

North Carolina Hazardous Waste Section's Guidelines
On the Use of Thermal Desorption for Generators Closure
For Soil Contaminated With Hazardous Waste

The following guidelines are minimum requirements set by the Division of Waste Management (Division) and developed by the Hazardous Waste Section (Section) to outline the procedures that must be followed in order to use a thermal desorption process for the treatment of soil containing hazardous waste without obtaining a RCRA permit.

The guidelines apply only to soil and not to any other environmental media, process waste stream debris or other material. These guidelines do not allow "open flame" desorption and the treatment of the contaminated soil must be through an indirect contact with the thermal source.

Before The Desorption Process:

- 1) Prior to the use of the Desorption Process to treat soil contaminated with hazardous waste an Assessment and Clean-up Plan (ACP) as described in the Section's Generator Closure Guidelines must be submitted to the appropriate Section within the Division of Waste Management (Division). The guidance document is available at <http://deq.nc.gov/about/divisions/waste-management/waste-management-permit-guidance/hazardous-waste-section-technical-assistance-education-guidance>
- 2) The soil must be adequately characterized to identify all constituents of concern including those that can be treated by thermal desorption and those that cannot (e.g., metals, non-volatile constituents) as specified in 40 CFR 268.42, adopted by reference at 15A NCAC 13A .0112.
- 3) Soil that contains constituents of concern that cannot be treated by thermal desorption, and exceed the levels specified in the Section's "Contained- in" Policy for Soil Contaminated with Listed Hazardous Waste, are not eligible to use thermal desorption technology and must be properly disposed of as a hazardous waste. The guidance document is available at <http://deq.nc.gov/about/divisions/waste-management/waste-management-permit-guidance/hazardous-waste-section-technical-assistance-education-guidance>
- 4) Soil that displays a characteristic of hazardous waste that cannot be treated using thermal desorption is ineligible to use this technology and must be disposed of as a hazardous waste.
- 5) Soil sampling and characterization must follow the Section's Guidelines for Establishing Remediation Goals at RCRA Hazardous Waste Sites, and/or the Section's Generator Closure Guidelines. The Remediation Goals guidance is available at <http://deq.nc.gov/about/divisions/waste-management/waste-management-permit-guidance/hazardous-waste-section-technical-assistance-education-guidance>
- 6) The treatment of soil contaminated with hazardous waste must be implemented and treatment completed within 180 days from the date of an "Approved Remediation Plan."

7) The desorption treatment unit (Treatment Unit) must comply with all applicable local, State, and Federal Air Quality regulations and Subparts AA, BB and CC of 40 CFR 265 or 40 CFR 264.

During The Desorption Process:

- 1) Contaminated soil must be treated immediately after being generated (excavated). No containerization or creation of soil stockpiles is permitted prior to treatment. The Hazardous Waste Section may choose to allow limited storage based on a case-by-case basis depending on the capacity of the Treatment Unit.
- 2) A facility using this technology must be aware that it may be subject to Notification or Permit requirements under other applicable programs.
- 3) Each batch of soil that is treated must be sampled and analyzed to determine if treatment has been achieved. A batch is defined as the volume capacity of the treatment unit. Sampling and analysis must be conducted as described in the Section's "Contained-in" Policy for Soil Contaminated with Listed Hazardous Waste.
- 4) At all times, appropriate emission control devices must use best available technologies to minimize contaminant transfer to other media, and meet applicable air emission standards. If an emission control device becomes a hazardous waste either by listing or characteristic, it must be managed and disposed as hazardous waste.
- 5) The treated soil must be disposed in a Subtitle D landfill in accordance with the Section's "Contained-in" Policy for Soil Contaminated with Listed Hazardous Waste, or at another approved disposal facility as pre-determined in the "Approved Remediation Plan".

When the thermal desorption treatment is complete a Closure Report must be submitted to the appropriate Section within the Division. The Closure Report must follow the requirements specified in the Section's Generator Closure Guidelines.

If you have any questions or concerns contact the Environmental Chemist for your Region.

If you do not know your Region, see the map at the following link:

<http://deq.nc.gov/about/divisions/waste-management/frequently-asked-questions/hazardous-waste-section-faq>

(Hazardous Waste Regional/County Contacts)