

Notes

**NEWMOA Hazardous Waste Conference Calls  
March 27, 2018 & April 17, 2018**

**Topic: Management of Remediation Waste**

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**Participants in March 27 call:** CT DEEP (6 people); ME DEP (2 people); Mass DEP (3 people); NH DES (7 people); NJ DEP (9 people); NYS DEC (15 people); RI DEM (8 person); VT DEC (5 people); EPA Region 1 (4 people); EPA HQs (1 person); NEWMOA (1 person)

**Participants in April 17 call:** CT DEEP (3 people); ME DEP (1 person); Mass DEP (4 people); NH DES (5 people); NJ DEP (4 people); NYS DEC (8 people); VT DEC (4 people); EPA Region 1 (5 people); NEWMOA (1 person)

Call leader: CT DEEP

Notes prepared by Mark Dennen, David Wright, and Terri Goldberg. Answers for Rhode Island added after the call on April 17.

**Definition**

In this context, "remediation waste" refers to contaminated environmental media (i.e., soil, sediment, and water). It does not refer to other waste streams such as personal protective equipment and equipment decontamination wastes. In the following notes, "CICO" refers to contained-in/contained-out determinations.

## **Introduction**

Site remediation and RCRA staff are often differently trained. Remediation staff typically have more of a geology background. Sometimes site remediation staff tend to focus on getting the waste out of the ground and figuring out how to deal with it later. Better to consider RCRA issues from the start as they can drive cleanups. RCRA does not want to get in the way, but must ensure proper management, especially help folks avoid unnecessary costs and delays from permits and other requirements.

CT DEEP is considering full day training for DEEP Remediation staff and licensed environmental professionals (LEPs) focusing on remediation wastes, and covering topics such as:

- Contained-in policy - established by EPA; covers contaminated media that contains listed hazardous waste (HW) and is considered hazardous when disposed, but states can come up with policies to determine when concentrations are low enough they are no longer considered to contain listed hazardous wastes.
- Area of Contamination (AOC) Policy - contiguous area of contamination within which one can move soil or media around without triggering land disposal restriction (LDR) requirements.
- Point of generation- a critical issue, since it dictates when wastes become subject to hazardous waste requirements. Particularly important is in-situ vs. ex-situ treatment since in-situ can often be performed without triggering hazardous waste requirements, whereas ex-situ does.
- Issues to do with date that the site became contaminated: in particular, whether the contamination occurred before or after the effective date of RCRA.
- Specific circumstances of treatment, including windrows, tanks and containers, other units, and treatment by third parties.

CT is interested in hearing about where states are with coordination and communications with agency staff and remediation professionals regarding the management of remediation waste.

## **Questions & Responses**

1. Does your state have a contained-in policy? If so, do you require remediation waste coming into your state for disposal that has been “contained out” in another state to meet the conditions of your contained-in policy prior to disposal?

CT: Yes; has contained-in policy based on numerical standards from our state remediation regulations (on the DEEP website). In some cases, LDRs still apply, especially if the contamination occurred after the effective date of LDRs, or if the contaminated media was “contained-out” after it was “generated.” Some states require review for Connecticut “contained-out” wastes coming into their state.

ME: Coordination between RCRA and remediation; recently placed in cleanup program division; paying more attention to RCRA requirements; corrective action program combined with remediation; formulating a revised contained-in policy; falls to if remediation listed waste is greater than the contaminated media; exceeds commercial

worker scenario; handle listed hazardous waste (HW); contained-out for soils.  
Improvement in coordination due to restructuring of programs.

