RCRA Compliance at Cleanup Sites: Onsite Management of Remediation Waste

A NEWMOA Waste Site Cleanup Group Webinar

January 24, 2019
1:00 - 2:30 p.m.
Topics Covered in Previous Webinars

• Characterization of Contaminated Environmental Media (including listed waste).
  • Point of generation.
  • Generator responsibility to perform a hazardous waste determination.
  • Characteristic vs. listed hazardous waste.
  • “Contained in” principle for listed hazardous waste.
  • Exemptions for certain types of environmental media.

• Contained-In Policy.

• Area of Contamination (AOC) Policy.
Topics for Today’s Webinar

• On-Site Storage:
  • Types of units.
  • What’s allowed, what’s not allowed.

• On-Site Treatment.
  • Types of units.
  • Permit exemptions.
  • What’s allowed, what’s not allowed.

• Responsibility of the generator to comply with HW requirements.

• Other on-site waste management issues at cleanup sites.
“Area of Contamination” Policy

- **EPA policy** supported by most NEWMOA States (check w/ your state).
- AOC = a single, contiguous area of continuous contamination.
- Policy allows certain activities to occur within the AOC without triggering “generation” and the associated RCRA treatment and LDR requirements:
  - Consolidation of waste within the AOC.
  - In-situ treatment within the AOC.
- Does **not** cover:
  - Movement of waste outside the AOC.
  - Movement of waste between AOCs.
  - Ex-Situ treatment.
On-Site Storage of HW Media: What’s Allowed w/o a HW permit?

• Storage within the AOC under the AOC policy.
  • Utility trench interpretation. RO 11671
• Storage outside the AOC:
  • In containers or tanks under HW generator requirements. 40 CFR 262
    • Container are portable. Tanks are stationary. 40 CFR 260.10
    • Generator requirements: labeling/marking, condition, covered, etc.
    • Satellite containers. RO 11442
  • In “containment buildings” under HW generator requirements in §262, and special requirements in 40 CFR 265 Subpart DD.
  • HW rules do not allow generators to store HW media in any other type of units without a permit.
3 Types of Units Specific to RCRA Corrective Action Sites

- Require approval by EPA or an Authorized State.
- Typically approved via a RCRA permit, closure plan, order, or RAP.
- Approval specifies design, operating, and closure requirements.

   - Only allowed for “CAMU-eligible wastes.”
   - Can be approved for many different types of units for the storage or treatment of remediation waste.

2. Temporary Unit (TU). 40 CFR 264.553
   - Limited to tanks and containers used for the storage or treatment of remediation waste.
   - Can be approved for up to one year (extendable).
   • Used primarily for the storage of remediation wastes.
   • Also limited waste management activities:
     • Mixing, sizing, blending, and other physical operations.
     • But not treatment.
   • Cannot be used to store ignitable or reactive wastes.
   • Can be approved for up to two years (extendable).

   • For information about design, approval, etc., contact your State or EPA Corrective Action site lead.
On-Site Storage of HW Media: What’s **NOT** Allowed w/o a HW permit?

- Storage in ordinary waste piles outside of the AOC.
- Why not?
  - The HW media is not contained.
  - Exposed to sun, wind, rain - facilitates releases of the media and the HW constituents they contain.
  - Despite best efforts to cover them, waste piles tend to become exposed.
  - This is why waste piles are only allowed in special circumstances:
    - Under a RCRA Part B (TSDF) Permit.
    - An approved “Staging Pile” as described on prior slide.
- Geotubes are not a RCRA generator unit (i.e., a tank or ctr.).
  - They can be managed within a RCRA generator unit, however.
On-Site Treatment of HW Media: General Principles

• General rule: treatment of HW requires a HW permit.
  • However there are some exceptions.
• Even if treatment is allowed w/o a HW permit, other permit requirements may apply:
  • State permits (e.g., mobile soil treatment company).
  • Water permits (e.g., GW pump-and-treat system).
  • Air permits (e.g., soil venting through GAC filters).
On-Site Treatment of HW Media: What’s Allowed w/o a HW Permit?

- Treatment in-situ within the AOC.
  - Soil venting/GAC filtration.
  - Injection of bioremediation agents.
- Treatment in containers, tanks, or containment buildings under the “generator treatment” interpretation (check your state for applicability).  
  - Example: Soil stabilization in a roll-off container.
- Caution! Only chemical/physical treatment is allowed. Generators are not allowed to conduct thermal treatment (e.g., incineration, thermal desorption, etc.).
Treatment – What’s Allowed (Cont.)

