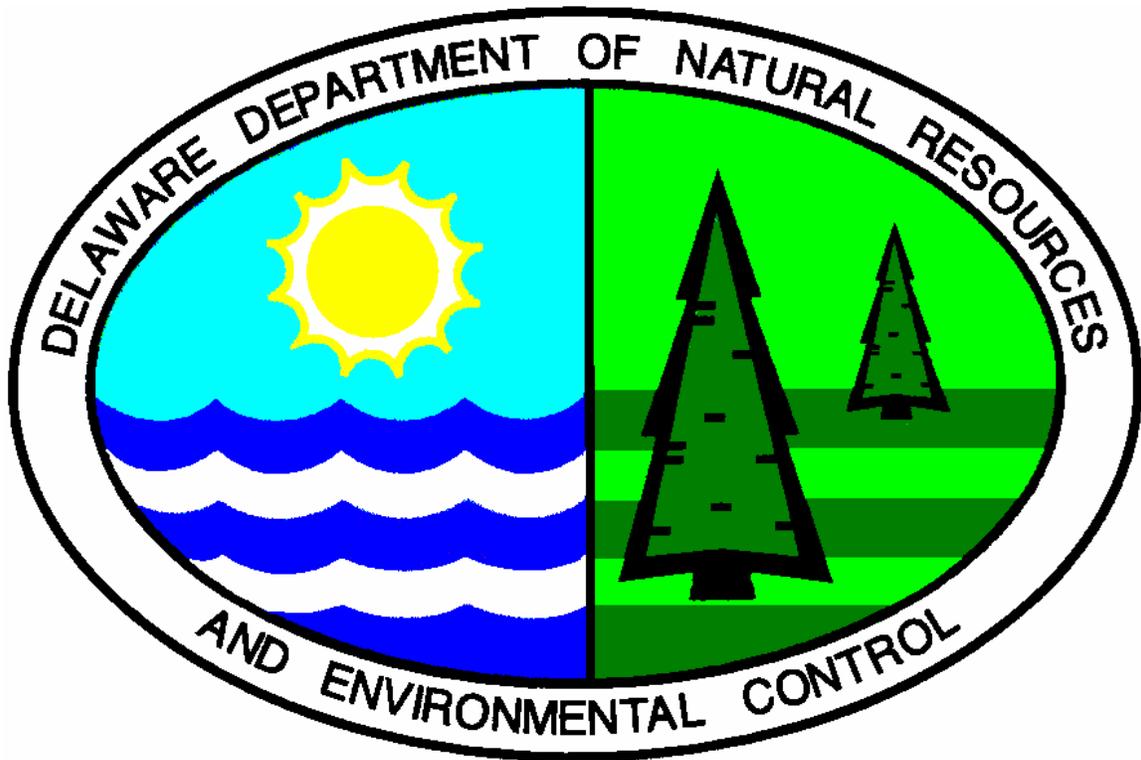


PROPOSED PLAN OF REMEDIAL ACTION



DELAWARE CAR COMPANY

Second and Lombard Streets
Wilmington, Delaware

DNREC Project No. DE-1059

August 2000

Department of Natural Resources and Environmental Control
Division of Air and Waste Management
Site Investigation and Restoration Branch

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I. INTRODUCTION

In February 2000, the Department of Natural Resources and Environmental Control (“DNREC” or “Department”) under the authority granted by the Hazardous Substance Cleanup Act (“HSCA”) (7 Del. C., Ch. 91) entered into a Voluntary Cleanup Agreement (VCP) with the Delaware Car Company to oversee a Remedial Investigation (RI) at the Delaware Car Company Site, located at Second and Lombard Streets in Wilmington, Delaware (Figures 1 and 2). The RI included the sampling of surface soil, subsurface soil and groundwater at various locations throughout the facility.

The Remedial Investigation Report was completed and approved in July 2000.

II. PURPOSE

This document is the Department’s Proposed Plan of Remedial Action for the Delaware Car Company property as defined in Figure 5. This Proposed Plan is issued under provisions of the HSCA and the Regulations Governing Hazardous Substance Cleanup (“Regulations”). It presents the Department’s assessment of the potential unacceptable health and environmental risks posed by the Delaware Car Company Site and plans for further action.

