

STATE OF DELAWARE

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL-  
SITE INVESTIGATION AND RESTORATION BRANCH

PROPOSED PLAN OF REMEDIAL ACTION



SCANNED

APR 20 2004

File# DE153

B8

**Scull Property Site  
Dover, DE**

**DNREC Project No. DE-0153**

---

This proposed plan of remedial action (proposed plan) presents the Department of Natural Resources and Environmental Control's (DNREC's) preferred cleanup alternative for the remediation of the Scull Property site in Dover, Delaware. For site-related reports and additional information, please see the public participation section of this document.

The purpose of the proposed plan is to provide specific information about the soil contamination and the cleanup alternatives DNREC has considered. In addition, as described in Section 12 of the Delaware Regulations Governing Hazardous Substance Cleanup (Regulations), DNREC will provide notice to the public and an opportunity for the public to comment on the proposed plan. At the comment period's conclusion, DNREC will review and consider all of the comments received and then will issue a final plan. The final plan shall designate the selected remedy, if required, for the site. All investigations of the site, the proposed plan, and comments received from the public, DNREC's responses to the comments, and the final plan will constitute the Remedial Decision Record.

This proposed plan summarizes the July 1997 Remedial Investigation and Feasibility Study (RI/FS) report and the administrative record file upon which this proposed plan is based. Copies of these documents can be obtained or viewed at locations listed at the end of this document.

**DNREC's proposed remedy is preliminary and a final decision will not be made until all of the comments are considered. The final remedy selected could differ from the proposed remedy based on DNREC's responses to comments.**

## **INTRODUCTION**

In September 1996, DNREC reached an agreement with Bayhealth Development Corporation, Inc. under the Department's Voluntary Cleanup Program. The agreement provided for the investigation of a former dump site known as the Scull Property site located off South State Street in Dover. (See Attachment 1.) Duffield Associates Inc., consultant to Bayhealth Development Corporation, completed the RI/FS report in July 1997.

This investigation revealed that the Scull Property site represents a fragment of a larger dump site, most of which lies beneath the former location of the City of Dover Department of Public Works waste water treatment plant on the Saint Jones River. The DNREC elected to place the Scull Property site in abeyance until information on the Public Works site could be developed. Consequently, DNREC reached an agreement with the City of Dover and a study of the Public Works site was completed in March 2002.

## **SITE DESCRIPTION AND HISTORY**

The Scull Property site is located on approximately 1.2 acres of heavily wooded low-lying land. The site is comprised of 1.215 acres and covers a portion of Kent County tax parcel numbers: ED 05-077.13-01-44900 (Gates property), ED 05-077.13-01-5100 (Bayhealth) and ED 05-077.13-01-5000 (City of Dover). It is bounded by South State Street on the east, the Central Delaware Surgery Center on the south, property belonging to the City of Dover on the west (the old wastewater treatment plant), and Tar Branch on the north. The western edge of the site is about two hundred feet from the Saint Jones River. The site lies within the limit of the 100-year flood plain of the Saint Jones River and Tar Branch. Portions of the site appear to be frequently saturated. It is covered with dense vegetation including mature trees. The bottom of the natural declivity in which the site is located is approximately 25 feet in elevation below South State Street.

Tar Branch is now enclosed in a culvert except for a 20-foot stretch on the Scull Property site. At this point, the culvert ends and the water flow forms a small pool under dry conditions. During heavy rain, this pool expands to flood a substantial part of the site. Although this wetland area has been heavily modified by filling activity and the construction of the culvert, it still provides a storage function in the drainage system, mitigating the effects of flooding. The pool is drained by another culvert that passes underneath the City of Dover property to the east.

During the 1940s and 1950s, while the property was operated by previous owners, and was used for disposal of wastes from local industries. Wastes including latex material, glassware, rubble, feathers and domestic trash have been identified. Historical aerial photos indicate that access to the dump site was from the east and that dumping began on City of Dover property, expanding to the west with time. Dumping was reportedly discontinued in the mid-1960s.

A strip of land between the site and the Saint Jones River is owned by the City of Dover. It has been filled and its surface is about four feet higher than that of the site. The City of Dover constructed a waste water treatment works in the 1960s and discontinued operations when the city linked to the Kent County treatment works. The property is now used for storage and remnants of two concrete basins remain.

Elm Terrace is a residential street to the north of Tar Branch. The single family houses occupy ground outside of the 100 year flood plain. There are also two historical residences to the immediate west of the site known as the Scull home and the Buchanan home. Their addresses are on South State Street. Recently, the area to the south of the site has been developed as an ambulatory care facility and a day care facility.