- Wastewater Treatment Units and Elementary Neutralization Units. 40 CFR 270.1(c)(2)(v), 40 CFR 260.10 (definition)
  - WWTU must be a tank. ENU can be a container or a tank.
  - Example: GW pump-and-treat system operated under a CWA permit.
  - Caution! Does not exempt the entire treatment process or facility!
  - Note: Geotubes are not WWTUs in their own right. However, they can be managed with a WWTU (i.e., a tank).

- Corrective Action units (CAMUs & TUs only, not Staging Piles).
- Spill Response Actions. 40 CFR 270.1(c)(3)
- Emergency Permits. 40 CFR 270.61
On-Site Treatment of HW Media: What’s **NOT** Allowed w/o a HW permit?

- Treatment in waste piles outside the AOC (unless approved as a CAMU). Reasons:
  - It constitutes ex-situ treatment.
  - A waste pile is not a unit generators are allowed to operate without a permit.
  - Includes “Wind-rowing.”

- Thermal treatment (i.e., incineration or thermal desorption).
Contained-In Determinations: Timing is Everything

• Timing of “Contained-In” determinations is critical to applicability of RCRA requirements.

• If made **before** the point of generation:
  • RCRA storage and treatment requirements don’t apply.
  • LDR standards may or may not apply:
    • Do not apply if contamination is “pre-RCRA.”
    • Do apply if contamination is “post-RCRA.”

• If made **after** the point of generation:
  • RCRA storage and treatment requirements apply until determination is completed.
  • LDR standards do apply, regardless of date of contamination.
Responsibility for Compliance with HW Generator Requirements

• Generator is responsible for complying with all applicable HW generator requirements:
  • Hazardous waste determinations.
  • On-site storage/treatment.
  • Personnel training, emergency response, manifest, biennial report.

• Compliance is required beginning at the point of generation.

• “Generator” = “any person, by site, whose act or process produces hazardous waste identified or listed in part 261 of this chapter or whose act first causes a hazardous waste to become subject to regulation.” 40 CFR 260.10

• There can be multiple generators at a site (“co-generators”).
On-Site Management: Other Things to Think About

• Reuse of media as fill (on- or off-site) may be restricted.
• Contaminants other than HW:
  • PCBs, asbestos, non-HW chemicals. May be subject to:
    • EPA requirements other than RCRA (i.e., TSCA, NESHAPs); and/or
    • State requirements (e.g., “special waste”).
• Other types of waste generated at cleanup sites:
  • Remediation-derived waste that is not media (e.g., GAC and other types of filters, PPE, wastewaters, etc.).
  • Old product, lab chemicals, etc.
  • Contents of tanks, piping, ductwork.
  • Demolition waste.
RCRA Compliance Should Be an Integral Part of Site-Wide Remediation Project Management

- It’s tempting to focus on cleanup and worry about RCRA compliance later.
- Allows Law of Unintended Consequences to kick in:
  - Enforcement actions/penalties.
  - Unexpected need for approvals/permits.
  - Unnecessary delays and cost overruns.
- Opportunities to minimize disposal cost can be missed:
  - Timing of “Contained-in” determinations.
  - Contaminated soil management and staging.
  - In-situ vs. ex-situ treatment.
- Consider including a RCRA expert in the design team.
  - Could be in-house, or contracted out.
  - Consult with State/EPA.
Resources for Further Information

• Managing Remediation Waste Under RCRA
• Contained-In Policy
• RCRA Area of Contamination Policy
• Guidance for Remediation Waste Management at Resource Conservation and Recovery Act (RCRA) Corrective Action Sites
• EPA Guidance on CAMUs and TUs
• RCRA Online - EPA Policy letters and memoranda.
• State Agency RCRA & Site Cleanup web pages
Future NEWMOA Training on Remediation Waste Management

- Original in-person training provided in May/June 2019 in CT, MA, NH.
  - Available on [NEWMOA website](#) (see 1:15 p.m. time slot).
- Webinar #2 of 4: **“Area of Contamination” and “Contained-In” Policies** (11/13/2019).
- Today: Webinar #3 of 4 (slides, recording to be posted).
- Other ideas? Let us know!
Ross Bunnell, Senior Sanitary Engineer
DEEP Waste Engineering & Enforcement Division
79 Elm Street
Hartford, CT 06106-5127

Phone: (860) 424-3274
Email: ross.bunnell@ct.gov