

FINAL PLAN OF REMEDIAL ACTION



OWENS STATION SITE – OPERABLE UNIT 2

*12613 Hunters Cove Road
Greenwood, Delaware*

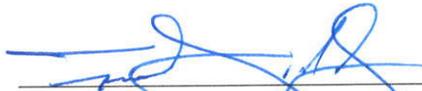
*January 2014
DNREC Project No. DE-1350*

This Final Plan of Remedial Action (Final Plan) presents clean-up actions required by the Department of Natural Resources and Environmental Control (DNREC) to address environmental contamination at the Owens Station Site – Operable Unit 2.

DNREC issued public notice of the Proposed Plan of Remedial Action (Proposed Plan) for Operable Unit 2 (OU-2) of the Site on October 30, 2013 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.

Approval:

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



Timothy T. Ratsep, Program Administrator
Site Investigation and Restoration Section

January 10, 2014

Date



PROPOSED PLAN OF REMEDIAL ACTION

Owens Station OU-2 Site
Greenwood, Delaware
DNREC Project No. DE-1350



November 2013

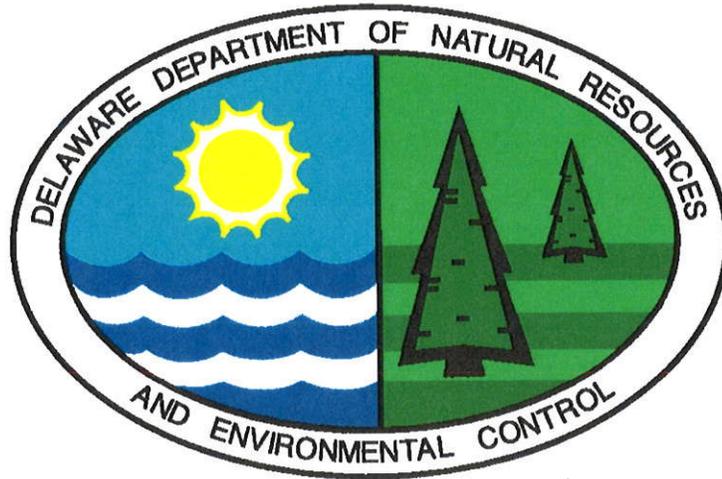
Delaware Department of Natural Resources and Environmental Control
Division of Waste and Hazardous Substances
Site Investigation & Restoration Section
391 Lukens Drive
New Castle, Delaware 19720

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PROPOSED PLAN OF REMEDIAL ACTION

Owens Station OU-2 Site
Greenwood, Delaware
DNREC Project No. DE-1350



Approval:

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

Approved by:

Timothy Ratsep, Environmental Program Administrator Site Investigation & Restoration Section
10/30/13
Date



What is the Proposed Plan of Remedial Action?

The Proposed Plan of Remedial Action (Proposed Plan) summarizes the clean-up (remedial) actions that are being proposed to address contamination found at the Site for public comment. A legal notice is published in the newspaper for a 20-day comment period. DNREC considers and addresses all public comments received and publishes a Final Plan of Remedial Action (Final Plan) for the Site.

What is the Owens Station OU-2 Site?

The Owens Station Site is located at 12613 Hunters Cove Road in Greenwood, Delaware. The Site consists of one tax parcel (430-9.00-19.00) and is approximately 105 acres (Figure 1). Operating Unit two (OU-2) encompasses approximately 82 acres and OU-1 consists of the remaining 23 acres of the total Site. The nearest intersection to the Site is Owens Road and Hunters Cover Road. The OU-2 Site is an active shooting clay range and a hunting dog training facility.

What happened at the Owens Station OU-2 Site?

The OU-2 portion of the Site is an active shooting clay range and hunting dog training facility. The facility has been in operations since approximately 1997. Prior to the development of the organized shooting range, the property was used as a private hunting reserve and for agricultural use. The Site contains a hunter training facility (operated by DNREC- Fish and Wildlife), dog training areas, ponds, shooting stands and a small camping area for visiting organizations.

