

FINAL PLAN OF REMEDIAL ACTION



BOYD'S CORNER FARM SITE

Boyd's Corner Farm
Middletown, Delaware

December 14, 2011
DNREC Project No. DE-1499

This Final Plan of Remedial Action (Final Plan) presents the Department of Natural Resources and Environmental Control's (DNREC's) determination that the debris from the previous unpermitted dump has been removed and the site does not pose an unacceptable risk for the proposed residential development.

DNREC issued public notice of the Proposed Plan for the Site on November 20, 2011 and opened a 20-day public comment period, which ended on December 12, 2011. The Proposed Plan requires:

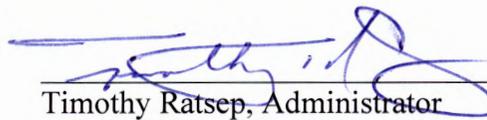
1. No Further Action at the site.
2. A Certification of Completion of Remedy will be issued for this site.

The Proposed Plan also includes the location of additional information found on the DNREC web page and in the DNREC office at Lukens Drive in New Castle.

There were no comments or questions from the public regarding the Proposed Plan. Therefore, the Proposed Plan was adopted as the Final Plan (see attached).

Approval:

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



Timothy Ratsep, Administrator
Division of Waste and Hazardous Substances



PROPOSED PLAN OF REMEDIAL ACTION

Boyd's Corner Farm Site
Middletown, New Castle County, Delaware
DNREC Project No. DE-1499



November 2011

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

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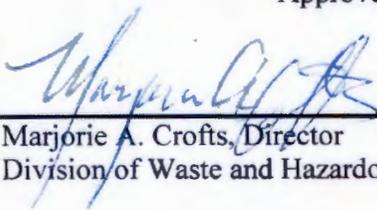
PROPOSED PLAN OF REMEDIAL ACTION

Boyd's Corner Farm Site
Middletown, New Castle County, Delaware
DNREC Project No. DE-1499



Approval:

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

Approved by:

Marjorie A. Crofts, Director Division of Waste and Hazardous Substances
11.24.11
Date

Boyd's Corner Farm Site
Middletown, DE



What is the Boyd's Corner Farm Site? The Boyd's Corner Farm Site (DE-1499) is six connected parcels in Middletown, south of Route 896 and east of Emerson Road (Figure 1). The Voluntary Cleanup Agreement was signed by Boyer Property LLC on February 4, 2011, and by DNREC-SIRS on February 14, 2011. The parcels are on the western bank of a stream feeding into Shallcross Lake and are currently farmed fields, woods and wetlands. Two of the plots will be maintained mostly as open space as well as being the site of a pump house. Homes will be constructed on the other four plots.

Tax Parcel Numbers: 13-013.32-058, 13-013.32-201, 13-013.34-149, 13-013.32-057, 13-013.32-056, 13-013.32-059
Address: No street address.
Nearest major intersection: Site is 1.1 miles west of the intersection of Routes 896 and 13 (Boyd's Corner Road and DuPont Highway, respectively).
Area: 2 acres
Surrounding Property: Surrounding land use is agricultural with future plans for residential use.
Zoning: Residential
Site Utilities: There are currently no utilities on the Site.
Surface water: Site is on the west bank of a stream leading to Shallcross Lake which is 3000 ft downstream.
Topography: The property slopes from southwest to northeast
Groundwater: The groundwater flows primarily to the east.

What happened at the Boyd's Corner Farm Site? The Site was used as an unpermitted dump by the surrounding farms and community beginning around 1937 and continued into the recent past. Two investigations were conducted between 2003 and 2008 to determine the nature and extent of the landfill. The soil was sifted to separate it from the debris and stockpiled in four mounds (Figure 2). The trash and debris were removed and disposed of.

- A Phase I Environmental Site Assessment was completed in 2003. Test pits were dug to determine the contents and geographical extent of the debris pit. The owner used screening machines to separate the debris from the soil and disposed of the debris, leaving the soil in four (4) separate mounds (Figure 2). Identified debris included empty 55 gallon drums, empty heating oil tanks, trash, tires, farm equipment, vehicles and building debris.

- A Phase II Environmental Site Assessment was completed in 2008. More test pits were dug and soil samples that targeted the impacted areas were collected. Two soil samples exceeded the Delaware Uniform Risk-based Standards (URS); one for PCBs and the other for arsenic. No other contaminants exceeded URS for soil or sediment.

