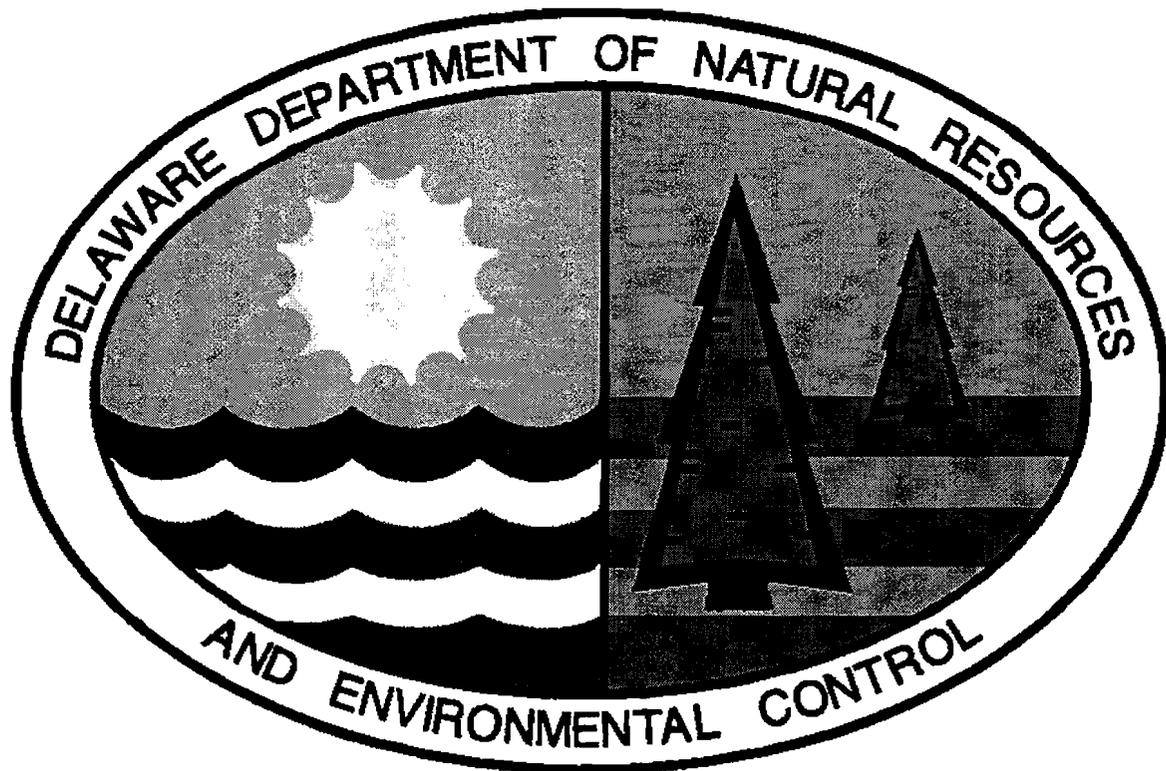


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BLACKWELL & SONS, INC.

FINAL PLAN OF REMEDIAL ACTION



DECEMBER 1996

**Department of Natural Resources and
Environmental Control
Site Investigation & Restoration Branch**

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BLACKWELL AND SONS PROPERTY FINAL PLAN OF REMEDIAL ACTION

1. INTRODUCTION

The Department of Natural Resources and Environmental Control ("DNREC" or "Department") issues this Final Plan of Remedial Action under the authority granted by the Hazardous Substance Cleanup Act (7 Del. C., Ch. 91) and the Delaware Regulations Governing Hazardous Substance Cleanup ("Regulations"). The Final Plan presents the Department's final selection of remedial activities to occur at the Blackwell and Son, Inc., property located at 2510 West 5th Street, Wilmington, Delaware. (Figures 1 and 2).

2. BACKGROUND

The Department reached an agreement with Stephen Horgan, Movable Feast, Inc., (the voluntary party) to perform a review of a Phase I Environmental Site Assessment and a Limited Phase II Investigation performed by WIK Associates, Inc., at the Blackwell and Son, Inc., property. The document review concluded in July, 1996.

The Blackwell and Sons, Inc., property consists of a 0.5± acre parcel containing two buildings and an open garage/shed. The property is presently zoned commercial (M-1). The property was maintained as the warehouses and offices of Blackwell and Sons, Inc., a painting operation.