What is the environmental problem at the Owens Station OU-2 Site?

A Preliminary Assessment (PA) conducted in 2005 identified that soil was suspected to be contaminated with lead from buck shot used in the shooting activities. A Remedial Investigation (RI) was performed in November 2012 to investigate the full extent of the lead contamination. The RI identified the interior of the shooting range as being impacted with lead in the surface soil. The three ponds onsite were investigated for any impact from the shooting activities. Two of the ponds appeared to be impacted by Site related runoff. Onsite ditches were also investigated for lead contamination. It was determined that limited transport of the lead from the shooting area to the shallow ditches occurred. However the lead found had minimal impact and the lead was not migrating off site.

What clean-up actions have been taken at the Owens Station OU-2 Site?

Lead recovery operations have occurred onsite, removing approximately 87 tons of lead pellets from the top 3-6 inches of soil. A mold-board plow is used in the active shooting area to till the top 5-6 inches of soil. This is done to decrease the availability of the lead to wildlife. Lime is also applied to neutralize the acidic soil, to stabilize the lead and control mobility. No till soybeans are planted in the active shooting area to help stabilize the soil. These actions are part of the best management practices for shooting range operations that currently take place onsite.

What does the owner want to do at the Owens Station OU-2 Site?

The Site will remain an active shooting range and hunting dog training facility.

What additional clean-up actions are needed at the Owens Station OU-2 Site?

DNREC proposes the following remedial actions for the OU-2 portion of the Site, which needs to be completed before a Certificate of Completion of Remedy (COCR) can be issued:

1. An Environmental Covenant, consistent with Delaware's Uniform Environmental Covenants Act (Title 7, Del. Code Chapter 79, Subtitle II) (UECA), will be recorded in the office of the Recorder of Deeds to include the following:
 - a. Use Restriction. Use of the Property shall be restricted solely to those non-residential type uses permitted within Commercial, Manufacturing, or Industrial Districts;
 - b. Compliance with Long Term Stewardship Plan. Perform all work required by the Long Term Stewardship Plan ("LTS Plan"), as issued, approved, modified or amended by DNREC;
2. The Site will be surveyed to determine the boundaries of OU-1 and OU-2.
3. Develop and implement a DNREC-approved Long-Term Stewardship (LTS) Plan. The LTS Plan will detail: 1) annual monitoring of surface water in the ditches for lead, 2) continue scheduled best management practices to remove and stabilize lead shot, and on-site ponds will be catch and release only, 3) the inspection schedule to be followed to ensure that the best management practices are taking place.

What are the long term plans for the Site after the cleanup?

The Site use will be divided into two OUs, with unrestricted use on OU-1 and restricted use for OU-2 by recording an Environmental Covenant. Annual monitoring of the surface water in the ditches will continue along with the current best management practices performed onsite to remove and stabilize lead shot.

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

The complete file on the Site including the Remedial Investigation Report and the various reports are available at the DNREC office, 391 Lukens Drive in New Castle, 19720. Most documents are also found on: <http://www.nav.dnrec.delaware.gov/DEN3/>

The 20-day public comment period begins on November 6, 2013 and ends at close of business (4:30 pm) on November 27, 2013. Please send written comments to the DNREC office at 391 Lukens Drive, New Castle, DE 19720 to Krystal A. Stanley, Project Officer or Robert Newsome, Public Information Officer.