- MA: Yes, has contained-in policy, which was developed by the waste site cleanup (WSC) program in coordination with HW program. HW program coordinates contained-in determinations with the WSC program; contained-in goes to WSC for 21-day presumptive approval. If WSC program cannot make a determination, rather than 21-day presumptive approval, goes to the Central Office for approval/decision.
- NH: Does coordinate HW Management and Remediation Bureaus, RCRA program conducts training for WSC Bureau. Communications between the two groups has improved. For mixtures, NH definition is more stringent than EPA. Do have contained-in policy and refer to in all letters; waste shipped to the large solid waste landfill in the State. Turnkey asks for contained-out determinations. The other landfill does not.
- NJ: Not authorized state for corrective action; adopted by reference; yes, per EPA policy; contained-in and contained-out values based on human health, residential properties; GW health based.
- NY: Yes, has a “contained-in” determination policy. Environmental media contaminated by listed hazardous waste on or after the effective date of the waste’s LDR must meet these standards before being subject to a “contained-in” determination. Will concur with other state’s “contained-in” coming into NY state.
- RI: Contained in policy – RI does recognize contained-in determinations based on EPA rules. Comparison is made to site remediation regulations.
- VT: Has a draft contained-in policy, has been in draft form for a long time. Recently have new site management regulations (first regulations, prior used guidance.) Looking at minor revisions to the rule soon, may encompass contained-in and contained-out (CICO). Has one facility that takes special waste (Coventry) – analytical requirements to make sure is not HW.

## 2. Does your state follow the EPA “Area of Contamination” (AOC) Policy?

- CT: Yes. CT’s AOC policy follows the EPA policy, but only applies to normal earth-working, but not windrows, ex-situ treatment, or staging piles. Discourage staging piles, have not yet picked up the portion of the federal post-closure rule allowing staging piles, but plan to do so in the next federal reg update.
- ME: Formulating revised contained-in policy, based on listed waste risk-based scenario. Not talked about AOC policy; have looked at in the past.
- MA: Yes, MA follows AOC policy, but they have their own definition in the regulations.
- NH: Yes, follow AOC, defer to EPA.
- NJ: AOC based on EPA policy. On enforcement side have had a series of enforcement cases relative to AOC policy. There is an issue with licensed site professionals not understanding RCRA and sending things to HW landfill that does not meet LDR. AOC all contiguous, under WSC does not have to be contiguous.
- NY: AOC follow EPA policy as part of active management of the site; when contamination occurred; tell people they have to let DEC know in order to use contained- in policy.

RI: Area of Contamination Policy – RI allows movement in a contiguous area of contamination.

VT: No AOC policy in VT yet, but follow EPA in a sense in waste site clean-up program. Statutory provision allows remedial action without a RCRA permit, so the RPMs have likely used this policy.

3. When does your state consider hazardous remediation waste to be generated and therefore subject to RCRA requirements?

CT: Waste is generated based on the date that the contamination occurred; if pre-RCRA, it's not waste until it is dug up and removed out of the AOC. If post-RCRA, it was already a waste at the time the contamination occurred and remains a waste thereafter. Waste is generated based on when generated; if pre-RCRA not a waste until it is dug up and removed out of AOC.

ME: Handles similar to CT – when material was generated was not subjected to RCRA is subject to RCRA when excavated; listed then spilled after RCRA – contained-in or contained-out. If it is not clear when contamination occurred, try to figure out and after good faith effort, not listed waste.

MA: Generated when placed in container or tank.

NH: Consider generated when excavated if pre-1980. If before that, generated after it leaves ACO, would consider waste that is listed waste even when in the ground. Date matters and makes a big difference.

NJ: Reviews, makes sure all submissions are provided to EPA Region 2; responsible parties that generated the waste, profile waste.

NY: When the waste is excavated or removed from the site.

RI: If site was contaminated pre-RCRA, then listing does not come into play.

VT: Generation is when removed from the site.

4. In characterizing remediation waste, how would your state handle the following scenarios:

- a. Environmental media became contaminated with listed waste *before* vs. *after* the effective date of RCRA for the waste in question (typically November 19, 1980, but sometimes later for newly-listed wastes).

CT: Remediation wastes – not considered hazardous prior to excavation if the contamination occurred before the effective date of RCRA; considered hazardous prior to excavation if contamination occurred after effective date of RCRA. However, if due diligence investigation indicates that it is not clear when the contamination occurred, do not need to assume waste is hazardous prior to excavation.

Remediation wastes - before vs. after effective date of RCRA. If not clear when contamination occurred or if the site produced the HW, do not need to assume waste is listed.

ME: In-situ - ok without a permit.

MA: Before versus after effective date is not a relevant fact, listing applies regardless of date. Case-by-case determination based on preponderance of evidence. Do not default to assume it does not come from a listed source.