Prior to the purchase of the property by Blackwell and Sons, Inc., in 1949, the property was briefly operated as a coal yard. Historic directories show that Ayers Coal Co., owned the property from 1946-1947. It appears through the historic record that the main use of the property was as a painting business warehouse and office.

3. INVESTIGATION RESULTS

WIK Associates, Inc., (WIK) was retained by Mr. Stephen Horgan of Movable Feast, Inc., to perform a Phase I Environmental Site Assessment and Limited Phase II Investigation of the Blackwell and Sons, Inc., property, in order to evaluate environmental issues prior to his purchase of the property.

The Phase I investigation was conducted during March of 1996. The limited Phase II Investigation was completed in June, 1996.

WIK performed the following scope of work during the Limited Phase II Investigation:

- Collected one sludge sample from the floor drain in the warehouse and analyzed it for volatile organic compounds (VOCs) and the eight Resource Conservation and Recovery Act (RCRA) metals;
- Collected one soil sample at a depth of 3 feet below grade in the vicinity of the sanitary sewer and analyzed it for VOCs and eight RCRA metals;
- Collected one surficial soil sample from the drum storage area and analyzed it for total petroleum hydrocarbons (TPH), VOCs and semi-volatile organic compounds (SVOCs);
- Collected one composite soil sample from across the back of the property and analyzed for TPH, SVOCs, and eight RCRA metals.

The locations of soil samples retrieved from the Blackwell and Sons, Inc., property are depicted in Figure 2.

Table 1 lists the sample locations, parameters analyzed and concentration of chemicals detected in the soil.

Based on the soil investigation at the Blackwell and Son, Inc. property the following has been determined:

- The sludge present in the floor drain exceeds reporting levels in accordance with the Interim Guidance on Screening Levels for Hazardous Substances Discovered During Site Assessments under the Delaware Hazardous Substance Cleanup Act ("Guidance") for Ethylbenzene, Methylene Chloride, Toulene and total Xylenes;
- Barium was detected above reporting levels in accordance with the Guidance in the subsurface soil collected near the sanitary sewer line;
- Benzo(a)pyrene was detected above reporting levels in accordance with the Guidance in the two surficial soil samples collected from the property boundary.

4. REMEDIAL ACTION OBJECTIVES

According to Section 8.4(1) of the Regulations, the Department will set remedial action objectives for land use, resource use and cleanup levels that are protective of human health and the environment. For the Blackwell and Son, Inc., property the following objectives were determined to be appropriate for the site:

- Prevent human contact (dermal, ingestion and inhalation) with contaminated soil; and
- Restrict land use to commercial/industrial.

These objectives are consistent with the current and future use of the site as a commercial building, the surrounding land use, state and federal regulations, and worker health and safety.

5. PROPOSED PLAN AND PUBLIC PARTICIPATION

The Department provided public notice of its Proposed Plan of Remedial Action for the Blackwell and Son, Inc., Property in The News Journal and Delaware State News on August 2, 1996. The Department preferred remedy conveyed in the Proposed Plan is:

- Placement of a deed restriction on the property by the current owner which restricts usage to either commercial or industrial purposes.
- Installation of a maintained asphalt cap on all areas not covered by the building footprint.

During the comment period, the Department received no comments on the Proposed Plan.

6. FURTHER ACTION

Based upon the results of the investigations performed at the Blackwell and Son, Inc. property located at 2510 West 5th Street, Wilmington, the Department has determined that the most appropriate remedy is:

- A deed restriction placed on the property by the current owner limiting it to commercial/industrial use only; and,
- The installation of a maintained asphalt cap on all areas of the property not covered by the building footprint.

7. DECLARATION

This Final Plan of Remedial Action for the Blackwell and Sons Property is protective of human health, welfare and the environment and is consistent with the requirements of the Delaware Hazardous Substance Cleanup Act.