Figure 1: Site Location Map

Figure 2: Operating Units

KAS:tlw; KAS13039.doc; DE 1350 II B 8

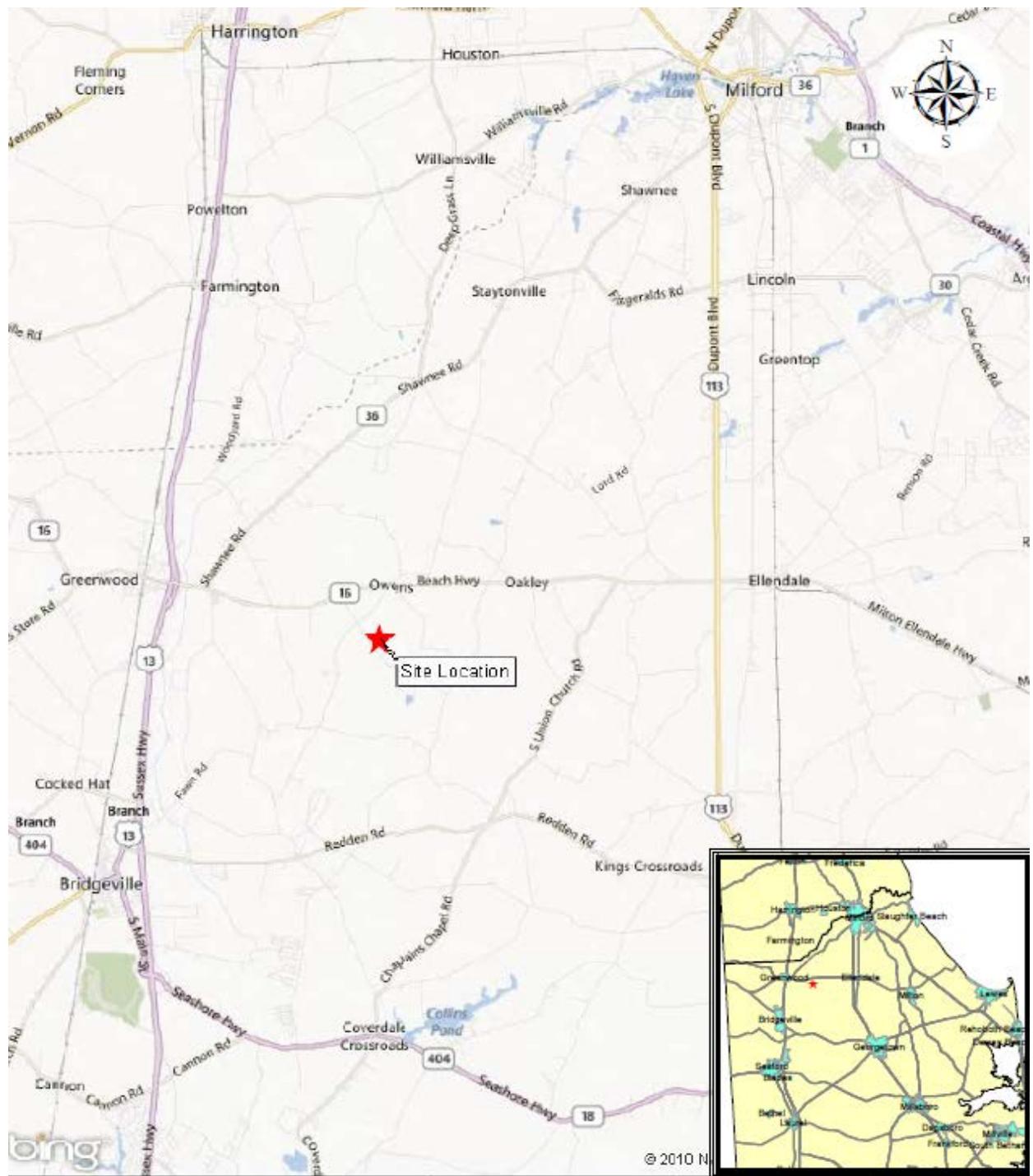


Figure 1

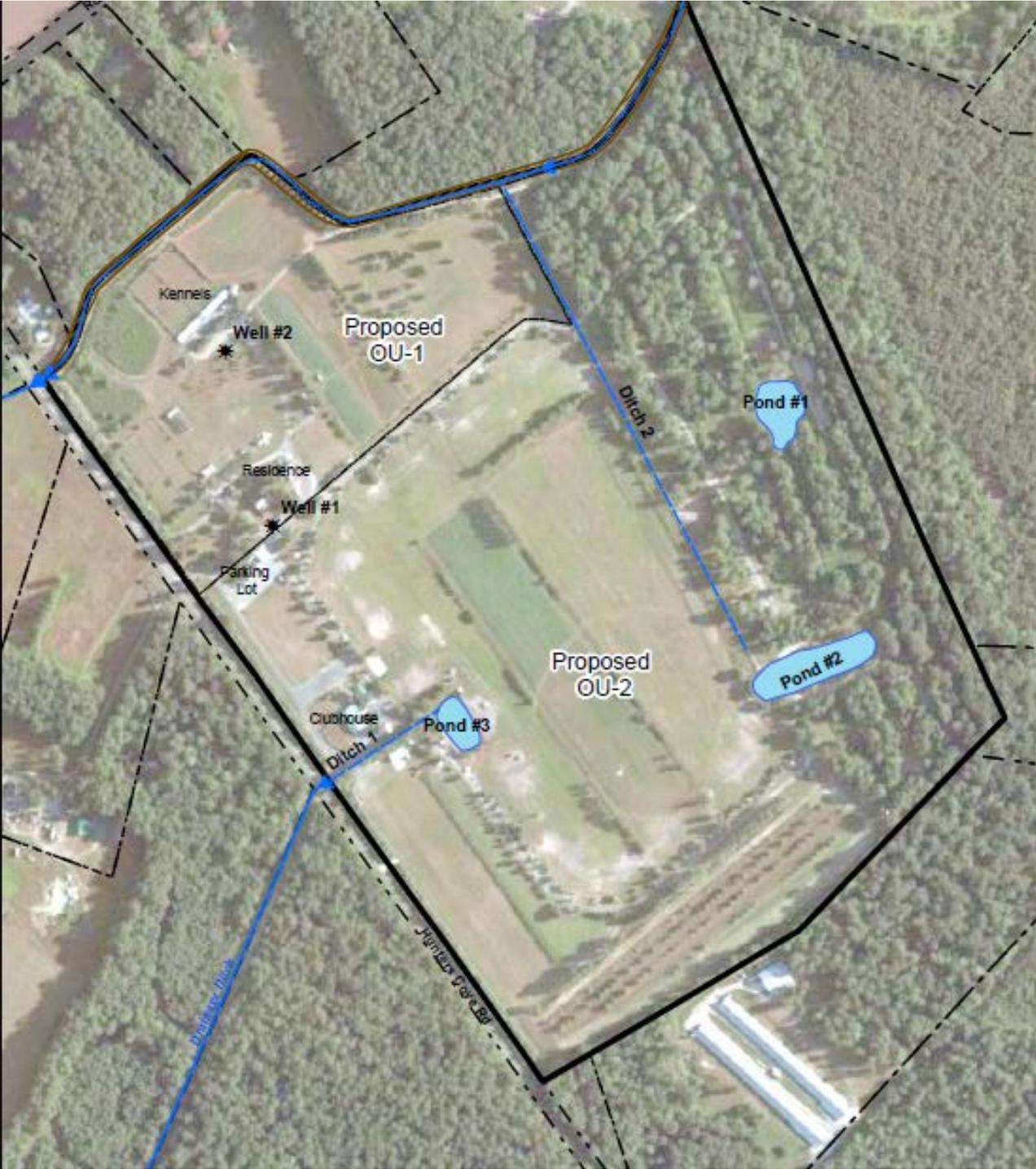


Figure 2

Glossary of Terms Used in this Proposed Plan

Area of Concern (AOC)	A discrete section of the Site representing the local bounds of contamination in soil or ground water.
Certification 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.
Contaminant of Concern (COC)	Potentially harmful substances at concentrations above acceptable levels.
Final Plan of Remedial Action	DNREC's adopted plan for cleaning up a hazardous site.
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.
Preliminary Risk Assessment	A quantitative evaluation of only the most obvious and likely risks at a site
Restricted Use	Commercial or Industrial setting
SIRS	Site Investigation Restoration Section of DNREC, which oversees cleanup of sites that were contaminated as a result of past use, from dry cleaners to chemical companies
US EPA	United States Environmental Protection Agency