

# FINAL PLAN OF REMEDIAL ACTION



## CLEVELAND AVENUE LANDFILL SITE

*10 McKees Lane  
Newark, Delaware*

*June 29, 2010  
DNREC Project No. DE-0052*

---

This Final Plan of Remedial Action (Final Plan) presents the Department of Natural Resources and Environmental Control's (DNREC's) intention to address environmental contamination at the Cleveland Avenue Landfill Site.

DNREC issued public notice of the Proposed Plan of Remedial Action (Proposed Plan) for the Site on June 9, 2010 and opened a 20-day public comment period. The Proposed Plan is attached. There were no comments from the public; therefore, the Proposed Plan is adopted as the Final Plan.

DNREC requires the following remedial actions be performed the Cleveland Avenue Landfill Site:

1. Installation of a fence, a minimum of 6 feet high, around the entire Site within 120 days following the issuance of the Final Plan of Remedial Action to restrict access by the public.
2. Recording of an environmental covenant consistent with Delaware's Uniform Environmental Covenants Act (Title 7, Del. Code Chapter 79, Subtitle II) on the property deed. The covenant will require written DNREC approval prior to any intrusive activity on the Site. In the event that intrusive activity becomes necessary at the Site, a Contaminated Materials Management Plan (CMMP) will also need to be developed and implemented to ensure proper handling of site soil and groundwater.
3. Development of an Operation and Maintenance (O&M) Plan for DNREC approval within 90 days following the installation of the fence. The O&M Plan details the regular inspection schedule to be followed in order to ensure the effectiveness of the fence.

### **Approval:**

**This Final Plan meets the requirements of the Hazardous Substance Cleanup Act.**

---

Kathleen Stiller, Program Manager II  
Site Investigation and Restoration Branch



## PROPOSED PLAN OF REMEDIAL ACTION

Cleveland Avenue Landfill Site  
Newark, Delaware  
DNREC Project No. DE-0052



May 2010

Delaware Department of Natural Resources and Environmental Control  
Division of Air and Waste Management  
Site Investigation & Restoration Branch  
391 Lukens Drive  
New Castle, Delaware 19720

### CONTENTS

- Proposed Plan: Questions and Answers
- Figures
- Glossary of Terms
- Attachment: *What is a Proposed Plan?*

# PROPOSED PLAN OF REMEDIAL ACTION

Cleveland Avenue Landfill Site  
New Castle, Delaware  
DNREC Project No. DE-0052



**Approval:**

This Proposed Plan meets the requirements of the Hazardous Substance Cleanup Act.

Approved by:

*Marjorie A. Crofts for MAC*  
\_\_\_\_\_  
Marjorie A. Crofts, Acting Director  
Division of Air & Waste Management

*5/20/10*  
\_\_\_\_\_  
Date



**What is the Cleveland Avenue Landfill Site?** The Cleveland Avenue Landfill Site is currently the location of McKees Park. The park is mostly grass-covered but has a playground area, basketball courts, and a pavilion on it, as well. The Site is owned by the City of Newark. The City of Newark entered into a Voluntary Cleanup Program (VCP) Agreement with the Department of Natural Resources and Environmental Control (DNREC) – Site Investigation and Restoration Branch (SIRB) to perform a remedial investigation and address contamination determined to be present on the Site.

**Tax Parcel Numbers:** 18.0150-0-001  
**Address:** 10 McKees Lane; Newark, Delaware  
**Nearest major intersection:** McKees Lane and East Cleveland Avenue  
**Area:** 4.02 acres  
**Surrounding Property:** Cleveland Heights Housing Development is located adjacent to the south and west of the Site. Porter Chevrolet is adjacent to the east of the Site  
**Zoning:** 18RS  
**Site Utilities:** None  
**Surface water:** White Clay Creek is located along the northern boundary of the property  
**Topography:** Flat land  
**Groundwater:** Groundwater was encountered at depths ranging from 6 to 13 feet below ground surface

**What happened at the Cleveland Avenue Landfill Site?** Between 1914 and the mid 1950s, the City of Newark operated a wastewater treatment plant on the Site. In addition, between approximately 1947 and the late 1950s, the City of Newark operated a residential waste landfill on the property occupying the Site, as well as the adjacent property, which was sold to the Newark Housing Authority (NHA) in 1960. In the mid 1960s, the NHA built the Cleveland Heights Housing Development on their property. The housing development is currently vacant. The Cleveland Heights Development Site (DE-1367) is being addressed separately with the NHA.