NH: Not clear – EPA guidance airing toward site; do due diligence, good faith effort; most sites barely above detection limit for PCE and TCE, not HW.

NY: Environmental media contaminated by listed hazardous waste on or after the effective date of the waste’s LDR must meet these standards before being subject to a “contained-in” determination.

RI: Issues to do with date site became contaminated - before or after RCRA.

VT: Have never looked at the date as a factor. If known listed, then treat as listed, otherwise just look at TCLP. Although at some drycleaners have said is listed waste.

- b. It is not clear when contamination with listed waste occurred (e.g., there is no documentation of a spill or other release).

CT: See last sentence of answer to a. above.

ME: Ex-situ treatment on ground is acceptable.

MA: Does not matter when contamination occurred; listing applies regardless.

VT: See above.

NY: Listing applies regardless.

- c. It is not clear whether or not the contamination is actually listed (e.g., chlorinated solvents are found, but there are no records that such solvents were ever used at the site).

CT: Use a similar rationale as for date that contamination occurred as described in the last sentence of a. above. That is, if due diligence investigation indicates that it is not clear whether or not the waste came from a listed source, there is no need to assume that it is a listed hazardous waste.

ME: Corrective action is within remediation program. Material going into WWTP, exempted. Material in tubes would be hazardous waste.

MA: Case-by-case determination; will presume listed sources, logical conclusion even without documentation.

NY: Will presume listed sources, in order to use the “contained-in” determination.

VT: See above.

5. How does your state regulate the on-site treatment of environmental media? Specifically:

- In-situ treatment.
- Ex-situ treatment on the ground (e.g., windrows).
- Ex-situ treatment in tanks or containers.
- Ex-situ treatment in units other than tanks and containers.
- Treatment conducted by third parties (e.g. remediation contractors).

- Example: A site that borders a river had historic (pre-1980) releases of listed hazardous waste to the river that produced contaminated sediment. The contaminated sediment will be vacuum-dredged and pumped into a CWA-permitted wastewater treatment system. The sediment solids from this system will be sent to geotubes which are located in a large depression in the ground that is lined with a synthetic membrane for containment. Water that seeps out of the geotubes collects on the synthetic membrane liner, and is pumped back to the CWA-permitted wastewater treatment system. Solids accumulate in the geotubes for many months until they are sufficiently dewatered. At that time, the geotubes are cut up and shipped off-site for disposal at a hazardous waste landfill. (The concentrations of listed waste in the contaminated sediment are too high for it to be contained out.)

CT: In situ- allowed to occur with waste permits, as long as the contamination is pre-RCRA. In situ does not include windrows in the AOC, or other treatment that occurs above ground in the AOC. Ex situ allow on-site treatment in tanks and containers under CT's Generator Treatment in Accumulation Tanks and Containers policy. Any other type of treatment requires a RCRA permit, CAMU or TU. Require state permits for ex-situ treatment by third parties. Specific example: DEEP would say that the depression in the ground with the synthetic membrane liner is a surface impoundment (not a tank because it is not self-supporting and is made of earthen materials), and that operation of the impoundment including the treatment with the geotubes would require a permit, CAMU or TU. The point of generation of the waste is a little unclear but would occur prior to the geotubes being cut up and shipped off-site.

MA: In-situ-no, some ex-situ treatment allowed with liner, not treatment if moved around. Tanks and containers is a bright line subject to RCRA. Ex-situ other than tanks is treatment. Does not matter if conducted by third party. Specific example would defer to waste site cleanup program.

NH: In-situ is remediation bureau and treated in AOC or on-site; if RAP in place, stay out of it. RCRA section regulates when it comes off the site. Specific example needs to meet LDR, no difference with third parties. Ex-situ – not dealt with windrows; AOC and pre-1980 not permitted. Ex-situ tanks or containers in AOC, leave to remediation bureau. Ex-situ other than tanks and containers, HW would not step in, must meet LDR, working to help remediation bureau to understand. Does not see difference between responsible and third parties.

