



PROPOSED PLAN OF REMEDIAL ACTION

Barcroft Site (aka SPI Pharma)
Lewes, Delaware
DNREC Project No. DE-0037



April 2016

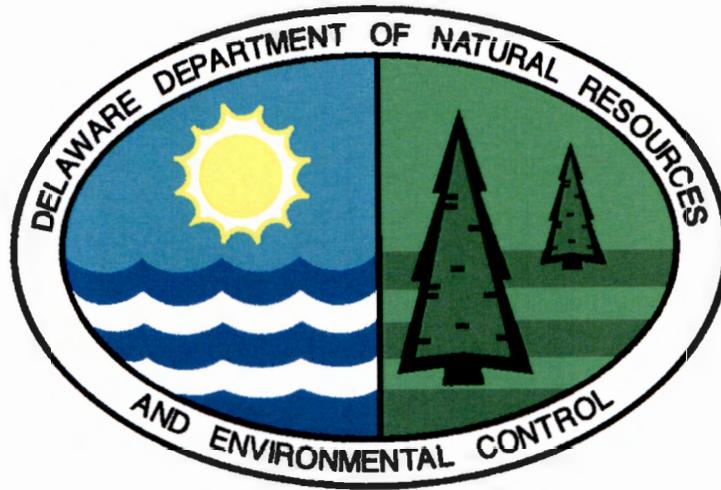
Delaware Department of Natural Resources and Environmental Control
Division of Waste and Hazardous Substances
Site Investigation & Restoration Section
391 Lukens Drive
New Castle, Delaware 19720

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Approval:

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

Approved by:

Timothy Ratsep, Environmental Program Administrator
Site Investigation & Restoration Section

Date

April 21, 2016



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 Barcroft Site?

The Barcroft Site is located at 40 Cape Henlopen Drive in Lewes, Delaware, and consists of one tax parcel (3-35 5.00 7.00), totaling approximately 13 acres (Figure 1). The Site is surrounded by Cape Henlopen State Park to the west, south and east. The Site consists of an office/warehouse building, a paved parking area, several above ground storage tanks, settling lagoons and is zoned commercial (Figure 2).

What happened at the Barcroft Site?

The owner of the Site manufactures pharmaceutical grade aluminum hydroxide and magnesium hydroxide by using seawater pumped to the plant from Breakwater Harbor. There are above ground storage tanks on the Site that hold the products used during the manufacturing process, including sodium hydroxide, alumina trihydrate, sodium aluminate and carbon dioxide. There is also an above ground storage tank for fuel oil that leaked during the 1970s.

What is the environmental problem at the Barcroft Site?

In the mid-1970s an oil leak occurred from an underground line. The company performed a cleanup action, but several years later, they noticed oil sheens on the surface of the property. Also, a Preliminary Assessment (PA) was performed by the EPA in 1984 that suggested a Site Inspection (SI) be performed due to the fact that the two sludge lagoons on the property were unlined and the sludge itself had not been tested. The SI was performed in 1988, but did not include any further conclusions. A Phase II Environmental Site Assessment (ESA) was completed in 1999 prior to the Site being sold to SPI Pharma.

What clean-up actions have been taken at the Barcroft Site?

The Site owners applied for and received an Underground Injection Control (UIC) permit which allowed them to put in a system to pump contaminated groundwater out of multiple wells and separate the water from the fuel. The UIC permit was closed after five years because it met the original goals. The Site was recommended to SIRS, and absorbent socks were used in the

monitoring wells to continue to soak up free product, until groundwater testing showed it was no longer necessary.

What does the owner want to do at the Barcroft Site?

The Site will continue to be used by SPI Pharma for manufacturing activities.

What additional clean-up actions are needed at the Barcroft Site?

DNREC proposes the following remedial actions for the Site, which need to be completed before a Certificate of Completion of Remedy (COCR) can be issued.