What is the environmental problem at the Boyd's Corner Farm Site? The Site may have been impacted by the historic farmland and dumping activities at the site. The Remedial Investigation was performed in April 2011. One soil sample contained polychlorinated biphenyls (PCBs) that slightly exceeded the residential URS concentration for soil. However, the risk assessment showed that the risk is below the carcinogenic and non-carcinogenic risk standards. Several soil samples had slightly elevated concentrations of metals, but they are naturally occurring in the area and within the background standard. One groundwater sample had a slightly elevated concentration of a polycyclic aromatic hydrocarbon (PAH), but after re-testing, the contaminant was not detected.

- Aroclor 1242 was detected in one soil sample (SS-28) at a concentration of 0.348 mg/kg, which exceeds the DNREC URS of 0.3 mg/kg. The risk analysis resulted in a carcinogenic risk of 4×10^{-8} , which is well within the acceptable carcinogenic risk of 1×10^{-5} .
- Indeno (1,2,3-cd) pyrene was detected in one groundwater sample (MW-4), and had an estimated (J qualified) concentration of 0.41 ug/l, which exceeds the DNREC URS of 0.09 ug/l. MW-4 was retested in August, 2011 using a lower detection limit, and Indeno (1,2,3-cd) pyrene was not detected in the water.

What does the owner want to do at the Boyd's Corner Farm Site? The owner of the Boyd's Corner Farm Site would like to develop four of the six parcels into residential lots. The other two parcels will remain mostly as open space, and a small portion of them will be used as the location of a pump house for the future residential development (Figure 3).

What clean-up actions have been taken at the former Boyd's Corner Farm Site? The trash and debris were removed by the owner after the Phase I Environmental Site Assessment was performed in 2003.

How does DNREC plan to clean up the former Boyd's Corner Farm Site? Based on the 2011 Remedial Investigation Report, there is no risk to future residential users of the site. Therefore, there is no need to remediate the Boyd's Corner Farm Site.

No Further Action is required by DNREC-SIRS at the Boyd's Corner Farm Site.

What are the long term plans for the Boyd’s Corner Farm Site after the cleanup? After the 20-day comment period, DNREC will issue a Final Plan of Remedial Action. A Certificate of Completion of Remedy will then be issued for the property, without restrictions. The four parcels on the southern half of the Site will be developed into residential properties. The two parcels on the northern part of the Site will remain open space because of their position along a stream. A pump house serving the planned development will also be located on one of the two undeveloped parcels.

The results of the RI indicate that the risk meets the acceptable level for the proposed future use as residences and open space. The site will be graded to meet the needs of the residential construction. DNREC will issue a Certificate of Completion of Remedy.

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

The complete file on the site, including 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 November 20, 2011 and ends at close of business (4:30 pm) on December 12, 2011. Please send written comments to the DNREC office or call Kate Durant, Project Manager, or Robert Newsome at 302-395-2600.

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- Figure 1: Location Map
- Figure 2: Soil Stockpiles
- Figure 3: Proposed Development

Figure 1 – Location Map



1 inch = 2,000 feet



**Boyd's Corner Farm
DE-1499**

Figure 2 – Soil Stockpiles



1 inch = 125 feet
0 80 160 240 320 Feet

**Boyd's Corner Farm
DE-1499**

Figure 3 – Proposed Development



Glossary of Terms Used in this Proposed Plan

Brownfield	Property that is vacant or underutilized because of the perception or presence of an environmental problem.
Certified Brownfield	A brownfield that DNREC has determined is eligible for partial funding through the Delaware Brownfields Program.
Contaminant of Concern (COC)	These are potentially harmful substances at concentrations above acceptable levels (eg metals and PAH).
Certificate of Completion of Remedy (COCR)	A formal determination by the Secretary of DNREC that remedial activities required by the Final Plan of Remedial Action have been completed.
*Exposure	Contact with a substance through inhalation, ingestion, or direct contact with the skin. Exposure may be short term (acute) or long term (chronic).
Final Plan of Remedial Action	DNREC's proposal for cleaning up a hazardous site after it has been reviewed by the public and finalized.
Hazardous Substance Cleanup Act (HSCA)	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.
Human Health Risk Assessment (HHRA)	An assessment done to characterize the potential human health risk associated with exposure* to site related chemicals.
Proposed Plan of Remedial Action	A plan for cleaning up a hazardous site submitted by DNREC and subject to public comments.
Risk	Likelihood or probability of injury, disease, or death.
Risk Assessment Guidance for Superfund (RAGS)	An EPA guidance document for superfund sites
Site Specific Assessment (SSA) and Site Inspection (SI)	Environmental studies of a site including sampling of soils, groundwater, surface water, sediment and/or wastes on the property.

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 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 near the site in the evening. Citizens can request a public meeting if DNREC did not already schedule one.

Comments are collected at the public meetings, by phone or in writing. DNREC considers all comments and questions from the public before the Proposed Plan is finalized and adopted as a Final Plan.