At the time of closure of the wastewater treatment operations, all equipment was disassembled and removed from the Site, except for the in-ground sewage treatment tanks. These tanks were emptied, cleaned, and filled in with dirt and stone. This area and the landfill area were capped with a layer of top soil and stabilized with grass.

**What is the environmental problem at the Cleveland Avenue Landfill Site?** Environmental investigations conducted at the Site indicated that the contaminants

of concern (COCs) in soil for an unrestricted use (residential) exposure scenario are select metals and semi-volatile organic compounds (SVOCs). Conversely, benzo(a)pyrene is the only, seemingly isolated, COC in soil for a restricted use (commercial/industrial) exposure scenario. The COCs in groundwater are select metals, SVOCs and volatile organic compounds (VOCs). There were also exceedences of select metals in surface water (White Clay Creek) and sediment. Based on a comparison of concentrations detected in upstream and downstream samples; however, the conclusion was that groundwater discharging from the Site did not appear to be negatively impacting the Creek (surface water or sediment).

The following environmental investigations were performed at the Site:

- 1983: NUS Corporation conducted an investigation on behalf of the United States Environmental Protection Agency (US EPA). Furniture, appliances and household waste were discovered during the investigation. However, the investigation concluded that there was no evidence of hazardous materials present on site that warranted further investigation by the US EPA. The Site was subsequently referred to the DNREC-SIRB.
- 2002-2003: DNREC-SIRB conducted a Site Inspection (SI). The investigation determined that there were metals and poly nuclear aromatic hydrocarbons (PAHs) in soil and further evaluation was necessary to determine the extent of impact to soil, groundwater, sediment, and surface water at the Site.
- 2008: TetraTech, NUS conducted a Remedial Investigation (RI) on behalf of the City of Newark. The findings of the RI were consistent with those of the previous investigations. Municipal waste was found to extend to at least 17 feet below ground surface in some areas. Metals (arsenic, barium, iron, lead, manganese and vanadium) and SVOCs (benzo(a)pyrene and benzo(b)fluoranthene,) were detected in the soil samples at concentrations exceeding the corresponding Delaware Uniform Risk-Based Remediation Standards (URS) values. Elevated arsenic and barium concentrations detected in surface water (White Clay Creek) adjacent to the Site were detected in comparable concentrations in either the upstream and downstream concentrations or just the upstream sample. Similarly, elevated arsenic, barium, nickel and silver concentrations in the samples collected adjacent to the Site were comparable to the concentrations detected in the samples collected both upstream and downstream. Therefore, the Site is not considered to be the source of the contaminants in the Creek.

### **What does the owner want to do at the Cleveland Avenue Landfill Site?**

Currently, the City of Newark does not have any redevelopment plan for this Site.

The Site will remain open space; however, access will be restricted by a fence that will surround the Site.

**What remedial actions are proposed at the Cleveland Avenue Landfill Site?**

Currently, the only potential exposure pathway to present a risk at the Site is the human health risk associated with the coming into contact with the soil atop the buried material. Therefore, the City of Newark will be required to fence the Site to prevent access by trespassers. DNREC-SIRB will also require an environmental covenant, or restriction, be included on the property deed limiting future development at the Site.

DNREC requires the following remedial actions be performed on the Cleveland Avenue Landfill Site:

1. Installation of a fence, a minimum of 6 feet high, around the entire Site within 120 days following the issuance of the Final Plan of Remedial Action to restrict access by the public.
2. Recording of an environmental covenant consistent with Delaware's Uniform Environmental Covenants Act (Title 7, Del. Code Chapter 79, Subtitle II) on the property deed. The covenant will require written DNREC approval prior to any intrusive activity on the Site. In the event that intrusive activity becomes necessary at the Site, a Contaminated Materials Management Plan (CMMP) will also need to be developed and implemented to ensure proper handling of site soil and groundwater.
3. Development of an Operation and Maintenance (O&M) Plan for DNREC approval within 90 days following the installation of the fence. The O&M Plan details the regular inspection schedule to be followed in order to ensure the effectiveness of the fence.

**What are the long term stewardship requirements proposed for the Site?** The Site will undergo inspections on a regular basis to ensure the effectiveness of the fence in keeping people off of the Site.