Nicholas A. Di Pasquale, Director
Division of Air and Waste Management

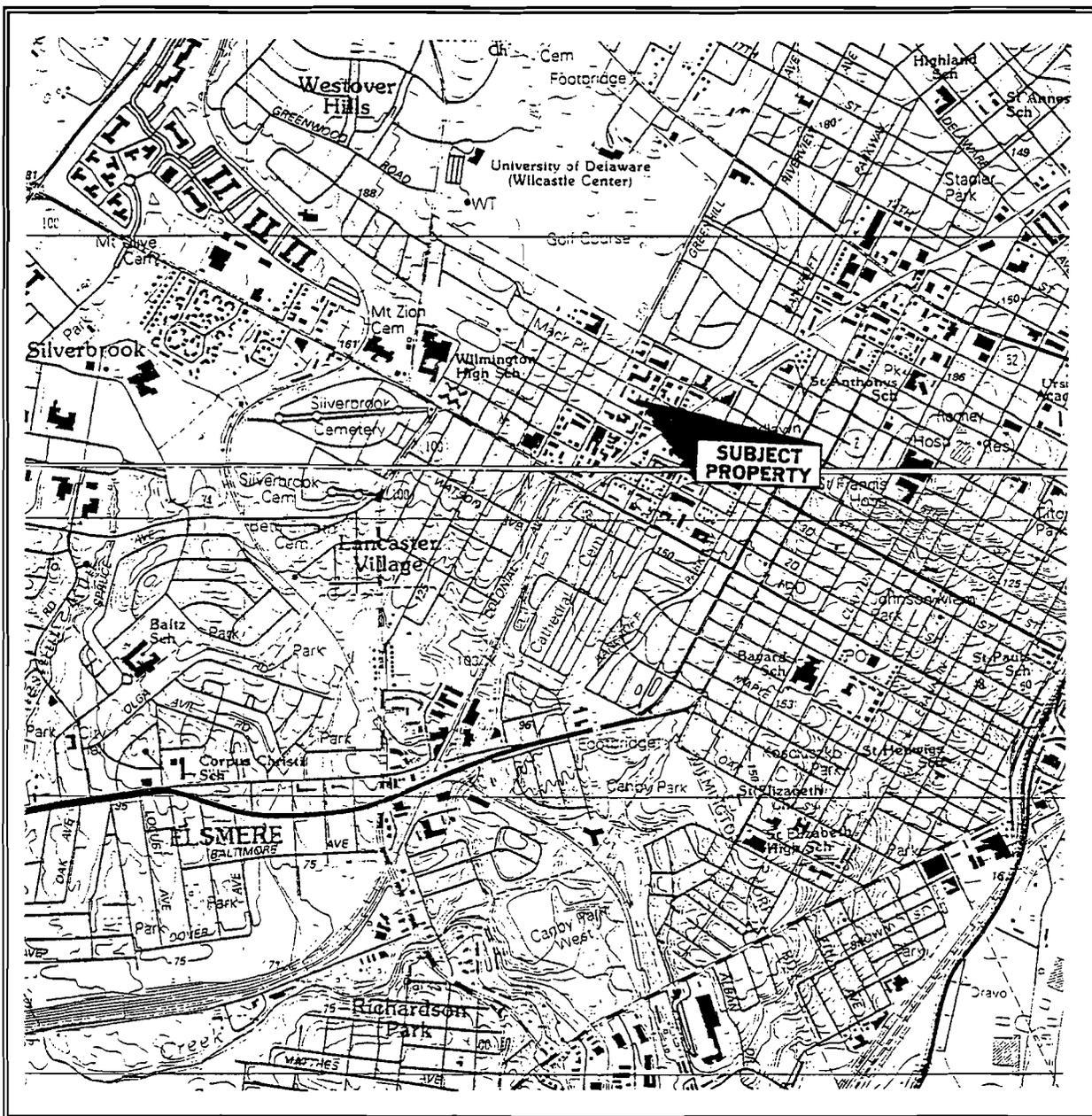


FIGURE 1

Site Location/Topographic Map

Wilmington North Quadrangle: 7.5 minute series