## INVESTIGATION RESULTS

Based on a review of all the environmental investigations conducted at the site, semi-volatile organic compounds (SVOCs) and lead were identified as contaminants of potential concern for the RI/FS. The analytical results from the RI/FS indicated that only benzo(a)pyrene exceeded its unrestricted (i.e., residential) use Uniform Risk-based Standard (URS) value in soil.

### SOIL

<u>Contaminant</u>	<u>RME Concentration*</u> (mg/kg)	<u>URS for Unrestricted Use (mg/Kg)</u>	<u>URS for Restricted Use (mg/Kg)</u>	<u>Default Natural Background Concentration</u> (mg/kg)
benzo(a)pyrene	1.7	0.09	0.8	--

\*RME –Reasonable Maximum Exposure Concentration calculated as the 95% Upper Confidence Level (UCL) of the arithmetic mean of contaminants detected at the site  
mg/kg – milligram per kilogram

## SITE RISK EVALUATION

The risk associated with exposure to soil at the site was assessed using DNREC’s Site-Specific Standard Calculator for Multiple Analytes. The calculated risk based on exposure to benzo(a)pyrene and other SVOCs detected on the site in soil was  $2.46 \times 10^{-5}$  for carcinogenic risk based on an unrestricted land use scenario.

## REMEDIAL ACTION OBJECTIVES

The following qualitative objectives are determined to be appropriate for the site:

- Prevent human residential exposure to impacted soil; and
- Preserve the flood mitigation function of the wetlands and natural habitat

These objectives are consistent with the current undeveloped floodplain status of the site.

Based on the qualitative objectives, the quantitative objectives are:

- Prevent human exposure to impacted soil that would result in a carcinogenic risk exceeding  $1 \times 10^{-5}$  or a non-carcinogenic risk exceeding hazard index of 1.0.

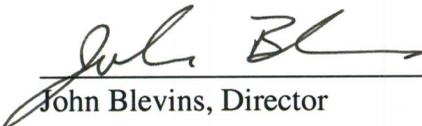
## PROPOSED PLAN OF REMEDIAL ACTION

Based on DNREC's evaluation of the site information, which includes current and past environmental investigations, historical information and the above remedial action objectives, the recommended action for the site will include the following:

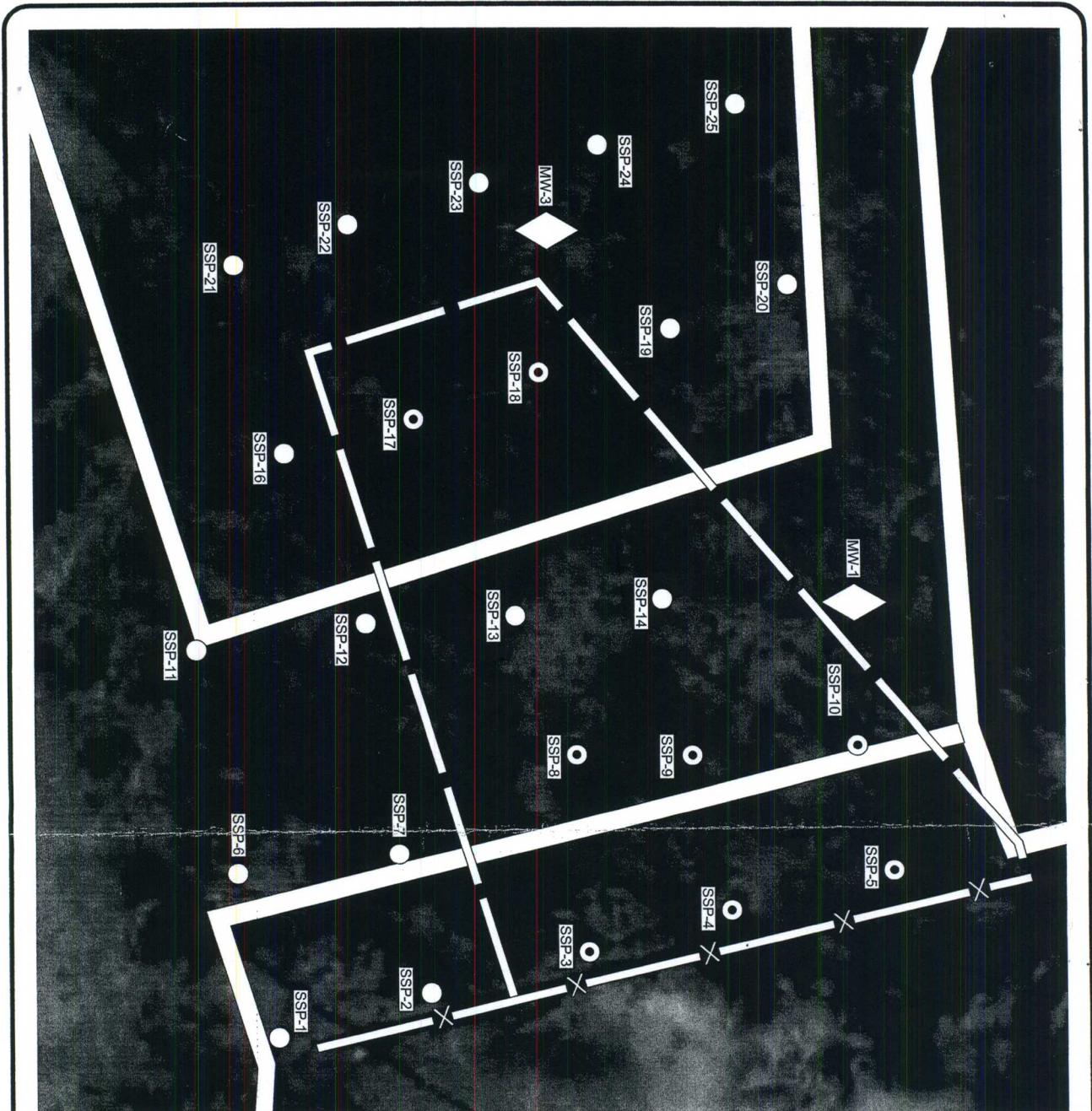
- ◆ Install a fence around areas of heaviest surface soil contamination. The proposed fence location is shown in Attachment 2. The fence will be a 6-ft medium duty chain link security fence. The specifications of the fence will be subject to DNREC approval and will be consistent with City of Dover requirements.
- ◆ Place a deed restriction on the three site parcels within 90 days of issuance of DNREC's final plan of remediation prohibiting construction, development or activity in the fence area except under DNREC oversight.
- ◆ Submit an Operations and Maintenance Plan for Department approval within 60 days that will include provisions for the periodic inspection and maintenance of the fence.

<b>PUBLIC PARTICIPATION</b>
The Department is actively soliciting written public comments and suggestions on the proposed plan of remedial action. The comment period begins April 12, 2004, and ends at the close of business (4:30 p.m.) May 3, 2004.
If you have any questions or concerns regarding the Scull Property site, or if you would like to view reports or other information regarding this site, please contact the project manager, Stephen Johnson, 391 Lukens Drive, New Castle, Delaware 19720 or at (302) 395-2600.