DNREC will issue a Certification of Completion of Remedy for the Cleveland Avenue Landfill Site following: 1) the installation of a fence around the property, 2) the recording of an environmental covenant on the property deed, and 3) the development of a DNREC-approved O&M Plan.

**How can I find additional information and/or comment on the Proposed Plan?**

The complete file on the Site, including the Site Inspection and the Remedial Investigation, is available at the DNREC office, 391 Lukens Drive in New Castle. Most documents are also found on:

<http://www.nav.dnrec.delaware.gov/DEN3/>

The 20-day public comment period begins on June 9, 2010 and ends at close of business (4:30 pm) on June 29, 2010. Please send written comments to the DNREC office or call Lindsay Hall, Project Manager, at: 302-395-2600.

Figure 1: Location Map

## Glossary of Terms Used in this Proposed Plan

<b>Contaminants of Concern (COC)</b>	These are potentially harmful substances at concentrations above acceptable levels (e.g. metals and PAHs).
<b>Certification of Completion of Remedy (COCR)</b>	A formal determination by the Secretary of DNREC that remedial activities required by the Final Plan of Remedial Action have been completed.
<b>Final Plan of Remedial Action</b>	DNREC's adopted plan for cleaning up a hazardous site.
<b>Hazardous Substance Cleanup Act (HSCA)</b>	Delaware Code Title 7, Chapter 91. The law that enables DNREC to identify parties responsible for hazardous substances releases and requires cleanup with oversight of the Department.
<b>Proposed Plan of Remedial Action</b>	DNREC's initial plan for cleaning up a hazardous site, which is subject to public comment before being adopted as final.
<b>Site Inspection (SI)</b>	Environmental study of a site which includes the sampling of soils, groundwater, surface water, sediment and/or wastes on the property, as appropriate. This evaluation is performed on behalf of the United States Environmental Protection Agency (U.S. EPA).
<b>Remedial Investigation (RI)</b>	Thorough environmental study of a site which includes 1) sampling of site environmental media and/or wastes on the property and 2) conducting a preliminary risk assessment using the data collected to determine the risk posed to human health and the environment.
<b>Risk</b>	Likelihood or probability of injury, disease, or death.
<b>Voluntary Cleanup Program (VCP)</b>	This HSCA program involves a site owner who willingly enters into an agreement with DNREC to investigate and remediate their property.
<b>Uniform Environmental Covenant Act (UECA)</b>	Deed restrictions on the site. These can include restrictions on soil intrusion, groundwater usage or usage of the site based on the extent of the cleanup.
<b>Uniform Risk-Based Remediation Standards (URS)</b>	A set of concentration criteria for various contaminants potentially present in site media that are developed for protection of human health and the environment

## **What is a *Proposed Plan*?**

A Proposed Plan of Remedial Action (Proposed Plan) is a summary of how DNREC plans to clean up a contaminated site. A Final Plan of Remedial Action (Final Plan) is the adoption of the Proposed Plan after all comments made by the public, within the comment period of twenty days, have been considered and addressed by DNREC.

The Delaware State Legislature passed the Hazardous Substance Cleanup Act (HSCA) in 1990. The Legislature made sure that members of the public would be informed about environmental problems in their own neighborhoods and have a chance to express their opinion concerning the clean up of those environmental problems before DNREC takes action.

After DNREC studies a site, it summarizes the problems there and proposes one or more possible solutions in a Proposed Plan. The Proposed Plan contains enough information to allow lay persons to understand the site. More detailed information can be found in the reports and documents approved by DNREC. All of the documents and reports created by DNREC or consultants during the course of the investigation of the site are available to the public at the offices of DNREC-SIRB or at DNREC's Delaware Environmental Navigator website:

<http://www.nav.dnrec.delaware.gov/DEN3/>

DNREC issues the Proposed Plan by advertising it in at least one newspaper in the county where the site is located. The legal notices for the Proposed Plans and the Final Plans usually run on Wednesdays or Sundays in the legal classified section of the News Journal and/or the Delaware State News. The public comment period begins on the day (Wednesday), or the day after (Sunday) the newspaper publishes the legal notice for the Proposed Plan.

DNREC frequently holds public meetings during the comment period. Those meetings are usually held during a weekday evening, at a location near the site. Citizens can request a public meeting if DNREC did not already schedule one.

The public may comment on the Proposed Plan by letter or email, or at the public meeting. DNREC considers all comments and questions from the public before the Proposed Plan is finalized and adopted as a Final Plan.

---