1993

2510 West 5th Street

Wilmington, Delaware

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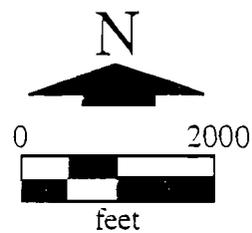
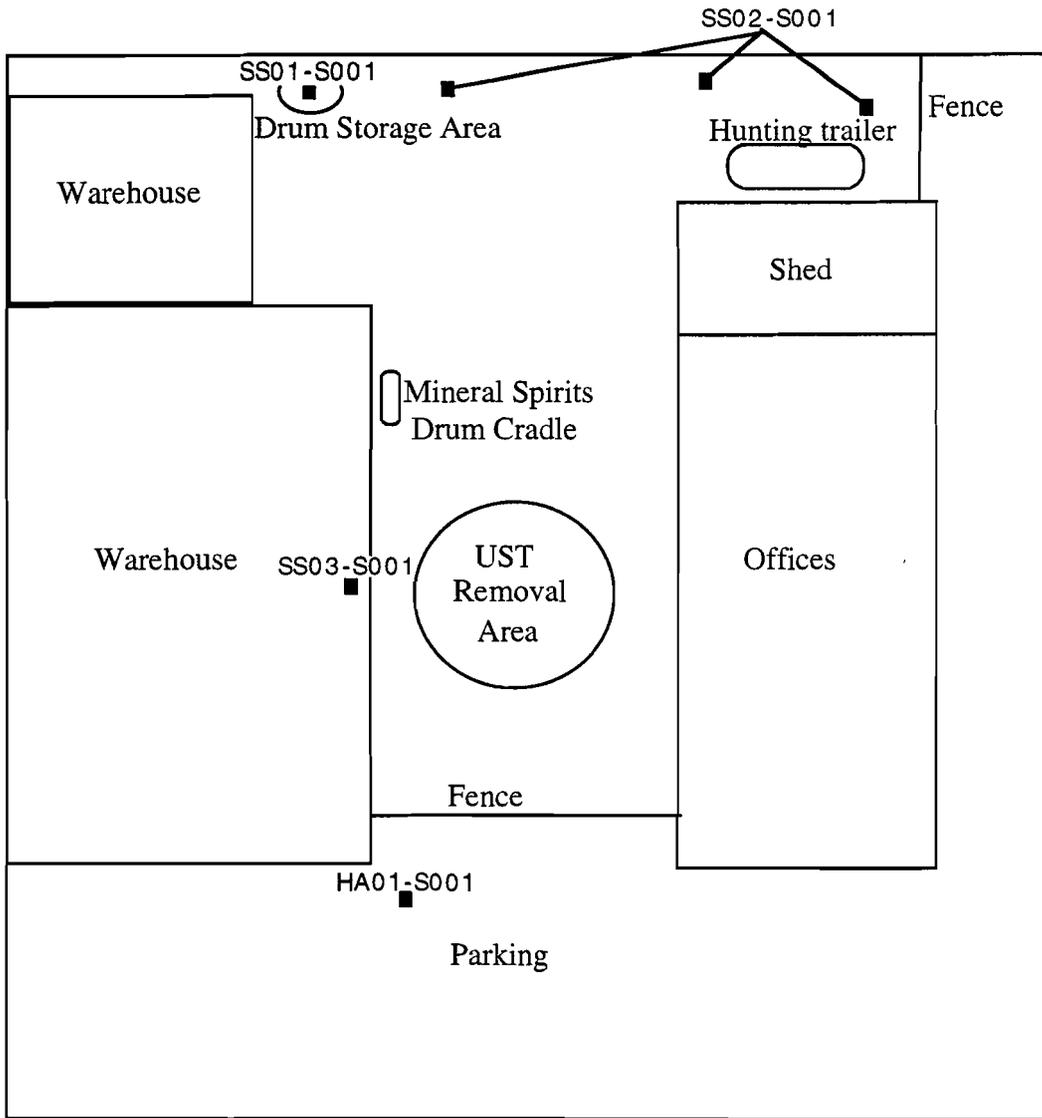


