

Greenwood Chemical Superfund Site

Proposed Remedial Action Plan Summary

Greenwood, Albemarle County, Virginia

EPA Seeks Public Comment on Proposed Cleanup Plan

The U.S. Environmental Protection Agency (EPA) has developed a Proposed Remedial Action Plan (PRAP) for cleaning up the remaining deep soil and groundwater contamination at the Greenwood Chemical Site ("Site") located near Newtown, in Albemarle County, Virginia.

The plan outlines several options for cleanup, including EPA's preferred cleanup alternative.

EPA's preferred cleanup alternative includes:

- a permeable soil cover
- upgrading the existing groundwater pump-and-treat system
- long-term groundwater monitoring
- institutional controls.

This fact sheet is a summary of the PRAP. If you would like to review the full document entitled: "**Superfund Proposed Remedial Action Plan for Greenwood Chemical Site Operable Unit Two and Four**", it is available on EPA's website at:

www.epa.gov/reg3hwmd/super/sites/VAD003125374/index.htm



Proposed Plan Summary

EPA considered many cleanup options. Various cleanup options were compared and contrasted against one another in an engineering report. The options are listed below. **EPA's preferred cleanup is Alternative 2 (marked in BOLD print).**

Alternative 1: No Action.

EPA is required by law to consider a "No Action" alternative for every Superfund site for comparison purposes.

Alternative 2: Existing Permeable Soil Cover with Enhanced Pump-and-Treat System.

Alternative 2 would expand the existing five-well groundwater pump-and-treat network with additional wells to help prevent migration of site-related contamination. The recovered groundwater would continue to be treated at the existing on-site water treatment plant. Institutional controls will help ensure that any prospective users of the Site are aware that deep soil is contaminated with volatile organic compounds (VOCs). The controls will also prevent the extraction of groundwater from under the Site as a potable water source.

This enhanced series of groundwater recovery wells would capture contaminated groundwater, stopping it from spreading off-site, and treat it. Then the cleaned water would be discharged to a stream. EPA would conduct periodic performance evaluations to check the effectiveness of the system.

**The Public Comment Period
regarding the Site's proposed plan
begins June 23, 2005 and ends
July 22, 2005.**

Alternative 2A: Existing Permeable
Soil Cover, In-Situ Chemical Oxidation with
Enhanced Pump-and-Treat System.

Alternative 2A includes all of Alternative 2 activities described above, plus in-situ chemical oxidation of contaminated groundwater. In-situ chemical oxidation involves treating certain contaminants with a chemical oxidant like potassium permanganate (KMnO₄). The chemical reagent would be injected into the contaminated groundwater and must come in direct contact with the contaminant to turn it into harmless compounds like carbon dioxide and water. In-situ chemical oxidation has been shown to work on some, but not all of, the Site-related chemicals in the contaminated groundwater.

Alternative 3: Impermeable Cap with
Enhanced Pump-and-Treat System.

Alternative 3 includes all the actions listed under Alternative 2 except an impermeable cap would be constructed instead of a permeable soil cover. The cover would be a multi-layer composite barrier system that minimizes the long-term movement of liquids into the capped area. Most of the contaminants located in the deep soil are within the saturated zone. The impermeable cap would not have any impact on groundwater moving through the contaminated soil located below the water table.

Alternative 4: Soil Excavation,
Off-Site Treatment and Disposal with
Enhanced Pump-and-Treat System.

In Alternative 4, all the clean surface soil would be excavated and put aside; then the deep, contaminated soil would be removed

and replaced with the saved surface soil and a layer of new topsoil would be placed over the backfill material and vegetated. Institutional controls would also be implemented.

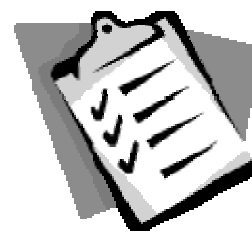
Alternative 4A: Excavation, Off-Site
Treatment and Disposal of Contaminated
Soil, In-Situ Chemical Oxidation with
Enhanced Pump-and-Treat System.

Alternative 4A includes the remedial actions described in Alternative 4, plus the in-situ chemical oxidation remedial action described under Alternative 2A.

EPA's Nine Criteria Analysis

Before EPA chooses a final cleanup method, the alternatives are evaluated using nine criteria to make sure that EPA is selecting the best cleanup. The nine criteria are:

1. Overall Protection of Human Health and the Environment
2. Compliance with Applicable or Relevant and Appropriate Requirements
3. Long-term Effectiveness
4. Reduction of Toxicity, Mobility, or Volume through Treatment
5. Short-term Effectiveness
6. Implementability
7. Cost
8. State Acceptance
9. Community Acceptance



At this point, EPA has only fully evaluated the first seven of the nine criteria. Only after considering input from state officials and the community regarding the proposed plan will EPA make a final cleanup decision. Submit your comments about EPA's proposed plan by July 22, 2005.

Your Role in the Process

Community involvement is critical to EPA's decision making process. The PRAP is written to seek community input on the proposed cleanup. In addition to this fact sheet, the primary PRAP document and supporting documents are available for review on the Internet, at www.epa.gov/arweb.

To make sure the community has a chance to comment on the proposed plan, there is an official 30-day public comment period. This public comment period is an opportunity to submit comments

- ✓ By mail,
- ✓ By e-mail,
- ✓ Or in person, at the upcoming public meeting regarding EPA's proposed plan.



Comments will be accepted from **June 23, 2005 to July 22, 2005**. Mailed and E-mailed comments must be postmarked no later than July 22, 2005.

Mail comments (postmarked no later than July 22, 2005) to:

**U.S. ENVIRONMENTAL
PROTECTION AGENCY
ATTN: Eric Newman, 3HS23
1650 Arch Street
Philadelphia, PA 19103**

Or send comments by e-mail to:
newman.eric@epa.gov

After the public comment period has ended and all the comments have been reviewed and carefully considered, EPA, in consultation with the Virginia Department of Environmental Quality, will choose the final cleanup plan for the Site. The final cleanup will be described in a Record of Decision (ROD). Responses to the comments submitted during the public comment period will be recorded in a document called the Responsiveness Summary, which is also part of the ROD.

Public Meeting

EPA will hold a public meeting to discuss the PRAP, the cleanup options, and EPA's preferred cleanup alternative.

**When: Wednesday, July 6, 2005
6:00-8:00 pm**

**Where: Emmanuel Episcopal
Church
7599 Rockfish Gap Turnpike
Greenwood, VA**

For More Information

For more information on the Greenwood Chemical Site, visit the websites listed below:

www.epa.gov/reg3hwmd/super/sites/VAD003125374/index.htm or www.epa.gov/arweb

Or to review the Administrative Record in person, call for an appointment with:

Anna Butch, (215) 814-3157
U.S. Environmental Protection Agency
EPA Administrative Records Room
1650 Arch Street
Philadelphia, PA 19103

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