1. A proposed Environmental Covenant must be submitted to DNREC for approval within 60 days of the issuance of the approved Long Term Stewardship (LTS) Plan.
2. An Environmental Covenant, consistent with Delaware's Uniform Environmental Covenants Act (7 Del.C. Chapter 79, Subchapter II) must be recorded in the Office of the Sussex County Recorder of Deeds within 90 days of the issuance of the Long Term Stewardship Plan. The Environmental Covenant must include the following activity and/or use restrictions:
 - [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.] Limitation of Groundwater Withdrawal. No groundwater wells shall be installed and no groundwater shall be withdrawn from any well on the Property without the prior written approval of DNREC-SIRS and DNREC Division of Water;
 - [c.] Compliance with the Long Term Stewardship Plan. All work required by the Long Term Stewardship Plan must be performed to DNREC's satisfaction in accordance with the Plan; and
 - [d.] Compliance with Contaminated Materials Management Plan. All work required by the Contaminated Materials Management Plan must be performed to DNREC's satisfaction in accordance with the Plan.
3. A Contaminated Materials Management Plan (CMMP) must be submitted to DNREC within 60 days of the issuance of the Final Plan of Remedial Action. The CMMP will provide guidance to enable construction workers to safely handle any potential contaminated soil and groundwater at the Site.
4. The CMMP will be implemented upon its approval by DNREC.

5. A Long-Term Stewardship Plan shall be submitted to DNREC for approval within 60 days of the issuance of the Final Plan of Remedial Action. The LTS plan will detail the groundwater monitoring requirements and schedule to be followed in order to monitor the attenuation of the groundwater Contaminants of Concern (COC).
6. The LTS Plan must be implemented within 60 days of its approval by DNREC.
7. A request for a Certification of Completion of Remedy (COCR) must be submitted to DNREC within 60 days of approval of the Contaminated Materials Management Plan and the Long Term Stewardship Plan.

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

The Site use will be restricted to non-residential (commercial/industrial) purposes by recording the environmental covenant. The CMMP will be completed and available for the Site.

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 April 24, 2016 and ends at close of business (4:30 pm) on May 16 2016. Please send written comments to the DNREC office at 391 Lukens Drive, New Castle, DE 19720 to Kathryn Durant, Project Officer or Robert Newsome, Public Information Officer.