FIGURE 2

Movable Feast Site Diagram & Soil Sample Locations



■ Soil Sample Locations

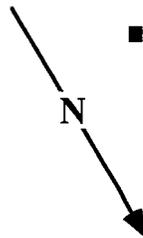


Table 1
Movable Feast
Soil Sample Analytical Results

Sample Identification	SS01-S001	SS02-S001	SS03-S001	HA01-S001	Trip Blank	DNREC Reporting Level Surficial Soil (3/96)	DNREC Reporting Level Subsurface Soil (3/96)
Sample Date	4/26/96	4/26/96	4/26/96	4/26/96	4/26/96		
Depth	0-6"	1'-1.5'	0-6"	3.5"			
Metals							
Arsenic	NA	70	13.4	6.14	NA	610	15
Barium	NA	151	388	70.8	NA	140,000	32
Cadmium	NA	ND (1.2)	7.40	ND (0.98)	NA	1,000	6
Chromium	NA	10.2	30.8	11.5	NA	10,000	19
Lead	NA	338	208	83.3	NA	1,000	nca
Mercury	NA	ND (0.12)	28.3	ND (0.12)	NA	610	3
Selenium	NA	ND (1.2)	ND (1.0)	ND (1.1)	NA	10,000	3
Silver	NA	ND (2.5)	ND (2.0)	ND (1.9)	NA	10,000	nca
TPH	110	372	NA	NA	NA	nca	nca
VOCS							
Acetone	0.0052 JB	NA	6.000 JB	0.005 JB	0.0031 JB	8	8
2-Butanone	0.0044 JB	NA	6.250 JB	0.0047 JB	ND (0.010)	1,000,000 *	nca
Ethylbenzene	ND (0.0055)	NA	82.820	ND (0.006)	ND (0.005)	5	5
Methylene Chloride	ND (0.0055)	NA	2.350 JB	0.0042 JB	ND (0.005)	0.25	0.25
Tetrachloroethene	ND (0.0055)	NA	ND (6.400)	0.0018 J	ND (0.005)	0.25	0.25
Toluene	ND (0.0055)	NA	164.400	ND (0.006)	ND (0.005)	5	5
1,1,1-Trichloroethane	0.0098	NA	ND (6.400)	0.0021 J	ND (0.005)	0.9	0.9
m+p-Xylene	ND (0.0055)	NA	371.600	ND (0.006)	ND (0.005)	nca	nca
o-Xylene	ND (0.0055)	NA	154.800	ND (0.006)	ND (0.005)	1,000,000 *	150 *
Total Xylenes	ND	NA	526.400	ND	ND	74	74
SVOCs							
Acenaphthene	ND (0.360)	0.050 J	NA	NA	NA	10,000	200
Acenaphthylene	0.053 J	0.370 J	NA	NA	NA	nca	nca
Anthracene	0.140 J	0.370 J	NA	NA	NA	10,000	4,300
Benzo(a)Anthracene	0.520	1.100	NA	NA	NA	7.8	0.7
Benzo(a)Pyrene	1.200	1.800	NA	NA	NA	0.78	4
Benzo(b)Fluoranthene	1.900	2.200	NA	NA	NA	7.8	4
Benzo(g,h,i)Perylene	0.940	0.670	NA	NA	NA	nca	nca
Benzo(k)Fluoranthene	1.600	2.200	NA	NA	NA	78	4
Benzy Alcohol	0.086 J	ND (0.820)	NA	NA	NA	610,000 *	nca
Butylbenzylphthalate	0.051 J	ND (0.400)	NA	NA	NA	5,300	68
Chrysene	0.800	1.500	NA	NA	NA	780	1
Di-n-Butylphthalate	0.220 J	0.260 J	NA	NA	NA	1,000	120
Di-n-Octyl Phthalate	0.041 J	ND (0.400)	NA	NA	NA	10,000	nca
Dibenz(a,h)Anthracene	0.330 J	0.250 J	NA	NA	NA	0.78	11
Dibenzofuran	ND (0.360)	0.054 J	NA	NA	NA	8,200 *	120 *
bis(2-Ethylhexyl)Phthalate	0.980	ND (0.400)	NA	NA	NA	410	11
Fluoranthene	1.000	1.900	NA	NA	NA	10,000	980
Fluorene	ND (0.360)	0.061 J	NA	NA	NA	10,000	160
Ideno(1,2,3-cd)Pyrene	0.810	0.600	NA	NA	NA	7.8	35
2-Methylnaphthalene	0.056 J	0.065 J	NA	NA	NA	nca	nca
Naphthalene	0.220 J	0.072 J	NA	NA	NA	30	30
Pentachlorophenol	0.130 J	ND (0.400)	NA	NA	NA	48	0.33
Phenanthrene	0.480	0.910	NA	NA	NA	nca	nca
Pyrene	1.000	2.500	NA	NA	NA	10,000	1,400

Notes:
 ND - Not detected, detection limit listed in parenthesis
 NA - Not applicable
 nca - No Criteria Available
 J-Analyte present. Reported value may not be accurate or precise
 B-Compound detected in laboratory blank
 Bold indicates value above reporting level
 * - Risk Based Concentrations (10/95)