

# 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/marketing, 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.

# Storage - What's Allowed (Cont.)



## 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.
1. **Corrective Action Management Unit (CAMU).** 40 CFR 264.552
    - 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).

## Storage - What's Allowed (Cont.)



3. Staging Pile. [40 CFR 264.554](#)
  - 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.

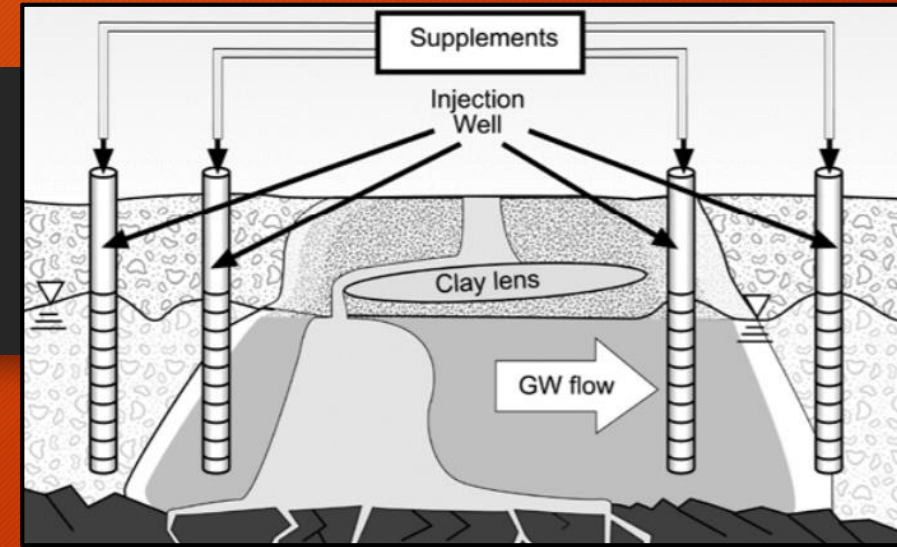


# On-Site Treatment of HW Media: General Principles



- 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). [RO 11209](#) [RO 14471](#) [RO 14662](#)
  - 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 #1 of 4: [Waste Characterization & Listed Hazardous Waste](#) (10/24/2019).
- Webinar #2 of 4: [“Area of Contamination” and “Contained-In” Policies](#) (11/13/2019).
- Today: Webinar #3 of 4 (slides, recording to be posted).
- Webinar #4 of 4: [Waste Treatment and Land Disposal Restrictions](#) (2/25/2019).
- Other ideas? Let us know!

# Questions?



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