NY: In-situ and ex-situ depends on how big it is. Corrective action is part of both cleanup and waste programs. May need a permit for air, RCRA, water; follow RCRA policy; RCRA program trying to make sure contained-in policy is part of cleanup and incorporated at an early stage; hard to determine timeframe; try to make sure concurs with out-of-state site that is accepting the waste; use letter with specific information; contained-in a go as non-HW to particular sites.

RI: Corrective action occurs with remediation program. Treatment in-situ and ex-situ are permitted under the Remedial Approval Letter.

VT: These sites are handled by the remediation site program regulations rather than RCRA permitted.

- a. Not authorized for RAPs
- b. Remediation of Waste Policy
  - i. Principal: Environmental media is not solid waste, but contaminated with HW so is subject to regulation as a HW.
  - ii. Policy: No longer contains HW applies to contaminated media.

NH: Publicly-owned treatment works (POTW) exemption only applies to mixing with domestic sewerage.

CT: Says if NPDES permitted, then the final discharge meets the POTW exemption. But for the wastewater treatment unit exemption to apply, the unit must be a tank, and the POTW exemption could apply to the final discharge. Groundwater “pump and treat” system discharges to POTW are subject to pre-treatment permitting approvals in CT.

### **Additional Points**

CT: Emphasized that surface impoundments do not meet wastewater treatment unit exemption because this exemption is limited to treatment in tanks, and surface impoundments do not meet the definition of tanks in 40 CFR 260.10.

VT: One permitted solid waste landfill; do review of environmental waste media when contained-in determination is done; compare to draft contained-in policy.

ME: In the past, DEP has reviewed out-of-state determinations when notified; no notification or reporting requirements whether subject contained-in or contained-out policy.

EPA Region 1: EPA only makes CICO decisions in non-delegated states, open to discussions with the states if want us to. No issues.

Louisiana: Only state where CICO is codified. EPA saying can do such a rule, but no EPA authorization since EPA does not have a rule to authorize: This would be a “broader in scope” provision.

NH: Would like to do this, since current NH RCRA rules are a strict if mixed with HW is a HW.

NEWMOA: Discussing whether to add RCRA ARRAs training to the 101 WSC basics training for the waste site committee.

CT: Discussing such a training to environmental professionals group on CT, but would be OK if NEWMOA did the training instead. Should coordinate.

NJ: RCRA for LSRP professionals training is scheduled. Should coordinate.

Case Studies:

NH: Plating company – contained-out. HW sludge stabilized was ROD. Found out after press release that did not meet RCRA ARRAs.

CT: Another scenario of an electroplating remediation site. TCE contaminated soil of unknown source, below TCLP from 1950s to 1960s was successfully contained out. Hex chromium was also present and was assumed to be F006 waste by preponderance of the evidence. Wanted to treat using mobile ex-situ stabilization technology approved under the accumulation and treatment in containers and tanks exemption of a co-applicant (new owner). This treatment would be allowed without a permit, but since the treatment was ex-situ, the LDRs would attach at the point of excavation. As a result, if the treated soil met LDR standards then OK to ship to special waste landfill without manifest requirements, if not then ship to HW facility under manifest requirements, for additional treatment to meet LDRs prior to disposal on the land. Considered putting back on site instead of off-site special waste disposal but ran into CT dirty-dirt policies. CT allows ex-situ treatment of contaminated soil. NH does not allow CICO before material is excavated, so LDRs always attach. CT allows CICO based on soil borings, prior to excavation, so in some cases LDRs do not attach. NH has CICO on influent to POTW, after GWETS.

CT: At what point does sludge mixed with soil morph into constituents from sludge?

Another issue: PFAS contamination. Where can media be disposed? Solid waste facilities are reluctant to take it.

NH: Electroplating facilities now looking at sludges – must go the HW facility. Disposing AAAF from fire departments: Concerns with not notifying landfills; finding it in landfill leachate.

Are PFAS contaminated materials hazardous wastes anywhere?

VT: May be a hazardous waste

NY: It is a hazardous substance (6 NYCRR Part 597) and not a hazardous waste relative to RCRA. Our waste site cleanup/CERCLA regulations (6 NYCRR Part 375) define hazardous waste as including the list of hazardous substances. That provides us the authority to address PFOA and PFOS contamination under CERCLA, but those chemicals are not a hazardous waste relative to waste management and disposal.