SFJ/rm  
SFJ04006.doc  
DE 1181 II B8

  
\_\_\_\_\_  
John Blevins, Director

4/7/04  
\_\_\_\_\_  
Date



**LEGEND**

○ APPROXIMATE LOCATION OF SURFACE SOIL SAMPLE

● BENZO(A)PYRENE CONCENTRATION MEETS RESTRICTED USE REMEDIATION STANDARD

○ BENZO(A)PYRENE CONCENTRATION ABOVE RESTRICTED USE REMEDIATION STANDARD



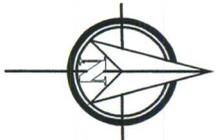
◇ APPROXIMATE LOCATION OF EXISTING MONITORING WELL



- - - APPROXIMATE LOCATION OF EXISTING FENCE



— APPROXIMATE LOCATION OF PROPOSED FENCE



**SAMPLE LOCATION PLAN**

**SCULL PROPERTY**

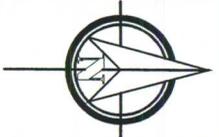
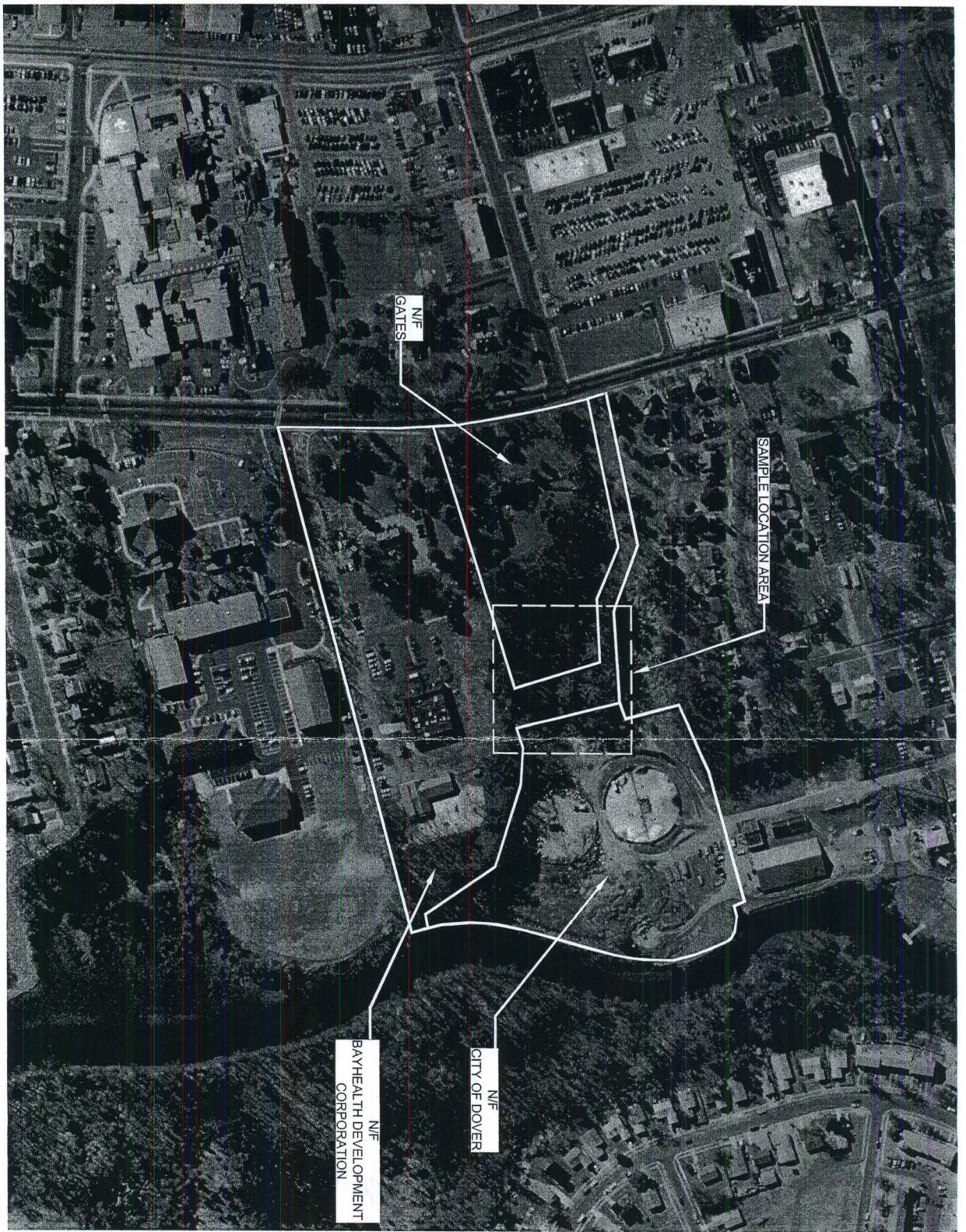
DOVER-KENT COUNTY-DELAWARE

DESIGNED BY: JLG  
 DRAWN BY: GAZ  
 CHECKED BY: WAT  
 FILE: B-3399.EE-02



400 LIMESTONE ROAD  
 WILMINGTON, DE 19808-1232  
 TEL: (302)239-8634  
 FAX: (302)239-8485  
 1528 WALNUT STREET, SUITE 725  
 PHILADELPHIA, PA. 19102  
 E-MAIL: DUFFIELD@DUFFIELD.COM

DATE: 13 FEBRUARY 2004  
 SCALE: 1" = 30'  
 PROJECT NO. 3399.EE  
 SHEET: FIGURE 2



SHEET: FIGURE 1	PROJECT NO. 3399.EE	SCALE: 1" = 200'	DATE: 10 FEBRUARY 2004	<b>PROPERTY BOUNDARIES</b>  <b>SCULL PROPERTY</b>  DOVER-KENT COUNTY-DELAWARE		DESIGNED BY: JLG	
				DRAWN BY: GAZ	CHECKED BY: <i>WAS</i>	FILE: B-3399.EE-01	