The Proposed Plan of Remedial Action also includes a comparison of the remedial alternatives with respect to but not limited to: current and potential land use, natural resource use, proximity of human populations, use of surrounding properties, specific environmental issues (groundwater), protection of public health, welfare, and the environment, and compliance with applicable laws and regulations.

The Department will provide public notice and opportunity to comment on the Proposed Plan in accordance with Section 12 of the Regulations. At the conclusion of the comment period, the Department, after review and consideration of the comments received, shall issue a final plan of remedial action, which shall designate the selected remedial action.

III. SITE DESCRIPTION AND HISTORY

Site Description

The Delaware Car Company is located at Second and Lombard Streets in Wilmington, New Castle County, Delaware (Figures 1-4). The site is generally bounded by East Fourth Street to the northeast, the northwest by Lombard Street, and to the south by the Amtrak Viaduct. Residential structures border the northern and western portions of the property. The site is roughly triangular in shape and is approximately 7 acres in size. The coordinates of the site are 39° 44’ 12” latitude by 75° 32’ 44” longitude.

The site is currently owned and operated by Delaware Car Company. Delaware Car Company employs 35 people in refurbishing and repairing damaged rail cars. The site consists of two parcels referred to as Parcel A and Parcel B. Parcel A is approximately 5.7 acres in size and consists mostly of a large, irregularly shaped brick and concrete block building in generally good condition with portions dating to 1800's. The outside grounds are almost entirely covered with asphalt, crusher run or granite Belgian block. Parcel B is approximately 1.3 acres in size. An old concrete slab building foundation covers a portion of Parcel B with a large portion of the remaining ground covered with black sand. Railroad tracks transect portions of both parcels and the inner building for the purpose of moving rail cars. Both parcels are enclosed within a chain link fence topped with barbed wire.

Site History

The Delaware Car Company property has an extensive industrial history involving metal working dating to the early 1800's. Lobdell Car Wheel operated on the property from 1836, and was the largest producer of iron wheels in the United States at the time of its operation. A fire destroyed the plant in 1853, but it was immediately rebuilt and enlarged. Between 1884 and 1937 the property was owned by corporations which manufactured nuts and bolts. By 1937, Benjamin F. Shaw Steam Piping Contractors had considerably expanded the complexes of buildings, and used the site until the early 1970's manufacturing pipes and pipe fittings. Mechtron purchased the property in 1974 for use as a repair facility for railroad dining cars. Mechtron also used Parcel B as a warehouse yard and stored hazardous substances on this portion of the property. Mechtron filed for insolvency on March 28, 1981. Delaware Car Corporation purchased the property in 1983, followed by Delaware Car Company in 1987.

IV. INVESTIGATION RESULTS

In February 2000, DNREC performed a Brownfield Preliminary Assessment II (BPAII) on the site. WIK Associates, Inc., conducted a Remedial Investigation of the property in conjunction with the DNREC BPA II and developed a report in June 2000.

From three (3) locations, groundwater samples were collected during the BPA II investigation in February 2000. Groundwater samples were submitted to the DNREC Division of Water Resources Lab, Dover, Delaware, for analysis all of the US EPA Target Analyte List (Inorganics) and Target Compound List (Organics) (TAL/TCL).

One groundwater sample (DCC-MW-1/MW-4) exceeded HSCA URS values (December 1999) for lead, and also for volatile and semivolatile organic Tentatively Identified Compounds (TICs) were detected in the sample. The organic contamination is most likely the result of a groundwater plume of contamination that is believed to have migrated from the Former Service Station site, 4th and Spruce Street, onto the northern

portion of Parcel B of the Delaware Car Company Property. This plume carried gasoline compounds and is the most likely source of the benzene detected in the groundwater sample. The data tables are contained in the Remedial Investigation Report of July 2000.

