release occurs (ROL [I3568](#), [I4650](#)).
- Where the spill occurs doesn't matter. It could be outdoors, or in a warehouse (ROL [I1161](#), [I3335](#)).
- If the CCP is reclaimed from the spill residue, it is exempt. However, the generator has the burden of proving that the residue is recyclable in order for it to be exempt (ROL [I3743](#)). EPA presumes spills to be discarded unless documented otherwise.
- CCPs spilled prior to the effective date of RCRA don't become HW until they are removed from storage or disposal – e.g., dug up (ROL [I2090](#)).

“CONTAINED-IN” WASTES



- EPA “contained-in” principle: a material that contains a listed hazardous waste is itself a listed hazardous waste.
 - This principle applies to materials that contain U- and P-listed HW.
 - Applies to environmental media, but also spill-cleanup residues (absorbent, booms, pads), used wipers, etc.
- EPA “contained-in policy.”
 - Only applies to contaminated environmental media (soil, sediment, groundwater, surface water) – not to other “contained-in” wastes.
 - Exempt if concentrations are low enough that they can be deemed to no longer contain listed hazardous waste.
 - DEEP has a [contained in policy that is posted on the DEEP website](#).

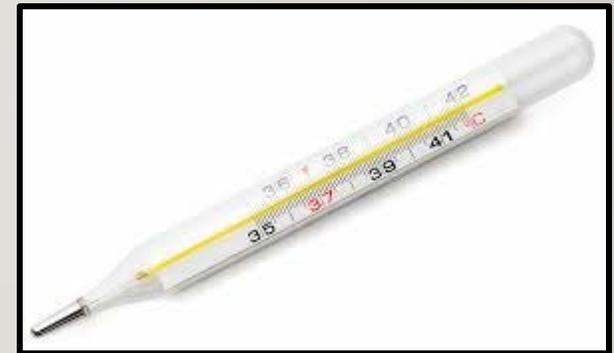
CONTAINER RINSATES



- Rinsates from non-empty containers are fair game (see 40 CFR 261.7):
 - If the CCP is listed, the rinsate is listed (ROL [I1374](#)).
 - If the CCP is characteristic, the rinsate is hazardous if it is characteristically hazardous (ROL [I4708](#)).
- Rinsates from triple-rinsing P-listed containers are P-listed waste (ROL [I2299](#), [I2455](#), [I2917](#)).
- Rinsates from RCRA-empty containers
 - Rinsates are newly-generated wastes and can be hazardous if characteristic (ROL [I4708](#)).
 - Listings do not carry through.

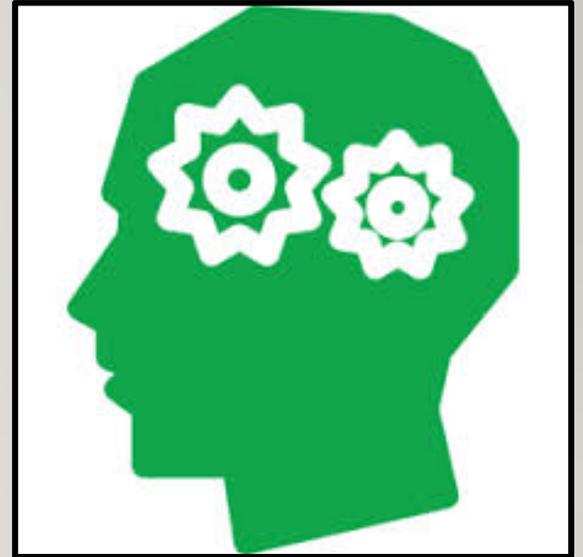
MANUFACTURED ARTICLES

- EPA’s interpretations about whether “manufactured articles” are CCPs has varied over the years.
- Some interpretations imply that manufactured articles are not CCPs (ROL [I3310](#), [I4817](#), [I4850](#)).
- Some imply they are CCPs (ROL [I1584](#), [I1666](#), [I1726](#), [I2120](#), [I3490](#), [I3356](#), [I4012](#), [I4468](#), [I4887](#), [I4920](#)).
 - Examples: batteries, thermometers, thermostats, fluorescent lamps, printed circuit boards, airbags.
- DEEP believes it is best not to apply a “manufactured article” test to determining if a material is a CCP.



CLOSING THOUGHTS

- Don't assume that just because a material doesn't look like a hazardous waste means that it isn't a hazardous waste.
- Be on the lookout for CCPs:
 - Virgin product storage areas.
 - Labs.
 - Returned products.
 - Discontinued processes, unused portions of buildings.
- Don't fall into the trap of "it's an unused product, so it can't be a waste."
- Document legitimate use/reuse or recycling.
- Consider the possibility of sham recycling.



RESOURCES

- RCRA Online: <https://rcrapublic.epa.gov/rcraonline/>
- EPA Checklist to determine if a CCP is a solid or hazardous waste: <https://rcrapublic.epa.gov/files/14837.pdf>
- US EPA, “[A User-Friendly Reference Document for Hazardous Waste Listings](#)”
- [RCRA Training Module on HW Identification](#)
- [DEEP list of RCRA Online documents pertaining to commercial chemical products.](#)



QUESTIONS?



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