Figure 1: Site Location Map

Figure 2: Site Map

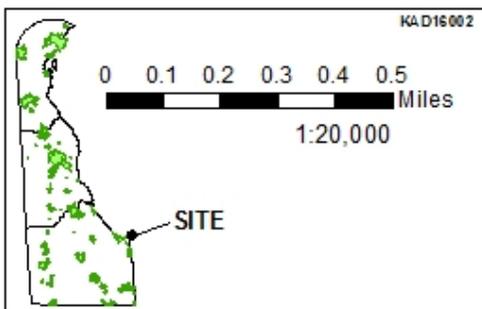
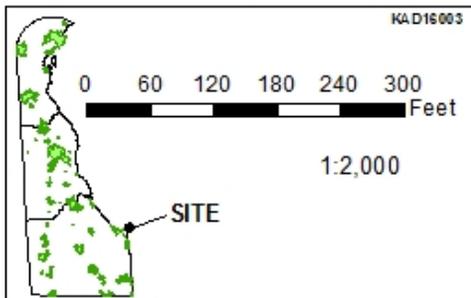
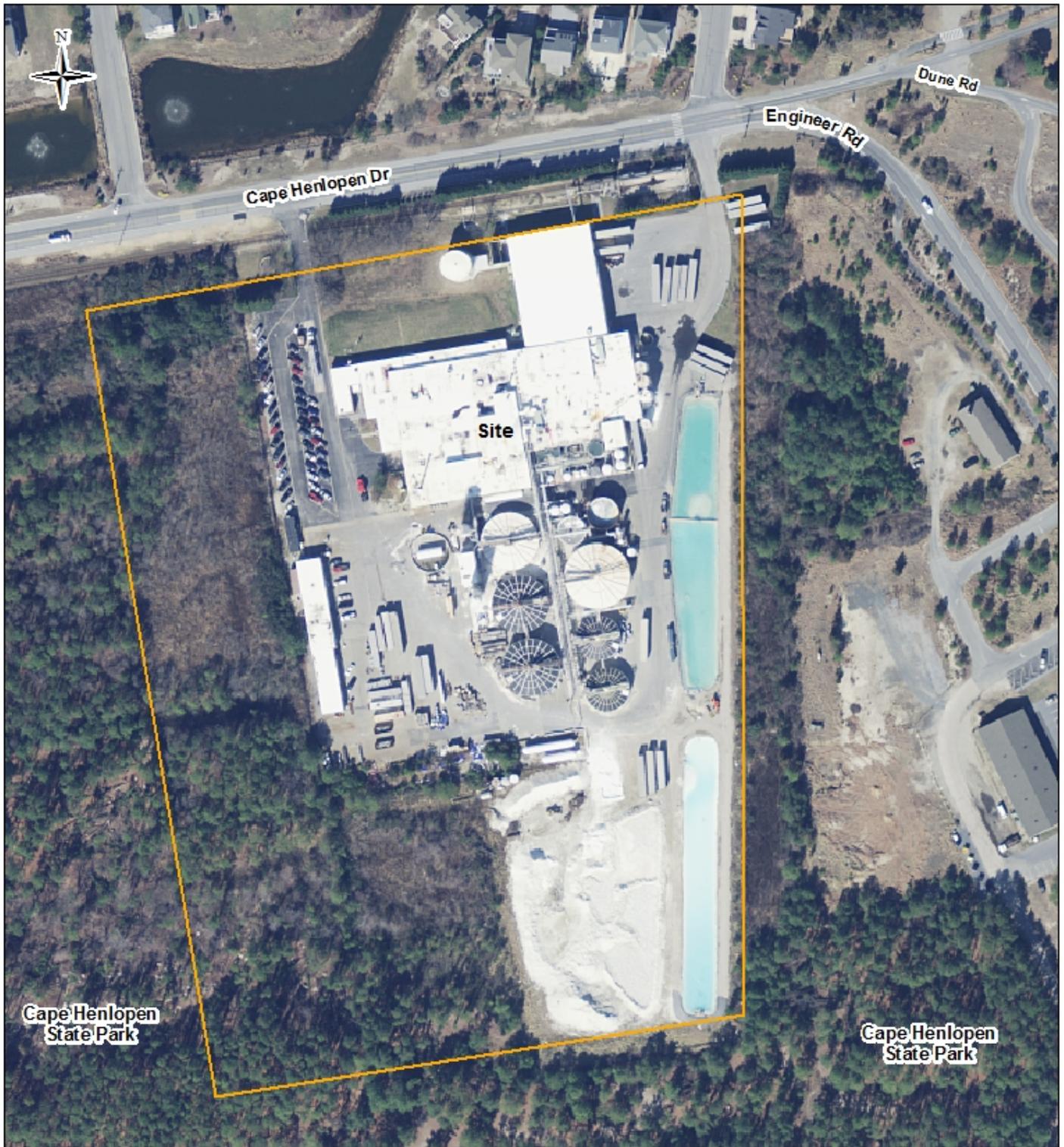


FIGURE 1
SITE LOCATION MAP
BARCROFT (aka SPI PHARMA)
LEWES, DE (DE-0037)
USGS 7.5 MIN TOPO

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March 2016



**FIGURE 2
SITE MAP
BARCROFT (aka SPI PHARMA)
LEWES, DE (DE-0037)
2012 AERIAL**

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March 2016

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.
Contaminated Materials Management Plan	A written plan specifying how potentially contaminated material at a Site will be sampled, evaluated, staged, transported and disposed of properly.
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 adopted plan for cleaning up a hazardous site.
Groundwater Management Zone	A geographical area where DNREC restricts drilling for ground water because it is contaminated
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.
Preliminary Risk Assessment	A quantitative evaluation of only the most obvious and likely risks at a site
Risk	Likelihood or probability of injury, disease, or death.
Restricted Use	Commercial or Industrial setting
Site Inspection (SI)	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).
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