During the investigations by DNREC and WIK Associates, a total of thirty-one (31) soil samples were collected. All soil samples delivered to a HSCA certified laboratory were initially screened in the SIRB mobile laboratory for the following classes of compounds: Volatile Organics (VOCs), Pesticides, Carcinogenic PAHs, Poly Chlorinated Biphenyls (PCBs), and Metals. Screening was performed in the mobile lab. Of the soil samples collected and field screened, twelve (12) were selected for fixed laboratory analysis.

Arsenic levels were above HSCA URS restricted standards in four (4) of the shallow soil samples and one (1) deep soil sample. DCC-SS-2 contained high concentrations of six (6) semivolatile organic analytes and high levels of semivolatile Tentatively Identified Compounds (Tables 1-4).

As part of their Remedial Investigation, WIK Associates conducted several site specific risk calculations for the Delaware Car Company site. Based on the HSCA certified analytical results, arsenic was the only inorganic analyte that exceeded the restricted use regulatory criteria. The site concentrations range from 0.88 mg/kg to 19.6 mg/kg.

WIK Associates also conducted a HSCA Sample Specific Standard Calculation for Multiple Carcinogenic Analytes for the area of sample DCC-SS-2, under guidance from DNREC. The results of the risk calculation demonstrate that the exposure risk for the sample area is below 10^{-5} , based on a one-hour exposure time for each day of the work year.

The detailed risk calculations are contained in the Remedial Investigation Report of July 2000.

According to HSCA regulation 8.4(1), remedial action objectives must be established for all Proposed Plans of Remedial Action. The remedial action is evaluated utilizing both Qualitative and Quantitative Objectives. The following considerations were taken into account in the development of the Qualitative and Quantitative Objectives.

The Qualitative Objectives for this site are:

- Control potential human contact with contaminated soil.
- Control potential human contact with contaminated groundwater.

Based on the above qualitative remedial action objectives, the following quantitative objectives that DNREC-SIRB determined will meet the qualitative objectives include:

- Prevent human contact with soil having constituents which exceed 10^{-5} cancer risk.
- Prevent human ingestion of groundwater at the site containing lead concentrations greater than 15 µg/L.
- Prevent human ingestion of groundwater at the site containing benzene concentrations greater than 5 µg/L.

Three (3) potential remedial alternatives were evaluated to address the Remedial Action Objectives. The alternatives for the site were as follows:

Alternative 1: No further action. Contaminants identified during the Remedial Investigation are not addressed in any fashion.

Alternative 2: Containment of affected materials compliance with DNREC HSCA Regulations and placement of institutional controls.

Alternative 3: Complete removal of PAH impacted soils in exceedence of the DNREC restricted criterion.

V. PROPOSED REMEDIAL ACTION PLAN

Based upon the information and results of the investigation performed at the Delaware Car Company property in Wilmington, Delaware, DNREC-SIRB concludes that a remedial action is required to prevent continued contact with site soils. The Proposed Plan for the Delaware Car Company Site calls for containment of affected materials with a placement of a two inch layer of compacted stone to minimize exposure in compliance with HSCA Regulations and placement of institutional controls, consisting of the following:

- Fencing - A fence would be maintained around the contaminated area to reduce physical contact between humans and the soil;
- Deed Restriction – A deed restriction would be placed on the property to prevent future land uses that could cause unacceptable exposure risks to the contaminated soil;
- Require notification and approval from DNREC prior to any future intrusive activity in the containment area;
- Placement of a Groundwater Management Zone (GMZ) at the site to prevent future use of the groundwater beneath the site; and
- Development of an Operation and Maintenance Plan (O & M) to maintain the containment system.

VI. PUBLIC PARTICIPATION

The Department actively solicits public comments or suggestions on the Proposed Plan and welcome opportunities to answers questions. Please direct written comments to:

DNREC Site Investigation and Restoration Branch
Attn: Ann L. Breslin
391 Lukens Drive
New Castle, DE 19720
Or call (302) 395-2610

The public comment period begins on August 10, 2000 and ends at 4:30 pm on August 31, 2000. If so requested, a public hearing on the Proposed Plan will be held. The meeting time and place will be announced if the hearing is requested.

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